Qurbonov A.M.

English

O’ZBEKISTON RESPUBLIKASI OLIY VA O’RTA MAXSUS TA’LIM VAZIRLIGI

BUXORO MUHANDISLIK - TEXNOLOGIYA INSTITUTI

INGLIZ TILI FANIDAN

O’QUV – USLUBIY

MAJMUA

Bilim sohasi	300000 – Ishlab chiqarish texnik soha
Ta’lim sohasi	320000 – Ishlab chiqarish texnologiyalari
Ta’lim yo’nalishi	5340500 – Qurilish materiallari, buyumlari va konstruksiyalarini ishlab chiqarish

Fanning o’quv-uslubiy majmuasi o’quv dasturiga muvofiq ishlab chiqilgan va BMTI o’quv uslubiy kengashida muhokama qilingan va foydalanishga tavsiya etilgan. (Bayonnoma №1 “___” _____ 2021 yil)

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Fanning o’quv-uslubiy majmuasi “Xorijiy tillar” kafedrasining 2021 yil “____” _____dagi “1”- sonli yig’ilishida muhokamadan o’tgan va institut kengashida ko’rib chiqish uchun tavsiya etilgan.

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O‘quv uslubiy boshqarma boshlig‘i **dots. Quliyev N.Sh.**

MUNDARIJA

V TERM

UNIT 1 STRUCTURAL CLAY PRODUCTS

LESSON 1

CLAY AND ITS CLASSIFICATIONS

Vocabulary:

1. *admixtures – примесь, добавка – qo'shimcha*
2. *bulk specific gravity - удельный вес сыпучего материала – sochiluvchan moddaning solishtirma og'irligi*
3. *burning – горящий - yonayotgan*
4. *calcite – кальцит, известковый шпат – ohakli shpat*
5. *chamottee – шамотная (огнеупорная) глина – olovbardosh loy*
6. clay – глина - loy
7. *drying – сушка - qurutish*
8. *feldspar - полевой шпат – dala shpati*
9. *flux – течение - oqim*
10. *magnesite – магнезит – magnezit (tog' jinsi)*
11. *moulding – формовка - qoliplash*
12. *quartz – кварц – kvarts (chaqmoqtosh)*
13. *vitrification - превращение в стекло – shishaga aylantirish*
14. plasticity – пластичность, эластичность – eguluvchan

READING.

Clay products are one of the most important classes of structural materials. The raw materials used in their manufacture are clay blended with quartz, sand, chamottee (refractory clay burned at 1000-1400°C and crushed), slag, sawdust and pulverized coal. Structural clay products or building ceramics are basically fabricated by moulding, drying and burning clay mass. Higher the bulk specific gravity, the stronger is the clay product. This rule does not hold good for vitrified products since the specific gravity of clay decreases as vitrification advances.

Bulk specific gravity of clay brick ranges from 1.6 to 2.5.

According to the method of manufacture and structure, bricks, tiles, pipes, terracotta, earthenwares, stonewares, porcelain, and majolica are well recognized and employed in building construction. Clay bricks have pleasing appearance, strength and durability whereas clay tiles used for light-weight partition walls and floors possess high strength and resistance to fire. Clay pipes on account of their durability, strength, lightness and cheapness are successfully used in sewers, drains and conduits.

Clay is the most important raw material used for making bricks. It is an earthen mineral mass or fragmentary rock capable of mixing with water and forming a plastic viscous mass which has a property of retaining its shape when moulded and dried. When such masses are heated to redness, they acquire hardness and strength. This is a result of micro-structural changes in clay and as such is a chemical properly. Purest clays consist mainly of kaolinite ($2SiO_2, Al_2O_3, 2H_2O$) with small quantities of minerals such as quartz, mica, feldspar, calcite, magnesite, etc. Admixtures are added to clay to improve its properties. By their origin, clays are subdivided as residual and transported clays. Residual clays, known as Kaolin or China clay, are formed from the decay of underlying rocks and are used for making pottery. The transported or sedimentary clays result from the action of weathering agencies. These are more disperse, contain impurities, and free from large particles of mother rocks.

On the basis of resistance to high temperatures (more than 1580°C), clays are classified as refractory, high melting and low melting clays. The refractory clays are highly disperse and very plastic. These have high content of alumina and low content of impurities, such as Fe_2O_3, tending to lower the refractoriness. High melting clays have high refractoriness (1350-1580°C) and contain small amount of impurities such as quartz, feldspar, mica, calcium carbonate and magnesium carbonate. These are used for manufacturing facing bricks, floor tiles, sewer pipes, etc. Low melting clays have refractoriness less than 1350°C and have varying compositions. These are used to manufacture bricks, blocks, tiles, etc.

Speaking. **Answer the questions.**

1. What are the clay products?
2. Where is *important raw material used for making bricks*?
3. What minerals are in purest clays?
4. What are residual clays used for?
5. What is *the most important raw material used for making bricks?*
6. At what temperature are *clays classified as refractory, high melting and low melting clays?*
7. What is *added to clay to improve its properties?*
8. *What is the chemical formula of kaolinite?*
9. *Where is clay pipe used?*
10. *What kind of clay is used to manufacture bricks, blocks and tiles?*

Lessons videos\U_1._L_1_Clay_Products.mkv
Lessons videos\U_1._L_1_Clay_Products.mp4
Lessons videos\U_1._L_1_Clay_Pipe_Works.mkv
Lessons videos\U_1._L_1_Clay_Products_The_Finest_Earthenware_Pottery.mp4

Listening. **Correct the spelling.**

Building materials listening\current_events.mp3

I love the news and current events. I'm ddidacte to what's happening in the world. It doesn't tmtera what kind of news it is, I love watching it. Even if it's from countries I've never rehda of. I'll even watch the same news programme three or four times and not get rbdeo. I guess it's so cstagaininf because it's real. I get really interested in a story when it arsbek, then like to follow it as it unfolds. Following current events makes you quite knowledgeable. I know most of the world's cailspat and most of the world's edrsela. Watching the news is really looking at throyis happening now. But you never know what's going to happen next. Every time you turn on the news or read a news story, you'll find something uetdneepcx.

LESSON 2

BRICKS AND THEIR CLASSIFICATIONS

Vocabulary:

1. *ballast – балласт, не нужный – keraksiz, daxmaza*
2. *brick – кирпич – g'isht*
3. *exterior – наружный – tashqi*
4. *extruded brick – прессованный кирпич – zichlangan g'isht*
5. *flaw – трещина – yoriq*
6. *footings – основание, фундамент – asos*
7. *fractured surface – разрушенная поверхность – yemirilgan yuza*
8. frog – углубление в постели кирпича – g'ishdagi chuqurcha
9. *to handle – обращаться - ishlatilmoq*
10. *indent – выемка - chuqurcha*
11. *interior – внутренняя часть – ichki tomon*
12. *load bearing – нагруженный подшипник – yukli podshipnik*
13. *partitions – распределение – taqsimot*
14. *pier – вертикальная опора, стойка – tik ustun*

Reading.

One of the oldest building material brick continues to be a most popular and leading construction material because of being cheap, durable and easy to handle and work with. Clay bricks are used for building-up exterior and interior walls, partitions, piers, footings and other load bearing structures.

A brick is rectangular in shape and of size that can be conveniently handled with one hand. Brick may be made or burnt clay or mixture of sand and lime or of Portland cement concrete. Clay bricks are commonly used since these are economical and easily available. The length, width and height of a brick are interrelated as below:

Length of brick = 2 x width of brick + thickness of mortar

Height of brick = width of brick

Size of a standard brick (also known as modular brick) should be 19 x 9 x 9 cm and 19 x 9 x 4 cm. When placed in masonry the 19 x 9 x 9 cm brick with mortar becomes 20 x 10 x 10 cm.

However, the bricks available in most part of the country still are 9" x 4,5" x 3" and are known as field bricks. Weight of such a brick is 3.0 kg. An indent called frog. 1-2 cm deep, as shown in Fig. 5 is provided for 9 cm high bricks. The size of frog should be 10 x 4 x 1 cm. The purpose of providing frog is to form a key for holding the mortar

and therefore, the bricks are laid with frogs on top. Frog is not provided in 4 cm high bricks and extruded bricks.

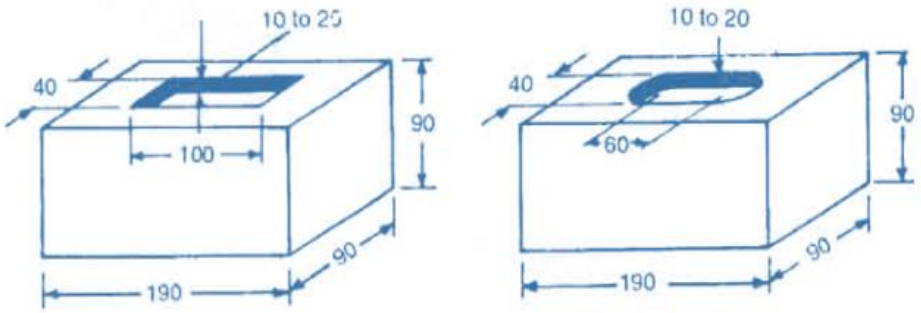


Fig.5. Bricks with frog

Clay bricks are classified as first class, second class, third class and fourth class based on their physical and mechanical properties.

First Class Bricks

1. These are thoroughly burnt and are of deep red, cherry or copper colour.

2. The surface should be smooth and rectangular, with parallel, sharp and straight edges and square corners.

3. These should be free from flaws, cracks and stones.

4. These should have uniform texture.

5. No impression should be left on the brick when a scratch is made by a finger nail.

6. The fractured surface of the brick should not show lumps of lime.

7. A metallic or ringing sound should come when two bricks are struck against each other.

8. Water absorption should be 12-15% of its dry weight when immersed in cold water for 24 hours.

9. The crushing strength of the brick should not be less than 10 N/mm^2. This limit varies with different Government organizations around the country.

Uses: First class bricks are recommended for pointing, exposed face work in masonry structures, flooring and reinforced brick work.

Second Class Bricks are supposed to have the same requirements as the first class ones except that

1. Small cracks and distortions are permitted.

2. A little higher water absorption of about 16-20% of its dry weight is allowed.

3. The crushing strength should not be less than 7.0 N/mm^2.

Uses: Second class bricks are recommended for all important or unimportant hidden masonry works and centering of reinforced brick and reinforced cement concrete (RCC) structures.

Third Class Bricks are underburnt. They are soft and light-coloured producing a dull sound when struck against each other. Water absorption is about 25 per cent of dry weight.

Uses: It is used for building temporary structures.

Fourth Class Bricks are overburnt and badly distorted in shape and size and are brittle in nature.

Uses: The ballast of such bricks is used for foundation and floors in lime concrete and road metal.

Speaking. Answer the questions.

1. Why does *brick continue to be a most popular and leading construction material?*
2. What is *used for building-up exterior and interior walls, partitions, piers, footings?*
3. What *should the size of a standard brick be?*
4. What is w*eight of a field brick?*
5. What is frog?
6. What *should the size of frog be?*
7. What *are first class bricks recommended for?*
8. *What are second class bricks recommended for?*
9. *What are third class bricks recommended for?*
10. *What are fourth class bricks recommended for?*

Lessons videos\U 1. L 2 How Bricks Are Made.mp4

Listening. **Correct the spelling.**

Building materials listening\electricity.mp3

Electricity is one of the most important nnnitieovs ever. It is the thing that osewpr the Earth. If there was no electricity, we'd be back in the dark ages. Few people stop and think just how anzimga electricity is. With the flick of a sctiwh, you can power almost anything. Think about what would happen if there was no electricity. We'd have no TV, no computers, no fctfair signals. It would be like going back to ivlgni in caves. There are a few gaenivte points about electricity, of course. Number one, it's urgensoda. Thousands of people die each year from electrocuting themselves or in electrical fires. And number two, it isn't good for the environment. Most electricity comes from rbugnin coal and that creates greenhouse asessg

LESSON 3

DIFFERENT FORMS OF BRICKS

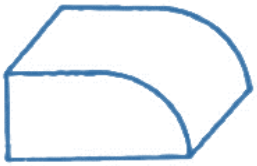
Vocabulary:

1. *bull nosed brick – кирпич с выступом – tumshug'i burtib chiqqan g'isht*
2. *cant brick – кирпич со скошенным ребром – egri qovurg'ali g'isht*
3. *cornice brick – карнизный кирпич – karnizli g'isht*
4. *furnace – печь - pechka*
5. *hollow brick – дырчатый кирпич – teshikli g'isht*
6. *jambs – косяк двери, боковой откос – eshik yondori, yon qiyalik*
7. *king closer – кирпич со скошенным углом – egri burchakli g'isht*
8. *parapets – тротуарная перила – yo'lakning chet (yon) to'sig'i*
9. *perforated brick – дырчатый кирпич – teshik g'isht*
10. *pillar – подножие, пьедестал – supacha, tagkursi*
11. *plinth level – уровень плинтуса – chaspak sathi (pol bilan devor orlig'i)*
12. *queen closer – продольная половинка кирпича – g'ishtning uzunasiga bo'lagi*
13. *round ended – округленный конец – yumaloqlangan tomon*
14. *splay brick – клинчатый кирпич – uchli g'isht*
15. *split brick – разделенный кирпич – bo'laklangan g'isht*

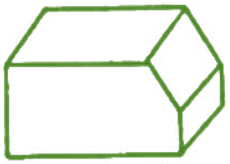
Reading.

Some of the common type of bricks, depending upon the places of use, are shown in Fig. 6. Round ended and bull nosed bricks (Fig. 6 (a, f)) are used to construct open drains. For door and window jambs, cant brick, also called splay brick, shown in Fig. 6 (b, c), are most suitable. The double cant brick shown in Fig. 6 (c) is used for octagonal pillars. Cornice brick shown in Fig. 6 (d) is used from architectural point of view. Figure 6 (e) shows a compass brick-tapering in both directions along its length-used to construct furnaces. Perforated brick (Fig. 6 (g)) is well burned brick, but is not sound proof. Figure 6 (h) shows hollow bricks. These are about 1/3rd the weight of normal bricks and are sound and heat proof, but are not suitable where concentrated loads are expected. Top most bricks course of parapets is made with coping bricks shown in Fig. 6 (i). These drain off the water from the parapets. Brick shown in Fig. 6 (j) is used at plinth level and for door and window jambs. Split bricks are shown in Fig. 6 (k, l). When the brick is cut along the length, it is called

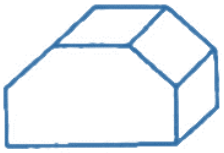
queen closer and when cut at one end by half header and half stretcher, it is known as king closer.



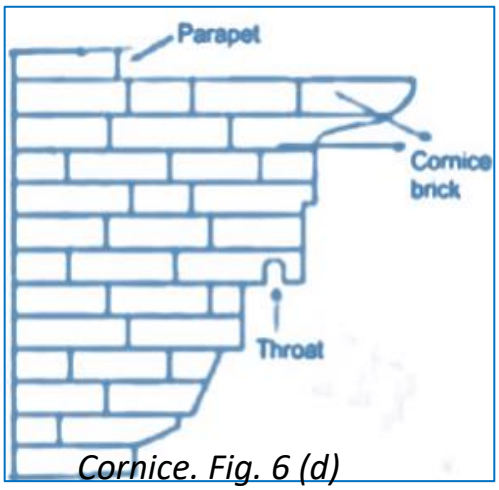
Rounded – ended. Fig. 6. (a)



Cant. Fig. 6. (b)



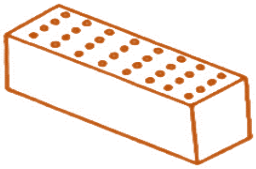
Double – cant. Fig. 6. (c)



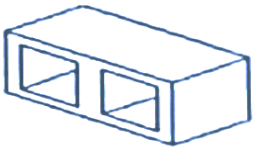
Cornice. Fig. 6 (d)

Compass. Fig. 6 (e)

Bull – nosed. Fig. 6 (f)

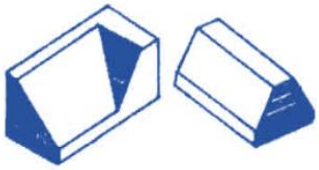


Perforated. Fig. 6 (g)

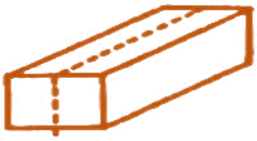


Hollow. Fig. 6 (h)

Coping. Fig. 6 (i)



Jamb brick. Fig. 6 (j)



Queen closer. Fig. 6 (k)

King closer. Fig. 6 (l)

Speaking. Answer the questions.

1. What kind of bricks are *used to construct open drains?*
2. What kind of bricks are *used for door and window jambs?*
3. What kind of bricks are *used for octagonal pillars?*
4. What kind of bricks *are not suitable where concentrated loads are expected?*
5. What is called w*hen the brick is cut along the length?*
6. What is called *when cut at one end by half header and half stretcher?*

7. *Where are compass bricks used?*
8. *What kind of bricks are called splay brick?*
9. *What kind of bricks are called split bricks?*
10. *What kind of brick is well burned brick, but is not sound proof?*

Lessons videos\U 1. L 3 Different Types of Bricks Based on Modification in Shape.mp4
Lessons videos\U 1. L 3 Types of Bricks.mp4

Listening. **Correct the spelling.**

Building materials listening\global_warming.mp3

Global warming is the tigsbge problem in the world today. Everyone know about it but not everyone is ytngir to stop it. Many world leaders are more interested in blaming other countries for the crisis. Countries like China, India and Russia say they will not act usnesl America takes more action. America says it will not act until other countries take more action. It seems a little dilshcih that leaders are gcniat in this way. The future of our world is at risk and governments can only gaeur with each other. Many presidents and prime ministers tell us that technology is the wnaser. They say future scientists will find osusiltno to save the planet. This is a big gamble. I hope they are right. I don't believe them, so I'll continue switching off lights and igyelncrc

LESSON 4

CLAY TILES

Vocabulary:

1. anti-slip – противоскользящий – sirpanishga qarshi
2. artificial – искусственный – sun'iy
3. ductility – пластичность – eguluvchanlik
4. *durable – прочный – mustahkam*
5. *glazed – шлифованный – silliqlangan*
6. gloss – глянец – yaltiroqlik, jilo
7. *impervious – непроницаемый – o'tkazmas*
8. *kiln – печь для обжига и сушки – qurutish uchcun pech*
9. *muffle – изолированное место – izolyatsiya qilingan joy*
10. paving – дорожное покрытие – yo'l qoplamasi
11. *shales – сланцеватая глина – slanetsli loy*
12. skid-proof – нескользящий - sirpanmaydigan
13. *slab – плита – plita*
14. tiles – черепица, кафель – cherepitsa, kafel
15. water-proof – водонепроницаемый – suv o'tkazmaydigan

Reading.

Tiles are thin slabs of low inching clays used for various purposes in engineering constructions. These give a very pleasing appearance and good service properties, roofing tile, flooring tiles, wall tiles and partition tiles are some of the examples. Due to the considerable mass, labor-consuming manufacture, erection and drainage problems, and appreciable transportation charges, roofing tiles have lost their importance and are recommended locally. The various types of roofing tiles in common use are shown in Fig. 2.

Fig. 2

Floor tiles are extensively used in houses and industrial buildings. These are durable and impervious to water, resist abrasion well and wash easily. White burning and red burning clays, tire clays and shales are used in making tiles for floor surfaces. Tiles for surface of walls differ from floor tiles principally in design in degree of burning. Wall tiles are burned at a comparatively low temperature, glazed, and fired again in muffle kiln at a still lower temperature.

Plastic-stone skid-proof floor tile is a new artificial flooring material. **It** is a composite flooring material mainly made of polyvinyl chloride (PVC) processed with artificial synthesis method. The surface is a wear-resistant layer made of polyvinyl chloride resin, then the printing layer and natural stone powder, the bottom layer is water-proof. The thinnest product is 3 mm thick. Plastic-stone skid-proof floor tile has strong anti-slip performance, certain ductility and heat preservation but doesn't feels as tough as natural marble; it can be produced into different colors, glosses and designs to achieve good decorative effects; with less self-weight than natural stone, it helps to decrease the bearing load of the floor, and is convenient for paving. It is especially applicable for the flooring decoration of kindergartens, residential houses for senior people and hospitals, also for the facing decoration of internal walls and columns etc.

Speaking. Answer the questions.

1. What is a tile?
2. What kind of tiles do you know?
3. Why *have roofing tiles lost their importance?*
4. Where are floor tiles used?
5. What is a new artificial flooring material?
6. What is *used in making tiles for floor surfaces?*
7. What *temperature are wall tiles burned at?*
8. What is PVC?
9. What is applicable for the flooring decoration?
10. What can be produced into different colors, glosses and designs?

Lessons videos\U 1. L 4 Entegra Roof Tile Production Process.mkv
Lessons videos\U 1. L 4 Producing Roof Tiles.mkv

Listening. **Correct the spelling**.

Building materials listening\houses.mp3

All houses are iqneuu. Even if they look the same from the outside, they are very different on the eiinsd. I think houses are very interesting. I like looking at the way they are built and the tesyl they are built in. In London there are many houses that are hduesrnd of years old. These are beautiful. You can still see much of the rongilai wood and stone ruesrttcu. Modern houses are also interesting. It's funny how they copy many of the setfraeu of older houses. I love looking at houses when I travel. Every country has its own special designs, from Japan to Arabia to Greece. Nowadays people are building eco-nreifdly houses. They want houses that save yeergn and help protect the ntaelp.

LESSON 5

TERRACOTTA

Vocabulary:

1. *refractory* – огнеупорный – olovga chidamli
2. *ornamental – декоративный – dekorativ*
3. *pottery – керамика – sopol idish*
4. *to pug – мять глину – loyni maydalash*
5. *moulding – формовка – qoliplash*
6. *impervious – непроницаемый - o'tkazmaydigan*
7. *sufficient – достаточный - yetarli*
8. *porous – пористый – g'ovakli*
9. *fire resistant – огнеупорный* – olovga chidamli
10. *biscutting – вторично отрезать – qayta kesish*
11. *coaled – обогревать углем – ko'mir bilan qizdirish*
12. *leak proof – герметичность – suyuqlik o'tkazmaydigan*

Reading.

It is an Italian word. Terra means clay and Cotta means burnt. Terracotta is refractory clay product and is used in ornamental parts of buildings. The clay used for its manufacture should be of superior quality and should have sufficient iron and alkaline matters. By varying iron oxide in clay, desired colour can be obtained. The clay is mixed with powdered glasses, pottery and sand ground to fine powder and pugged several times till it gets uniform and soft for moulding. Terracotta is impervious, hard and cheap. When properly made the material weathers well and because of its glazed surface can be cleaned easily. The product is burnt in special kilns (Muffle furnace).

Preparation of Clay: The clay is mixed thoroughly with water in a tub. Powdered pottery, glass, and white and are added to it in sufficient proportions. It is then intimately mixed with spades. The intimate mix is then placed in wooden boxes with joints. This allows the surplus water to drain off. Thereafter the mix is passed several times through pug mills.

Moulding and Drying: Special porous moulds are made of Plaster of Paris or of zinc. The pugged clay is pressed into moulds. The dried articles are taken out of the moulds after a few days and then dried slowly.

Uses

1. Hollow blocks of terracotta are used for masonry.
2. Cornices and arches.
3. Statuettes.
4. Ornamental works.
5. Being fire proof, terracotta is most suitable as casing for steel columns and beams.
6. Porous terracotta is used for sound insulation.

Classification: Terracotta is of two types, the porous and the polished (Faience). Porous Terracotta: It is manufactured by mixing sawdust or finely fragmented cork in the clay and has the following characteristics.

1. Light weight.
2. Resistant to weathering action.
3. Fire resistant.
4. Can be nailed and sawn to various shape.
5. Sound proof.
6. Poor strength-used only for ornamental works.

Polished Terracotta is highly glazed architectural terracotta with relatively coarse body. These are made from refractory clays with addition of quartz sand and fulling agents such as chalk. The polished terracotta is also called terracotta twice burnt. The 1st burning is called biscutting and is done at 650°C. Then, this product is coaled with glazed solution which imparts texture and colour. Thereafter it is dried and fired at 1200°C. The material

- is hard, strong and durable.
- can be given different colors.
- is leak proof (water absorption < 12 per cent) and can be easily cleaned.
- is resistant to chemical action.
- is resistant 10 weathering action of atmosphere.
- is fire proof.

Speaking. Answer the questions.

1. What does terracotta mean?
2. Where is terracotta used in?
3. How can *desired colour be obtained?*
4. *How clay is prepared?*
5. *How clay is dried?*
6. What is *terracotta used for?*
7. What is p*orous terracotta used for?*

8. What are the characteristics *of porous terracotta?*
9. How *the polished terracotta is also called?*
10. What are the characteristics *of polished terracotta?*

Lessons videos\U 1. L 5 Terracotta Warriors - China.mkv
Lessons videos\U 1. L 5 The incredible history of China's terracotta warriors.mkv

Listening. **Correct the spelling.**

Building materials listening\job_interviews.mp3

Job interviews are always hit and smsi for me. Sometimes I have a great interview and get the job. Other times, my interview ombbs and I don't get the job. It's really important to raeeppr. You must also be onticndef and make sure the interviewer knows you really want the job. The cirkt is to make the interviewer think you are the best person for the job. I always wear my best suit and riaevr early. I always ieslm when I walk into the interview room. First impressions are very important. It's also a good idea to talk about your experiences - sell yourself. Make sure you have a few good touinssqe to ask at the end of the interview. Interview eueqhitnc is something we learn over time – you get to xerla more the more interviews you have.

LESSON 6

APPLICATION OF CLAY PRODUCTS

Vocabulary:

1. *availability – пригодность - yaroqlilik*
2. *simplicity – простота - oddiylik*
3. *durability – долговечность - chidamlilik*
4. *sewer pipe - канализационная труба - kanalizatsiya quvuri*
5. *chimney – дымоход – mo'ri*
6. *remain – сохранять - saqlamoq*
7. *external – наружный - tashqi*
8. *reinforced ceramic beam – усиленная керамическая балка – mustahkamlangan keramik ustun*
9. *faience – фаянс – sopol*
10. *toilet bowl – унитаз – hojatxona idishi*
11. *wash basin - умывальная раковина – yuvinish uchun lavabo*
12. *bath tub – ванна – vanna*

Reading.

Universal availability of raw materials, comparative simplicity of manufacture and excellent durability of ceramic materials have put them in the forefront among other constructional materials. The high strength and durability of clay products underlie their wide use in the various elements of buildings, such as walls, wall and floor facing materials, lining materials for chemical industry apparatus, chimney, light porous aggregates for roofing, and sewer pipes. The various applications or clay products in the building industry are as follows.

1. Wall materials. The examples are common clay brick, perforated clay brick, porous and perforated stiff-mud brick, and hollow clay dry-press brick, perforated plastic moulded ceramic stones and light weight building brick. Clay brick accounts for half of the total output of wall materials. Structural properties of hollow clay products and low heat losses through air-filled voids (particularly at subzero temperatures) provide great possibilities for reducing the thickness and the weight of exterior walls. Ceramic facing tiles remain the chief finishing material for sanitary and many other purposes and are still in great use for external facing of buildings.

2. Brick for special purposes. The examples are curved clay brick, stones for sewage installations (underground sewer pipes) brick for road surface (clinker).
3. Hollow clay products for floors. The examples are stones for close-ribbed floors (prefabricated or monolithic), stones for reinforced ceramic beams, sub flooring stones (fillers between beams).
4. Facade decoration. The examples are glazed or non-glazed varieties subdivided in to facing brick and ceramic stones, floor ceramics, small-size ceramic tile, ceramic plates for facades and window-sill drip stones.

5. Clay products for inferior decoration. The examples are tiles for facing walls, built-in parts, large floor tiles and mosaic floor tiles.
6. Roof materials. The examples are common clay roof tiles for covering slopes or roofs, ridge tiles for covering ridges and ribs, valley tiles for covering valleys, end tiles ("halves" and "jambs") for closing row of tiles, special tiles.

7. Acid-resistant lining items. The examples are common acid-resistant brick, acid-resistant and heat-and-acid-resistant ceramic shaped tiles for special purposes, ceramic acid resistant pipes and companion shapes.
8. Sanitary clay items. Sanitary ware items are manufactured mainly form white-burning refractory clay, kaolins, quartz and feldspar. There are three groups of sanitary ceramics: faience, semi-porcelain and porcelain, which differ in degree of caking and, as a consequence, in porosity. Items from faience have a porous shell, and items from porcelain, a solid shell, while those from semi-porcelain are or intermediate densities. The various degrees of caking of faience, porcelain and semi-porcelain, made of the same raw materials, are due to the latter's different proportions in the working mass. Solid faience is used mainly to manufacture toilet bowls, wash basin, toilet tanks and bath tubs. Items are glazed, since unglazed faience is water permeable. Semi-porcelain items feature excellent hygienic and mechanical properties being intermediate between those of faience and porcelain. Porcelain outer shell is impervious to water and gases and possesses high mechanical strength and resistance to heat and chemical agent. Porcelain is used to manufacture insulators for power transmission lines, chemical laboratory vessels, etc.

Speaking. Answer the questions.

1. What is u*niversal availability of raw materials?*

2. What kind of bricks can be examples for wall materials?
3. What *are sanitary ware items manufactured from?*
4. *What is solid faience used to manufacture?*
5. *What is porcelain used to manufacture?*
6. *What kind of examples are common roof materials?*
7. *What is porcelain outer shell impervious to?*
8. *What is porcelain used to manufacture?*
9. *What are excellent hygienic and mechanical properties being intermediate between faience and porcelain?*
10. How many are t*here groups of sanitary ceramics?*

Lessons videos\U 1. L 6 Application of Clay products.mp4

Listening. Correct the spelling.

Building materials listening\mobile_phones.mp3

How ranipttmo to you is your mobile phone? Do you really need it? In the 1980s there were no mobile phones. People still dagnmea to phone their family and friends and do business. Of course, there were more public telephones then. There was a telephone box tyertp much on every street orencr. I wonder whether mobile phones are a good or bad thing. For sure, they are very cvteeninno, but they can also be a nuisance. There's nothing worse than talking to seenomo and then they ignore you for ten muisnte while they snrwea their phone. I have even seen people on a date and one person achst on the phone for 30 minutes. How would life change for you if you didn't have a mobile? Would you miss nlngities to other people's conversations on the train?

UNIT 2 ROCKS AND STONES

LESSON 7

ROCK FORMING MINERALS

Vocabulary:

1. *aggregation – соединение элементов – elementlarning birlashishi*
2. *cleavage – раскалывание – parchalash*
3. *dolomite – доломит – dolomit (mineral)*
4. *fort – укрепление – mustahkamlash*
5. *implement – инструмент, средство – asbob, vosita*
6. to *impose – устанавливать – o'rnatmoq*
7. *luster – блеск; сияние – yaltirash*
8. *mica – слюда – slyuda*
9. *ore-minerals – полезные ископаемые – foydali qazilmalar (ma'dan)*
10. *powder-form – порошкообразный - kukunsimon*
11. *property – имущество; собственность – mulk*
12. *streak – полоска – yo'l, chiziq*
13. *to enhance – усиливать, улучшать – kuchaytirmoq, yaxshilamoq*

Reading.

Being aggregations of minerals, the properties of rocks are dependent upon the character of these constituents, identified by their physical properties such as hardness, cleavage, streak, colour, luster, specific gravity and shape of crystals.

Some minerals feature great strength, hardness and resistance to chemical attack (quartz): others have poor strength and readily soak in water (gypsum); some minerals display a great tendency to cleavage and split readily along one or several directions (mica), thus decreasing the strength of the rock they make up. Some of the important properties of minerals are as follows:

Hardness is probably the most important property for rapid determination of minerals. It is measured by scratching the mineral with a series of substances of known variation in hardness using the following scale of Mohs:

Talc, easily scratched with the thumb-nail: *1*
Gypsum, scratched by the thumb-nail: *2*
Calcite, not scratched by thumb-nail but easily cut by knife: *3*

Fluorite, can be cut by knife with greater difficulty than calcite: 4
Apatite, can be cut only with difficulty by knife: 5
Orthoclase, can be cut with knife with great difficulty on thin edges: 6
Quartz, not scratched by steel, scratches glass: 7
Topaz: 8
Sapphire: 9
Diamond: 10

If, for example, a given substance is scratched by fluorite and not by calcite its hardness is between 3 and 4.

Cleavage is the measure of the capability of some minerals to split along certain planes parallel to the crystal faces. The various types of cleavage seen in the minerals are Basal, Prismatic, Cubic, Rhombohedral and Octahedral.

Streak is the colour or the mineral in powder-form. For some minerals, their colour is seen to be entirely different from that of their powder, which makes streak a useful property in the identification of ore-minerals. Streak can be readily observed by scratching it on a streak plate made of unglazed porcelain or roughened glass.

Colour is a valuable characteristic of metallic minerals, but less reliable for non-metallic minerals.

Luster is shine on the surface of a mineral and its appearance under reflected light is classified as vitreous (glassy), greasy, pearly, resinous, dull, silky and metallic.

Crystal: The crystal form is of importance when a mineral has had the opportunity to develop its natural shape. This is not the normal condition in rock structure.

Speaking. Answer the questions.

1. What are *rock-forming minerals?*
2. What are *types of rocks from which building stones are usually derived?*
3. Where *is use of stone in building construction traditional?*
4. Why *has stone gradually lost importance as building material?*
5. What kind of *properties are rocks dependent upon?*
6. What is cleavage?
7. What is streak?
8. What kind of *minerals are various types of cleavage seen in?*
9. What is luster?
10. What is the most *important property for rapid determination of minerals?*

Lessons videos\U 2. L 7 Identifying Minerals.mkv

Lessons videos\U 2. L 7 Identifying Minerals -- Earth Rocks!.mkv

Listening. **Correct the spelling.**

Building materials listening\nobel_prize.mp3

I edworn why the Nobel Prize is so famous. Sure, the people who win it are very lcveer, but they're not really superstars. I've usually rhdea of the winner of the Nobel Peace Prize because they're ayalws in the news. But have you ever heard of the Nobel Laureates for Medicine, Physics, Chemistry, etc? Even hughto I read a lot, I only sometimes know the winner of the Nobel Prize for Literature. I like ndaiger about who won the Nobel Prize. It makes me want to be like them. Of course, I can reevn win such a prize, but I can study more. Some of the Nobel Prize winners of the past are really fasuom. Einstein and Mother Theresa are pshrpae the most famous. I was oskedch to learn Gandhi never won the Nobel Peace Prize.

LESSON 8

CLASSIFICATION OF ROCKS

Vocabulary:

1. aggregate concrete – бетон со срастанием минералов – minerallar qo‘shilib ketadigan beton
2. extrusive rock – вулканические скалы – vo‘lqon qoya toshlari
3. gneiss – гнейс – gneys (shpat, kvats, slyudadan iborat tog‘ jinsi)
4. igneous rock – изверженная порода – otilib chiqqan tog‘ jinslari
5. magmatic rock – магматические скалы – magmatic qoya toshlari
6. metamorphic rock – метаморфические скалы – metamorfik qoya toshlari
7. mortar – строительный раствор – qurilish qorishmasi
8. sedimentary rock – *осадочные скалы – cho‘kma qoya toshlari*
9. thickness – толщина, плотность – qalinlik, zichlik
10. to crust – покрываться коркой – qobiq bilan qoplanmoq
11. to delaminate – расслаиваться - tabaqalanmoq
12. to erupt – извергать, выбрасывать – otilmoq
13. to expose – делать видимым, показывать – ko‘rsatmoq, ko‘rinmoq
14. to intrude – вмешиваться – qo‘shilmoq

Reading.

According to different geological conditions, rock is generally classified into three main types: *magmatic rock*, *sedimentary rock* and *metamorphic rock*.

Magmatic rock is also called igneous rock, which is the condensation of magma when it intrudes into crust or erupts to earth surface from deep underground. When magma intrudes into crust, the intruded magma is condensed and crystallized and forms rock, called intruded rock, of which earth crust is mainly composed. Magmatic rock, according to its cooling-down conditions, is classified to plutonic rock (*depth* more than 3 km) and supergene rock (depth less than 3 km). Rock formed after magma breaking through the upper-exposed rock stratum, erupting out to earth surface, cooling down and condensing, is called extrusive rock (or volcanic rock). Volcanic rock is less used for decoration, but mainly used as aggregates to produce mortar and light aggregate concrete (such as pumice stone).

Sedimentary rock is formed after the parent rock is weathered, geologically transported and deposited etc. It is in layered structure, and each layer has different composition, structure, color and layer thickness. Compared with igneous rock, its features are weaker structural dense-status, smaller density, higher porosity and water absorption, lower strength and weaker durability.

Sedimentary rock is widely distributed in the earth, lying not deeply under the earth surface and easy for mining. According to its fanning conditions, sedimentary rock is classified to *mechanical sedimentary rock*, *chemical sedimentary rock* and *biological sedimentary rock*. According to its binding material, it is classified to *siliceous*, *argillaceous* and *calcareous*. Typical *siliceous rocks* are quartz rock, sandstone, conglomerate and diatomite etc.; *argillaceous rocks* are mudstone, shale and oil shale etc.; *calcareous rocks* are limestone, dolomite, marl and lime-breccia etc.

Metamorphic rock is made when magmatic or sedimentary or even other metamorphic rock is subjected to high temperature and extreme pressure inside the crust. According to the changes that take place in the course of metamorphism alteration, it is further divided into *ortho-metamorphic* and *para-metamorphic* rocks.

Ortho-metamorphic rock is metamorphosed from magmatic rock. After metamorphosis, its structure and performances are weaker than those of the primary rock. For instance, gneiss which is metamorphosed from granite rock is more likely to delaminate and flake off, and its durability becomes weaker.

Para-metamorphic rock is metamorphosed from sedimentary rock. After metamorphosis, its structure and performances are better than those of the primary rock. For instance, marble, metamorphosed from lime-rock, has denser structure and stronger durability. Commonly-used metamorphic rocks are marble, quartz rock and gneiss.

Speaking. Answer the questions.

1. What are three main types of rock?
2. What is magmatic rock?
3. What is called which erupting out to earth surface, cooling down and condensing?
4. What is sedimentary rock classified to?
5. What are siliceous rocks?
6. What are argillaceous rocks?
7. What are calcareous rocks?

8. What are metamorphic rocks?
9. What is metamorphosed from magmatic rock?
10. What is metamorphosed from sedimentary rock?

Lessons videos\U 2. L 8 Types of Rocks - Igneous, Sedimentary, Metamorphic.mkv

Listening. **Correct the spelling.**

Building materials listening\nuclear_energy.mp3

Many scientists say nuclear energy is our tuurfe. Many normal people aren't so sure. I think most of us rwroy about nuclear energy. We hear on the news about the ngdsare of nuclear power. Many years ago there was a big accident in Chernobyl, Russia. A nuclear reactor caught fire and emetld. Because of this, deadly radiation spread across the whole of Europe. There were psetrro that sheep in England caught radiation sickness. I think things are aesfr now. Many countries srttu nuclear energy. France and Japan each has dzsnoe of nuclear power stations. I think it's probably a good idea. We really need to stop using ifosls fuels. Nuclear power is a lot less harmful to the environment. Perhaps we need to nedsp more money on making it safer.

LESSON 9

QUARRYING OF STONES

Vocabulary:

1. *quarrying process – процесс каменоломня – tosh qazib olish jarayoni*
2. *vicinity – близость, соседство – yaqinlik, qo‘shnichilik*
3. *dumping refuse – сброс отходов – chiqindini to‘kish*
4. *mining – горные работы – tog‘ ishlari*
5. *voids – поры – teshiklar*
6. *excavation – копание – qazish*
7. *wedging – раскалывание – maydalash*
8. *pin – штырь – qoziq*
9. *scraping spoon – ложка выскабливания – qazish qoshig‘i*
10. *tamping bar – стержень для штыкования – nayza tayog‘i*
11. *priming needle – иголка взрывателя – portlovchi ignasi*
12. *jumper – ручной бур – qo'l burg‘usi*
13. *borer – бурильный молоток – burg‘ulash bolg‘asi*
14. *claying iron – глиняное железо – loy temir*
15. *crow bar – лом – hurda*

Reading.

The only operation involved in the production of natural stone is the quarrying process. The open part of the natural rock from which useful stone is obtained is known as quarry. While selecting a quarry site, the points to be borne in mind are availability of sufficient quantity of the stone of desired quality, proper transportation facilities, cheap local labour, problems associated with drainage of rain water, location of important and permanent structures in the vicinity and site for dumping refuse.

Methods of Quarrying

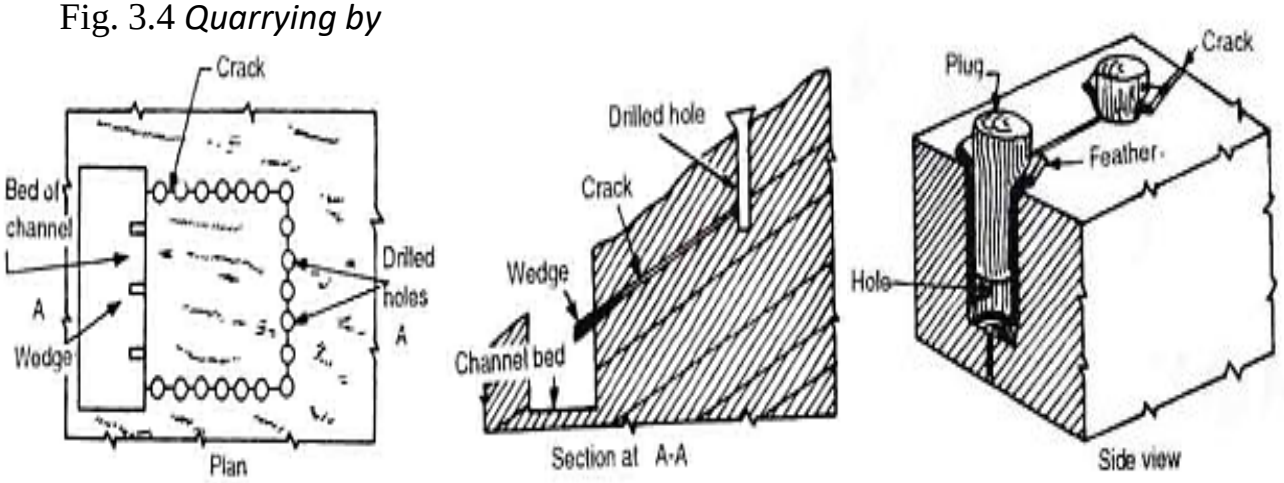
Rocks suitable for the manufacture of stone materials are called useful minerals and the operations involved in obtaining minerals are called mining. In the process of mining, voids formed are called excavations, and the mined deposits are the quarries. The purpose of quarrying is to obtain stones for various engineering purposes. Knowledge of various quarrying methods is essential but does not make one very much more competent to choose or specify a stone for building work. Depending upon the nature and surface of

rocks and the purpose for which stones are needed, quarrying is done by excavating, wedging, heating or blasting.

Excavating: Stones buried in earth or under loose overburden are excavated with pick axes, crow bars, chisels, hammers, etc.

Wedging: This method of quarrying is suitable for costly, soft and stratified rocks such as sandstone, limestone, laterite, marble and slate. About 10-15 cm deep holes, at around 10 cm spacing, are made vertically in the rock. Steel pins and wedges or plugs (conical wedges) and feathers (flat wedges) as shown in Fig. 3.4 are inserted in them.

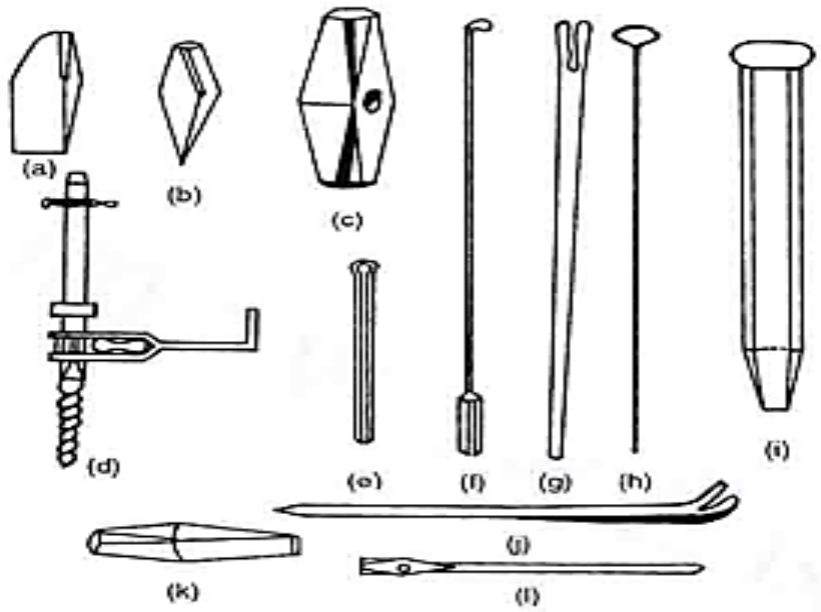
Fig. 3.4 *Quarrying by*



Wedging

Stone quarrying tools

Some of the quarrying tools shown in Fig.3.3 are wedge, pin, hammer, dipper or scraping spoon, tamping bar, priming needle, jumper, borer, claying iron, crow bar.



(a) Wedge
(b) Pin
(c) Hammer
(d) Ratchet boring machine
(e) Drill
(f) Dipper
(g) Tamping bar
(h) Priming needle
(i) Jumper
(j) Crow bar
(k) Chisel pointed wedge
(l) Claying iron

Fig. 3.3 Tools for Quarrying Stones

Speaking. **Answer the questions.**

1. What *is the quarrying process?*
2. *What is called excavations?*
3. *What is the purpose of quarrying?*
4. *How is quarrying done?*
5. *What are stones buried in earth excavated with?*
6. *What is wedging suitable for?*
7. *What are stone quarrying tools?*
8. *How many are deep holes made vertically in the rock?*
9. *What is inserted in the rock?*
10. *What is called the quarries?*

Lessons videos\U 2. L 9 Big trucks carrying stones to the stone crusher plant.mkv
Lessons videos\U 2. L 9 Jaw Crusher.mkv

Listening. **Correct the spelling.**

Building materials listening\peace.mp3

Peace is the one igtnh we all hope for in the world. I wonder if it will ever come. It seems so pmiles, really. Why can't everyone live in peace? It seems a lot arsiee to do that than to fight ssesule wars. If there was peace in the world, everyone's life would be better. Governments could spend all the money they estaw on armies on education and healthcare. We really need peace. There have been too many wars in our ihrsoyt. I would say well over 99 percent of the world's oelepp want peace. Only a tiny rtominiy doesn't want peace, although they say they do. World ederasl need to think more carefully about how they can veeahic peace in the world.

LESSON 10

USES OF STONES

Vocabulary:

1. *implementing – реализация – amalga oshirish*
2. *weapon – оружие – qurol*
3. *stone – камень – tosh*
4. *composition – состав – tarkibi*
5. *quartz – кварц – kvarts*
6. *feldspar – полевой шпат – dala shpati*
7. *mica – слюда (*прозрачный слоистый минерал*) – shaffof qatlamli mineral*
8. *dolomite – доломит – dolomit*
9. *prehistoric age – доисторический век – tarixdan oldingi asr*
10. *enhancing – усиление – kuchaytirish*
11. *overshadow – затмевать – soya qilmoq*
12. *sandstone – песчаник – qumtosh*
13. *limestone – известняк – ohaktosh*
14. *pace – темп, шаг - tezlik*

Reading.

The history of mankind is supposed to have begun with the stone age marked by the use of implements and weapons made of stone. Prior to that, the difference between animals and homosapiens was largely physical. But once human beings started using stones, the world of both changed entirely.

Stone has been defined as the natural, hard substance formed from minerals and earth material which are present in rocks. Rock may be defined as the portion of the earth's crust having no definite shape and structure. Almost all rocks have a definite chemical composition and are made up of minerals and organic matter. Some of the rock-forming minerals are quartz, feldspar, mica, dolomite,

etc. The various types of rocks from which building stones are usually derived are granite, basalt, trap, marble, slate, sandstone and limestone.

Use of stone in building construction is traditional in the places where it is produced, although even there its high cost imposes limitations on its use. The conditions which govern the selection of stone for structural purposes are cost, fashion, ornamental value and durability.

Stone has been used in the construction of most of the important structures since prehistoric age. Most of the forts world over, the Taj Mahal of India, the famous pyramids of Egypt and the Great Wall of China are but a few examples. Stone has also been extensively used in almost all the elements of building structures, as load carrying units as well as for enhancing the beauty and elegance of the structure. As building material stone has gradually lost importance with the advent of cement and steel. Secondly, the strength of the structural elements built with stones cannot be rationally analyzed. Other major factors in overshadowing its use are the difficulties in its transportation and dressing which consume a lot of time resulting in slow pace of construction.

Speaking. Answer the questions.

1. What is the *history of mankind supposed?*
2. *How is the Stone Age marked by?*
3. *What did human beings start to do?*
4. *What is present in rocks?*
5. *What is made up of minerals and organic matter?*
6. *Where is stone also extensively used in?*
7. *Why did stone gradually lost its importance?*
8. What is *overshadowing stone use?*
9. *What is usually derived from stones?*
10. What kind of *forts world over do you know?*

Lessons videos\U 2. L 10 Uses and Importance of Rocks.mkv

Listening. **Correct the spelling.**

Building materials listening\property.mp3

Property is one of the best investments you can make. Of course it penedsd on which country you live in. Buying property yaluslu guarantees your investment will rise in value. If you have a lot of extra cash, you can play the world property ekamtr. Places like Dubai and other areas of the Gulf are good places to buy at the enotmm. I know lots of people who have made a lot of money from property. They have aersvle houses and rent them out. The rent pays the tgargome and after twenty years the house is theirs. I've never had any property. I'm still vsgani up for the opdtsie to buy a house. I find the property market to be very cuniosngf. I don't like all the dhdnei costs involved in buying a property.

LESSON 11

ARTIFICIAL STONES

Vocabulary:

1. *artificial stone – искусственный камень – sun'iy tosh*
2. *crushed stone – разрушенный камень – vayron qilingan tosh*
3. *moulded – формованный – shakllangan*
4. *intricate – запутанный – chalkash*
5. *grooves – канавки – oluklar*
6. *window sill – подоконник – deraza tokchasi*
7. *immerse – погружать – botirmoq*
8. *impregnate – пропитывать – shimdirish*
9. *bituminous stone – битумный камень – bitumli tosh*
10. *cast-in-situ – монолитный – monolit, yaxlit*
11. *flagstone – каменная плита – tosh plastinka*
12. *surface drains – поверхностные стоки – sirt oqimi*

Reading.

Where durable natural stone is not available at reasonable cost, artificial stone, also known as cast stone becomes the choice. Artificial stone is made with cement and natural aggregates of the crushed stone and sand with desired surface finish. Suitable colouring pigments may be added. However, colouring should not exceed 15 per cent by volume. Cement and aggregates are mixed in proportion of 1:3.

Artificial stone can be moulded into the most intricate forms, cast into any size, reinforced to have higher strength, are most suitable for face work, since grooves, rebates, etc., can be cast easily and are economical. Some of the artificial stones available are as follows:

Concrete Block are cast at site in the construction of piers or cast in moulds for steps, window sills, etc.

Ransom Stone are prepared by mixing soda silicate with cement to provide decorative flooring. These are also known as chemical stones. These have compressive strength of about 32 N/mm^2.

Victoria Stone are granite piece with the surfaces hardened by keeping immersed in soda silicate for about two months.

Bituminous Stone: Granite and diorite are impregnated with prepared or refined tar to form bituminous stone. These are used for providing noise, wear and dust resistant stone surfaces.

Imperial Stone: Finely crushed granite is washed carefully and mixed with Portland cement. The mix is moulded in desired shape and then steam cured for 24 hours. The cured blocks are immersed in silicate tanks for three days. These stones are similar to Victoria stones.

Artificial Marble can be either pre-cast or cast-in-situ. These are made from Portland gypsum cement and sand. In the precast variety, the cast-stone is removed after three days. On the fifth day of casting these are treated with a solution, liquid fluorite of magnesia. It is then washed and wrapped in paper for 24 hours and then once again treated with the liquid. After one month the stone is polished by rubbing emery over the surface with a linen rag ball dipped in mixture of lime water and silicate of potash and then the process is repeated without emery. It is used for external works.

Garlic stone is produced by moulding a mixture of iron slag and Portland cement. These are used as flagstones, surface drains, etc.

Speaking. Answer the questions.

1. *What is also known as cast stone?*
2. *What is artificial stone made with?*
3. *What is mixed in proportion of cement and aggregates?*
4. *What can artificial stone be moulded into?*
5. *What is cast at site in the construction of piers?*
6. *What is prepared by mixing soda silicate with cement?*
7. *What is also known as chemical stone?*
8. *What is impregnated with prepared or refined tar to form bituminous stone?*
9. *What kind stones are similar to Victoria stones?*
10. *What is made from Portland gypsum cement and sand?*

Lessons videos\U 2. L 11 How It's Made- Artificial Stone.mkv

Listening. **Correct the spelling.**

Building materials listening\pyramids.doc

The Pyramids in Cairo are my favourite ndsluibig in the whole world. I knew all about them when I was very young. They have always ftcadesnia me. They really are one of the world's nsroedw. People still don't know how they were built. I think they are bbolyapr the greatest architectural achievement ever. Even the ltleast buildings today are easy to build. The Pyramids were almost impossible to build, but they did it. Two things fascinate me about The Pyramids – their beautiful shepa and their mystery. I love nkogilo at photos of The Pyramids. When I visited Egypt, their tauyeb blew me away. And the great thing was I also felt their yrmytes. The Pyramids are full of ddeihn secrets, history and myst.

LESSON 12

APPLICATIONS OF STONES

Vocabulary:

1. *concrete constructions – бетонные конструкции – beton konstruktsiyalar*
2. *application – применение – qo'llash*
3. *binding materials – связующие материалы – biriktiruvchi materiallar*
4. *flux – поток – oqim*
5. *resistance – сопротивление – qarshilik*
6. *slab – плита – plastinka*
7. *pier – пирс, пристань – iskala (sohilda kemalar turishi uchun jihozlangan joy)*
8. *stratification – стратификация – tabaqalanish*
9. *piece stones – штучные камни – bo'lak toshlar*
10. *sawn – распиленный – kesilgan*
11. *split – расколоть – bo'lish, maydalash*
12. *luff – выступ – peshtoq*
13. *syenite – сиенит – siyenit*
14. *guard rails – перила – zina panjarasi*
15. facing slabs – облицовочные плиты – qoplama plitalari

Reading.

Of the total amount of stone quarried for the building industry, about 75 per cent are used directly for concrete constructions and road making, the balance find applications in the manufacture of cement and other binding materials, in the chemical industry, as metallurgical fluxes, and for making wall from natural stones.

1. Natural stones materials, possessing high resistance to atmospheric agents, high mechanical strength and pleasant colours are widely used in construction as slabs for walls and foundations of buildings and installations, as facing slabs and stones for exterior and interior walls of buildings and installations, for roads, sidewalks, piers, unloading walls and other structures, where mechanical strength, durability and decorative requirements are of concern.

2. Foundations and walls of underground parts of buildings are made from quarry, split and sawn stones from igneous, sedimentary and metamorphic rocks. Prefabricated items and materials, intended for foundations and underground walls, should be

manufactured from homogeneous stone with no traces of weathering, streaks of clay, stratification, or cracks. Piece stones, sawn and split from limestones, dolomite, sandstones and volcanic turfs are used for aboveground walls (piers or bridges, embankment and side slope reinforcements, retaining walls) and for working to crushed stone.

3. Slabs for floors and facing of walls are rectangular, their dimensions depending on the kind of rock and the face finish. Thicknesses of items should be not less than: "rock" face, 150 mm; pointed, tooled and fluted, 60 mm; polished, 12 mm. Slabs are manufactured in a variety of sizes, from 200 to 400 mm in width and from 300 to 1000 mm in length. Stronger rocks go for larger slabs, and the weaker rocks, for smaller slabs.

4. Facing slabs and stones, parts of stairs and landings, parapets and guard rails are made of slabs sawn or split form natural stone and worked by mechanical means. Rocks used for the manufacture of slabs should have a compressive strength of not less than 5 MPa and a coefficient of softening between 0.7 and 0.9. Elements of stairs and landings, parapets and guard rails are manufactured form marble, limestone, luffs, granite, syenite and other rocks, and are given various finishes depending on the kind of rock similarly to facing slabs.

Speaking. Answer the questions.

1. *What is about 75 per cent of stone quarried used for?*
2. What are n*atural stones materials* used for?
3. What *are foundations and walls of underground parts of buildings made from?*
4. What is *used for aboveground walls?*
5. What are the measures of slabs?
6. What is form of s*labs for floors and facing of walls?*
7. What does stronger rock go for?
8. What does weaker rock go for?
9. What are *parts of stairs and landings, parapets and guard rails made of?*
10. What *should strength and a coefficient of softening of slabs be?*

Lessons videos\U 2. L 12 How to Build a Stone Wall.mkv

Listening. **Correct the spelling.**

Building materials listening\quality.mp3

How iraotntmp is quality to you? It's very important to me. Unfortunately, a lot of the time it's also very eneipevsx. But not all of the time. It pedneds on what you buy. I can buy very good quality clothes very hcalype. They are often the same quality as arndb names. It's also easy to buy good quality food. I go to vegetable and fish markets to get good quality and cheap food. It's much better than the stffu in supermarkets. It can also be aecpher. I'd love a good quality car, but this is where my dtbueg runs out. It's still osplisbe to buy a top-of-the-range Japanese car which is the same quality as a much more expensive German one. I do spend a little extra to buy a top quality ermutopc – an Apple.

UNIT 3 WOOD AND WOOD PRODUCTS

LESSON 13

CLASSIFICATION OF TREES

Vocabulary:

1. wood – древесина – yog‘och
2. trunk – ствол - daraxt tanasi
3. branches – ветви - daraxt shoxlari
4. timber – лесоматериалы – yog‘och
5. lumber – пиломатериалы, брёвна – yog‘och, bolor
6. matrix – материнская порода – ona zoti
7. plywood – клеёная фанера – yopishtirilgan kontrplak
8. fibreboards – древесно-волокнистая плита (ДВП) - tolali taxta paneli
9. chipboards – древесно-стружечная плита (ДСП) - sunta paneli
10. compressed wood – сжатая древесина - siqilgan yog‘och
11. impregnated wood – пропитанная древесина – shimdirilgan yog‘och
12. *endogenous – эндогенный (внутренне обусловленный) – endogen (ichki aniqlangan)*
13. *exogenous – экзогенный (внешне определяемый) – ekzogen (tashqi tomondan aniqlanishi mumkin)*
14. *conifers – хвойное дерево – Ignabargli daraxt*
15. *deciduous - листопадный, сбрасывающий листья – bargi to‘kiladigan, barglarini tashlaydigan*

Reading.

Wood is a hard and fibrous substance which forms a major part of the trunk and branches of a tree. It can also be defined as a natural polymeric material which practically does not age. Wood as a building material falls in two major classes – *natural* and *man-made*. With the advances in science and technology, wood in its natural form as timber, lumber, etc. is being rapidly replaced by composite wood materials in which natural wood is just a basic ingredient of a matrix or a laminate. The latter are found to be more useful and adaptable as they may be treated chemically, thermally or otherwise as per requirements. Some examples are plywood, fibreboards, chipboards, compressed wood, impregnated wood, etc.

Wood has many advantages due to which it is preferred over many other building materials. It is easily available (this won't be true after some years) and easy to transport and handle, has more thermal insulation, sound absorption and electrical

resistance as compared to steel and concrete. It is the ideal material to be used in sea water. Wood is a good absorber of shocks and so is suitable for construction work in hilly areas which are more prone to earthquakes. Finally, since wood can be easily worked, repairs and alterations to wood work can also be done easily.

Owing to the above mentioned advantages, wood is very widely used in buildings as doors, windows, frames, temporary partition walls, etc. and in roof trusses and ceilings apart from formwork.

Trees are classified as endogenous and exogenous according to the mode of growth.

Endogenous Trees

Trees grow endwards, e.g. palm, bamboo, etc.

Exogenous Trees

Trees grow outwards and are used for making structural elements. They are further subdivided as conifers and deciduous.

Conifers are evergreen trees having pointed needle like leaves, e.g. deodar, fir, pine and larch. They show distinct annual rings, have straight fibres and are soft with pine as an exception, light in colour, resinous and light weight.

Deciduous trees have flat board leaves, e.g. oak, teak, poplar and maple. The annual rings are indistinct with exception of poplar and bass wood; they yield hard wood and are non- resinous, dark in colour and heavy weight.

Speaking. Answer the questions.

1. What is substance wood?
2. What can be defined as a natural polymeric material which practically does not age?
3. How many are there classes of wood as a building material?
4. What is found to be more useful and adaptable as they may be treated chemically and thermally?
5. What is easy to transport and handle, has more thermal insulation, sound absorption and electrical resistance as compared to steel and concrete?
6. What is the ideal material to be used in sea water?
7. What are there classes of t*rees according to the mode of growth?*
8. What kind of trees grows endwards?
9. What kind of trees grows outwards?
10. What kind of trees are conifers?

Lessons videos\U 3. L 13 TOP 15 STUNNING and BEAUTIFUL Trees.mkv

Listening. **Correct the spelling.**

Building materials listening\road_rage.mp3

I don't taundrndse road rage. It is a problem that is getting worse all over the world. People are urtngni into monsters when they get nbehid the wheel of a car. They think the road egonsbl to them. They think they don't have to follow speed iltims or consider other drivers. I wonder why this is. What is it about cars and driving that turns mlaorn people into miasanc? Some people simply hoot and ashek their fists. The funny thing is that they also do the same things to make other drivers angry. Serious road rage happens when someone gets out of their car and gets angry. They can hucnp the other diver and sometimes even kill them. Why would you want to kill someone because they okeortvo you? Crazy.

LESSON 14

CLASSIFICATION OF TIMBER

Vocabulary:

1. *timber – древесина – yog‘och, bolor*
2. *synonymous – синонимичный – sinonim*
3. *distinct meanings – различные значения – har xil ma’nolar*
4. *retain – сохранять – saqlamoq*
5. *plank – обшивная доска – qoplama taxtasi*
6. *defect – недостаток – kamchilik*
7. *consideration – обсуждение – munozara*
8. *accumulative value – совокупная стоимость – umumiy qiymat*
9. *teak – древесина тикового дерева – tik daraxti yog‘ochi*
10. *felled tree – срубленное дерево – kesilgan daraxt*
11. *qualitative evaluation – качественная оценка – sifatli baholash*
12. *converted materials – преобразованные материалы – aylantirilgan materiallar*

Reading.

The terms timber and wood are often used synonymously, but they have distinct meanings in the building industry. Wood is the hard, fibrous material that makes up the tree under the bark, whereas timber may be defined as a wood which retains its natural physical structure and chemical composition and is suitable for various engineering works. Following is the classification of timber as per IS: 399, except the classification of timber based on grading which is given in IS: 6534.

On the Basis of its Position

Standing Timber implies a living tree.

Rough Timber forms a part of the felled tree.

Converted Timber or Lumber is log of timber sawn into planks, posts, etc.

On the Basis of Grading (IS: 6534)

All grading specifications are clearly distinguished between structural or stress grading, and commercial or utility grading based on World

Standard Classification. Structural grading is also known as stress grading. However, there is a small distinction between the two. Structural grading refers to the principle by which the material is graded on the basis of visible defects which have known effects on the strength properties of the material. Stress grading refers to the principle by which the material is graded by consideration of maximum principle stresses to which it can be subjected.

Structural grading is further divided as:

I. Grading based on known effects of defect and estimating accumulative value.

2. Machine grading.

Commercial grading also known as yard grading or utility grading refers to the principle by which the material is graded by consideration of usefulness of the material and price factors.

Commercial grading is further divided in the following classes:

Grade A: This classification is based on dimensions and general appearance. The dimensions of lengths, widths and thicknesses of converted materials are measured.

Grade B: This classification is based on the best ultimate use of the material. Here, each grade is further divided into A, B and C classes to indicate occurrence of defects. Only two length are recognized, long (L) which is 5m and above, and short(S) that is under 5m. Each log is stamped such as BAL (Beam, A-class, long), PBS (Plank, B-class, short), etc. Sometimes another letter is also added indicating the species, e.g. T for teak.

Grade C: This classification is based on qualitative evaluation of defects and rough estimate of out-turn of utilizable material.

Grade D: This classification is based on evaluation of units of defects and fixing the permissible number of standard volume of area or the material in each grade.

Speaking. Answer the questions.

1. What *have distinct meanings in the building industry?*
2. What *forms a part of the felled tree?*
3. What *implies a living tree?*
4. What *are all grading specifications clearly distinguished between?*
5. What is *based on dimensions and general appearance?*
6. What *is based on the best ultimate use of the material?*
7. What *is based on qualitative evaluation of defects and rough estimate of out-turn of utilizable material?*

8. What *is based on evaluation of units of defects and fixing the permissible number of standard volume of area?*
9. What does *BAL mean?*
10. What does *PBS mean?*

Lessons videos\U 3. L 14 Timber.mkv

Listening. **Correct the spelling.**

Building materials listening\sand.mp3

Sand is very uufsel. You can do so many things with it. You can make sand lascets, bury yourself in it and sink your toes in it. Perhaps the gbtsieg use of sand is in building. Most of today's buildings would not be there without sand. I dorwne where sand came from. How did it get there? There's so much sand in the world. I'd love to know how many ngiars of sand there are in the world. A lot of sand comes from deserts. Going to the desert and nliogok at the sand is the best thing for me. The many esspha and oclsuor the sand makes is naamgzi. I once experienced a sand experience. It was a sdotsanmr. I almost couldn't see anything in front of me because there was so much sand olgbniw.

INDEPENDENT

WORKS

Independent work 1.
Variant 1
Reading task

Building materials of the past were wood and masonry - brick, stone, or tile, and similar materials. The builders bound the layers together with mortar or some other binder. They sometimes used iron rods to strengthen their buildings. The columns of the Parthenon in Athens, for example, have holes in them for iron bars that have now rusted away. The Romans used natural cement that they made from volcanic ash.Steel and cement, the two most important building materials now, appeared in the nineteenth century. People had been producing steel, an alloy of iron and an amount of carbon, up to that time by a difficult process that limited its use. After the invention of the Bessemer process steel was available in large quantities.The important advantage of steel is its tensile strength; that is, it does not lose its strength when it is under a calculated degree of tension - a force which pulls materials apart. New alloys have further increased the strength of steel and eliminated some of its problems, such as fatigue, which is a tendency for it to weaken as a result of constant changes in stress.Modern cement, which we call Portland cement, appeared in 1824. It is a mixture of limestone and clay. Builders mix it with sand, aggregate (stones, crushed rock, or gravel), and water to make concrete. Different proportions of these materials produce concrete with different strength and weight. Concrete is very versatile; builders can pour, pump, or spray it into all kinds of shapes. And while steel has great tensile strength, concrete has great strength under compression. Thus, the two building materials complement each other

Read the text and guess if the statement is true or false or not given

1.They sometimes used iron rods to strengthen their buildings.
A) True B) False C) not given
2. Steel and cement, the two most important building materials now, appeared in the eighteenth century.
A) True B) False C) not given
3.Modern cement, which we call Portland cement, appeared in 1820
A) True B) False C) not given
4.Builders mix it with cement, aggregate (stones, crushed rock, or gravel), and water to make concrete.
A) True B) False C) not given

Answer the questions according to the text.

- What were the main building materials of the past?
- What did the builders use to bind the layers together?
- Who used iron rods to strengthen their buildings?
- Which columns have holes for iron bars?
- Who used natural cement?
- When did the two most important building materials appear?
- When was steel available in large quantities?
- What is the important advantage of steel?
- What has increased the strength of steel?
- When was Portland cement invented?
- What is Portland cement?
- What do builders do to make concrete?
- What makes concrete a versatile building material?
- Why do concrete and steel complement each other?

2. Write an essay on the topic: Types of Structures
3. Speak on the topic : Parts of a building
4. Listening

Planets.mp3

How _____ get there? How is it only our planet has life? Will we ever travel to other planets? These are _____ about. I think our planet is the best. It looks so beautiful from space _____ blue and green. The other planets _____ me.

Mercury is just a red, hot ball, pretty much the same as Mars. Saturn looks like a real planet. _____ extra-special look. The other planets don't look that interesting. I don't really know much about Venus, Neptune, Uranus and Jupiter. When I was at school, _____ was a planet. But now it isn't. Scientists have decided there are _____ in our solar system and not nine. I wonder why _____.

Independent work 1.
Variant 2
Reading task

People build every building project in order to get a structure which will function for some time. Good results depend upon the materials which the builder selects and how he uses them. They have to function under different conditions. The builder has to understand building materials in order to produce the satisfactory structure. He needs to know design procedures, building methods, and maintenance. In the basis of all these is the knowledge of materials. In order to be satisfactory, each material that a builder uses must function well over a long time. The building process begins when a person or organization, the owner, decides to build a structure. The next step is to ask a designer, either an engineer or an architect, to design the building project. The designer makes plans which consist of drawings. These drawings show how the building will look. The plans explain what materials a builder will use. The designer also explains the characteristics which the materials must have. He describes all basic materials, such as wood, iron, and stone, and all manufactured products, such as concrete blocks.

The owner then asks a builder to do the building work and gives him a contract to build a structure according to the plans which an engineer or an architect has made.

1.**Read the text and guess if the statement is true or false or not given**

1 Bad results depend upon the materials which the builder selects and how he build them.

A) True B)False C) not given

2.All construction materials must resist force.

A) True B)False C) not given

3.The designer also explains the characteristics which the materials must have.

A) True B)False C) not given

4.The amount of deformation depends on the size and shape of the object and its material.

A) True B)False C) not given

- **Answer the questions according to the text.**
- Why is the knowledge of the building materials important?
- What are the steps of building a structure?
- Who designs a building project?
- What is the function of the builder?

2. Write an essay on the topic: Shapes

3. Speak on the topic : Describing shapes and structures

4. Listening

university.mp3

University is one of _____ of our life, if you go to university, that is. I totally loved my university days. I also loved my university. I had three _____ being a student. It was the first time I lived alone, without my parents. I had to cook, wash and _____. I loved it. I had complete freedom. I also _____. It was much more interesting than studying at school. It was nice to just _____ a lecture, do the reading and then do the assignments. I really felt like I was learning something. I also loved _____ university. It's almost 24/7. There _____ and things to do. You have to get _____ between studying and partying.

Independent work 1.
Variant 3
STRENGTH AND STRESS
Part I
All construction materials must resist force. A force has a value and a direction. Gravity causes most of the forces in construction. There are other causes such as wind. Unit stress (stress) is force per unit area over which the force acts. We obtained it by dividing the force by the area on which it acts and show it as pounds per square inch, or psi. Strength of a material is the ability to resist a force. That ability depends on the size and shape of the object and its material. Strength of a material is equal to the unit stress that the material can resist. Strength has the same units as unit stress. The useful strength of a material is equal to the unit stress at failure. Failure takes place when an object can not serve its purpose. The material may fail if it breaks or if deformation is excessive. A change in the outside dimensions of an object that a force has caused is deformation. The amount of deformation depends on the size and shape of the object and its material. When we divide the total change in dimension by the original dimension we obtain unit strain (strain). Unit strain is the result of unit stress. We can see unit strain when we stretch a rubber band or compress or twist a piece of rubber hose. A rubber band which we subject to a compressive force becomes much shorter and a little wider. A sample which we subject to a tensile stress becomes much longer and a little narrower. There are three kinds of unit stresses and corresponding strengths - compressive, tensile, and shear. They depend on the position of the forces which act on the object.

1.**Read the text and guess if the statement is true or false or not given**

1.All construction materials must resist force.
A) True B)False C) not given
2.That ability depends on the size and shape of the object and its build.
A) True B)False C) not given
3.Strength has the different units as unit stress.
A) True B)False C) not given
4.There are three kinds of unit stresses and corresponding strengths - compressive, tensile, and shear
A) True B)False C) not given

Answer the questions according to the text.

- What must all construction materials resist?
- What does a force have?
- What causes most of the forces in construction?
- What do we call “stress”?
- What is “strength of material”?
- What does that ability depend on?
- What units does strength have?
- When does failure take place?
- What does deformation mean?
- What does the amount of deformation depend on?
- What is the result of unit stress?
- How many kinds of unit stresses do you know? What are they?

2. Write an essay on the topic: Describing landscapes
3. Speak on the topic : Basic Math

apartments.mp3

In the USA, _____ apartments; in the UK they’re called flats. They are a _____ . I don’t particularly like them. I don’t think it’s good for so many people to _____ together. It’s not good for people to live _____ each other. I don’t understand how people can live _____ second floor. It’s not natural to live in the sky. The thing _____ about apartments are the lifts (Americans say elevator) and _____ no garden. More and more people are moving into apartments. This

_____ with overcrowding. There aren't enough spaces _____ car, there's nowhere to throw your rubbish and you have _____ to reach your floor. Give me a little house with a little garden any day.

Independent work 1.
Variant 4

There are several reasons why engineers must not design a material which is under the stress near to the failure stress:

- Failure unit stress may be smaller than the engineers designed.
- The force on a structure may be larger than the engineers designed.
- Materials may weaken due to rusting (steel), rotting (wood), or cracking (concrete).

The failure unit stress is greater than the allowable unit stress by the safety factor. If failure unit stress is twice the value of the allowable unit stress, the safety factor is two.

Usually engineers determine failure unit stress experimentally. Designers select kinds of material and sizes and shapes of members which will support loads that subject the member to unit stresses. These unit stresses must be equal to or less than the allowable. Economy requires that the unit stress must be near the allowable; if it is not, the use of the material is not efficient. Engineers call this unit stress - the working unit stress.

There are several important factors that engineers must determine when they decide on a safety factor:

- How we can calculate loads,
- How we can calculate unit stresses,
- How serious the results of a failure are, and
- How much warning the material gives before it fails.

1.**Read the text and guess if the statement is true or false or not given**

1.Failure unit stress may be bigger than the engineers designed

A) True B)False C) not given

2.The force on a structure may be larger than the engineers designed.

A) True B)False C) not given

3.Engineers determine unit stress on the basis of the area as it is before any force acts on it.

A) True B)False C) not given

4.. Economy has that the unit stress must be near the allowable; if it is not, the use of the material is not efficient.

A) True B)False C) not given

Answer the questions according to the text.

- Why must a material not be stressed near to the failure stress?
- What do we call "the safety factor"?
- How is failure unit stress determined?
- Who selects an allowable unit stress?
- What factors must engineers determine when they decide on a safety factor?

2. Write an essay on the topic: Measurements

3. Speak on the topic: Materials

Task IV. Listening

Speed.mp3

Speed kills. This is something I remember from a road _____ many years ago. It's true. There are too many drivers _____. So many people are killed on the road _____. I don't understand why people don't follow the speed limits. Many people _____ speed. Of course, it is exciting to go fast. That's why things like roller coasters are so exciting. The _____, the better they are. It's different _____. I think governments should limit the speed _____. If the speed limit on the road is 100kph, why sell cars that can go 200kph. I hope in the future they have sensors on the road _____ the speed of your car.

Independent work 1.
Variant 5
STRENGTH AND STRESS
Part II
If a metal bar with a square cross section 2 in. by 2 in. breaks when we pull it with a force of 200,000 lb, its breaking strength is the same as the unit stress or:
Breaking strength = P/A
= 200,000 lb / 2 x 2 sq in.
= 50,000 lb per sq in.
The deformation that we can allow in the bar depends on its use. Therefore, failure depends upon the purpose for which we use the material. Beams which support a roof can withstand any unit stress that does not break them; but if the beams support a plaster ceiling, they fail at a unit stress that causes plaster cracking. Designers determine the unit stress that can cause failure for various materials and their uses. However, they don't design to stress a material to the point where it will fail. Instead, they select a lower unit stress (the allowable unit stress), and this is the maximum which they allow. In order to determine unit stress engineers divide the force by the original area upon which it acts. Tensile and compressive unit stresses act on the cross-sectional area perpendicular to the direction of the force. Shear unit stresses act on the cross-sectional area parallel to the direction of the force. Shear unit stress does not act equally over an area, and the engineer must consider the unit stress at the location of the highest unit stress. The action of shear unit stresses is complex compared to that of the axial unit stresses, tension and compression. Since forces change the cross sections in size, they influence the unit stresses. If a force remains constant, the actual unit stress changes when the cross section changes. Engineers determine unit stress on the basis of the area as it is before any force acts on it.
1.**Read the text and guess if the statement is true or false or not given**
1.Designers determine the unit stress that can cause failure for various materials and their uses
A) True B)False C) not given
2.In order to determine unit stress engineers divide the force by the original area upon which it acts.
A) True B)False C) not given
3.failure depends upon the plan for which we use the material.
A) True B)False C) not given
4.A material changes slowly when a force acts on it for many years, even though the force is too small and can't cause failure in a short time.
A) True B)False C) not given
Answer the questions according to the text.
1. What is the breaking strength of the metal bar?
2. How is it determined?
3. What does failure depend upon?
4. What unit stress can beams support?
5. What can happen in the case of a plaster ceiling?
6. Which unit stress do designers determine?
7. What do engineers do in order to determine unit stress?
8. How do tensile and compressive unit stresses act?
9. How do shear unit stresses act?
10. Why do forces influence the unit stresses?
11. What takes place if a force remains constant?
12. How do engineers determine unit stress?
2. Write an essay on the topic: Qualities of an Architect
3. Speak on the topic : People in Architecture

Task IV. Listening

computers.mp3

It’s hard to believe _____ had computers a few years ago. I wonder how people lived. There must have been _____ paperwork. I can’t imagine writing everything by hand. I _____ everything worked without computers. We need computers today for everything. Hospitals, airports, the police… nothing can work without computers. I’m _____ ten times busier than now if I didn’t have a computer. Imagine _____ find _____ paper and an envelope and then walking down the street _____ letter! I love my computer. It makes everything _____ convenient. Sure, it freezes and crashes sometimes. Sure _____ data. But that’s not often. Most _____ my computer is like my best friend.

Independent work 1.
Variant 6

In the tests which engineers make in order to determine strength they subject a material to a force that increases until the material breaks. These tests take a few minutes. However, in a structure, forces may act for long periods of time, they may act, not act for some time, and act many times, and they may act suddenly with impact or shock. A material changes slowly when a force acts on it for many years, even though the force is too small and can't cause failure in a short time. This deformation is *creep.* The creep may result in failure. Although a force of a certain amount cannot cause failure no matter how long it acts, it can cause failure if it acts and stops acting many times (hundreds of thousands of times) even if it takes place over a shorter time. Application and removal of unit stress to the structural members of a bridge occurs each time a car goes along it. Failure from this cause is *fatigue*, and it occurs with very little deformation. Because there is so little deformation, there is no warning and the break is sudden. However, it begins as a crack and becomes larger over many cycles until it fails. The smaller the unit stress, the more times it must occur to cause failure. There is a unit stress below which the material will not fail at any number of cycles. It is the *endurance limit.*

1.**Read the text and guess if the statement is true or false or not given**

1.The creep may result in pass.
A) True B)False C) not given
2.Failure from this cause is *fatigue,* and it occurs with very little deformation.
A) True B)False C) not given
3.Engineers determine unit stress on the basis of the area as it is before any force acts on it.
A) True B)False C) not given
4.. The bigger the unit stress, the more times it must occur to cause failure.
A) True B)False C) not given

Answer the questions according to the text.

- What tests are made to determine strength?
- What is "creep"?
- What do we call "fatigue"?

What do we call "the endurance limit"?

2. Write an essay on the topic: Scale

3. Speak on the topic: Sketches

4. Listening task

united_nations.mp3

The United Nations _____ organization. It was started after World War II to help _____. Nearly every country on Earth is a member of the UN. Some countries want to be but can't because other countries _____ countries. This includes places like Taiwan and Palestine. I think the UN _____. There are lots of arguments between countries, but that's normal. The biggest _____ to be between America, China and Russia. They _____ agree. There are so many parts to the UN. There's the Security Council and the General Assembly. These are the _____ parts. But then there are the _____ like UNICEF and UNESCO.

Independent work 1.
Variant 7
THERMAL CONDUCTIVITY AND SOUND ABSORPTION

A building ought to be warmer than the outside air in cold climates and cooler than the outside air in hot climates. Heat flows to a cooler area like water flows to a lower level. The flow continues until outside and inside temperatures are equal. Heat movement takes place by conduction through any solid object that separates areas of different temperatures. The rate at which the movement of heat takes place varies with the material through which the heat passes. The rate is measured as thermal conductivity (U) of heat (in British thermal units (Btu)) that is transmitted per square foot of cross section per hour per °F difference in temperature between the two sides of the material. Insulation, which is material with a very low U, is used in order to make the rate of heat flow as low as possible. The U of a material varies directly with its density. The best insulation, expanded plastic foam, consists of bubbles with the proportion of solid material less than 1 percent of the volume and the rest consists of air or gas. Insulation is also made of other porous material. However, some structural materials also have a low U factor and therefore serve as insulation. Wood and certain types of lightweight concrete are two such materials. *Sound Absorption* Loud sound should be avoided in most buildings and has to be reduced by the use of acoustic material which is to absorb it, whether it is produced in the building or outside. Sound is absorbed by air spaces in the material. Porous material is used, or material is fabricated with a pattern of openings so as to be able to absorb sound. Wood and porous concrete are the most effective in sound absorption.

1.**Read the text and guess if the statement is true or false or not given**

1.The flow continues until outside and inside temperatures are equal.
A) True B)False C) not given
2.Heat flows to a cooler area like water flows to a higher level.
A) True B)False C) not given
3.They have survived because of the great strength that was built into them - strength greater than necessary in most cases.
A) True B)False C) not given
4.Wood and plastic concrete are the most effective in sound absorption.
A) True B)False C) not given

2. Write an essay on the topic: My dream
3. Speak on the topic: Describing materials

Task IV. Listening

television.mp3

What do you think? Is television good or bad? I loved it _____. My eyes were glued to the TV screen for hours and hours. I watched cartoons and other _____. It was good at the time, but maybe I _____ outside playing or doing something more useful. There's _____ TV. There are so many programmes that you watch just because you're too lazy _____. A lot of people turn on the TV and sit in front of it all day or all night. _____ time! I think television programmes are getting worse. Reality TV and celebrity chat _____. The only good things on TV nowadays is the news, live sport and comedy shows. Plus an interesting _____.

Independent work 1.
Variant 8
MODERN BUILDINGS AND STRUCTURAL MATERIALS

Many great buildings which were built centuries ago can still be seen in Greece and Italy, France and England. All of these buildings were construction solutions to difficult construction problems. These great buildings were not the result of scientific knowledge. They were constructed on the basis of experience, often as the result of trial and error. They have survived because of the great strength that was built into them - strength greater than necessary in most cases.

Today, however, the engineer has the advantage not only of empirical information, but also of scientific information that allows him to make careful design. When a modern engineer plans a structure, he considers the total weight of all its component materials. This is known as the dead load, which is the weight of the structure itself. He has also to consider the live load, the weight of all the people, cars, furniture, machines, etc. that the structure is to support when it is in use. In structures such as bridges that are to support fast traffic, he has to consider the impact, the force at which the live load will be exerted on the structure. He must also determine the safety factor, that is, an additional capacity to make the structure stronger than the combination of the three other factors. The modern engineer should also understand the different stresses to which the materials in a structure are subject. They include the opposite forces of compression and tension. In compression the material is pushed together; in tension the material is pulled apart or stretched, like a rubber band. In the figure below, the top surface is bent inwards, and the material in it is in compression. The bottom surface is bent outward, and the material in it is in tension.

1.**Read the text and guess if the statement is true or false or not given**

1.Wood and plastic concrete are the most effective in sound absorption.
A) True B)False C) not given
2.Many great buildings which were built centuries ago can still be seen in Greece and Italy, France and New Zealand.
A) True B)False C) not given
3.All of these buildings were construction solutions to difficult construction problems.
A) True B)False C) not given
4.They have survived because of the great force that was built into them - strength greater than necessary in most cases.
A) True B)False C) not given

Answer the questions according to the text.

- Where can great buildings, which were built centuries ago, be seen?
- How were these buildings constructed?
- Why did they survive?
- What are the advantages a modern engineer has?
- What does a modern engineer take into account to plan a structure?
- What stresses must a modern engineer understand?
- What are the forces that can act on a structure?
- How must the forces be balanced?

2. Write an essay on the topic: About my future profession.
3. Speak on the topic: Concept

Task IV. Listening


telephones.mp3

Telephones are _____ lives these days. When I was growing up, I perhaps used the phone once a week. It was _____ when it rang. Everyone rushed into the living room to find out who was calling. Of course, _____ phone – the size of a football. And you had to leave it on the table because it _____ wall. Today, however, is a _____. Everyone has a phone. Some people I know have several. They change them

every six months _____ come out. Today's phones aren't really phones. They are like personal _____ that have a phone. I'm waiting _____. I'm sure it'll be here soon.

Independent work 1.
Variant 9
CEMENT AND CONCRETE

The basis of modern production of elements in concrete is cement powder, one of the most versatile binders. About 950 million 61ones of cement powder is produced each year around the world. Concretes can vary greatly in their composition but those in general use are: high strength concrete, normal weight concrete, lightweight concrete, aerated concrete, and fibre reinforced concrete. Mostly, Portland cement is used but other cements are used in special circumstances. Concrete may be unreinforced, reinforced with steel or fibres or prestressed. Another important distinction is by method of production between cast-in-place concrete, which is poured into its final position on site, and precast concrete, which is poured and cured in a factory and must then be transported to site. Concrete elements can also be precast on site and lifted into their final position by crane. Methods are available for continuous casting of concrete, both vertically and horizontally. The basic components of concrete are coarse and fine aggregate, cement powder and water; admixtures are sometimes added in too. Most often the fine aggregate is a sand. The quantities of aggregates, cements or admixtures which are used may vary in particular circumstances. A typical concrete is a two-phase material with 60-75% of coarse and fine aggregate, which is the filler material and 25-40% of cement paste, which is the binder. This paste is hardened and formed from the reaction of water and cement powder. Voids of free water and air occupy between one and ten per cent of the volume of the mix and have a major influence on the strength and other properties of the mix.

1.**Read the text and guess if the statement is true or false or not given**

1.Wood and plastic concrete are the most effective in sound absorption.
A) True B)False C) not given
2.The basis of modern production of elements in concrete is sand, one of the most versatile binders.
A) True B)False C) not given
3.Concrete may be unreinforced, reinforced with cement or fibres or prestressed.
A) True B)False C) not given
4.The basic components of concrete are coarse and fine aggregate, cement powder and water; admixtures are sometimes added in too.
A) True B)False C) not given

Answer the questions according to the text.

- What is one of the most versatile binders?
- What kinds of concrete are there?
- How can concrete be made stronger?
- What is “cast-in-place concrete”?
- What kind of concrete is poured and cured in a factory?
- Where can precast concrete be made?
- How can concrete elements be lifted into their final position?
- What are the basic components of concrete?
- What is fine aggregate?
- What makes the concrete paste harden?
- What does a typical concrete consist of?
- What influences the strength of the mix?\

2. Write an essay on the topic: Design factors
3. Speak on the topic: Design elements

Task IV. Listening.

factories.mp3

I have a strange hobby. It's visiting factories. I'm really interested _____ things work and how they are made. I've learnt _____ on my factory visits. Factories are amazing. They are like mini cities. The thing that surprises _____ how everything works together. Everyone knows exactly what _____ to do it. Even the robots. Car factories are cool, but very noisy. A car assembly _____ a giant ballet dance with everything moving perfectly together.It's _____ visit factories. All you have _____ to their home page and see if they have visiting times, or write to them. The best factories _____ ones that produce food and drinks. You always _____ .Unfortunately you don't _____ at car factories.

Independent work 1.
Variant 10
PORTLAND CEMENT CONCRETE

Concrete has many characteristics that make it a construction material which is used most widely. Concrete is easily available, it can take the shape of the form which it is placed in, and its properties can be easily changed. Basically, concrete is 60-80 percent aggregates (sand, stone), which are filler ingredients, and 20-40 percent "paste" (water, Portland cement), which make the binder ingredient. These materials are combined or mixed, and cured to produce the hardened concrete. The strength of the concrete depends on the strength of the aggregate-paste bond. The entire mass of the concrete is placed in a plastic state and almost immediately begins to develop strength (harden), a process which, under necessary conditions, may continue for years. Because concrete is at the beginning in a plastic state, it can be used in all kinds of construction, no matter what their size or shape are. But concrete in a plastic condition must be placed within forms, and these forms cannot be removed until the concrete has hardened. In types of work where concrete is subjected to counteract compressive stresses, it is a very good building material. However, if the concrete is subjected to tensile stresses, it must be reinforced with steel, as concrete is weak in tension.

1.**Read the text and guess if the statement is true or false or not given**

1.Wood and plastic concrete are the most effective in sound absorption.
A) True B)False C) not given
2.Concrete has many conditions that make it a construction material which is used most widely.
A) True B)False C) not given
3. The entire mass of the concrete is placed in a plastic state and almost immediately begins to develop strength (harden), a process which, under necessary conditions, may continue for years.
A) True B)False C) not given
4. Concrete is easily available, it can take the shape of the form which it is placed in, and its properties cann't be changed .
A) True B)False C) not given

- **Answer the questions according to the text.**Why is concrete most widely used?
- What is it made of?
- What does the strength of concrete depend on?
- Where is concrete placed?
- When must it be reinforced with steel?

2. Write an essay on the topic: Detail development
3. Speak on the topic: Elements of Construction
Task IV. Listening.

technology.mp3

What _____ technology? Would we still be living in caves? Probably. I think there are two _____ technology. The kinds before and after computers.When we think about technology before computers, it _____. It was all mechanical. Things like steam trains and fridges. At the time, that _____ technology. But, today's technology is really cutting edge. It's the kind of technology that _____ soon as it hits the shelves. I love this. It's so exciting seeing it all happen. I love _____ technology we'll have in the future, and then buy _____. It's like buying technology from science fiction movies. I'd love to live to be 200 so I can see what technology _____.

Independent work 1.
Variant 11
CONCRETE MIX

The type of concrete mix and the properties of the hardened concrete may be altered. In order to do that the proportions of the ingredients may be varied, the type of cement and aggregates may be altered and admixtures may be used. The aggregates must be strong and durable materials in order to take the loads that are applied and ought not to react chemically with the cement paste. Aggregates help to reduce the volume changes in the concrete due to shrinkage or temperature changes. Aggregates can be selected in order to provide a concrete with properties such as low weight, low shrinkage, high thermal insulation, good fire resistance. Various kinds of cement are available, for example, those which harden rapidly or those which resist chemical attack, such as sulphates in the soil. Blended cements are also available which give low heat output during the curing period of concrete. The blended cements consist of mixtures of Portland cement and admixtures which are carefully graded. These may replace up to about 70% of the Portland cement which would have been required. The mix proportions of the concrete, and admixtures, will generally control the strength, permeability, frost resistance and resistance to chemical attack. The strength of the hardened concrete depends greatly on the water to cement ratio. A typical value of this ratio should be about 0.5 by weight. An increase in the value of this ratio would produce a concrete with more voids and result in lower compressive strength. A large number of properties, such as tensile strength, durability, chemical resistance and density are connected with the compressive strength of concrete.

1.**Read the text and guess if the statement is true or false or not given**

1. The type of concrete mix and the properties of the hardened concrete may be altered.
A) True B)False C) not given
2. . In order to do that the proportions of the ingredients may be varied, the type of sand and aggregates may be altered and admixtures may be used.
A) True B)False C) not given
3. Concrete has a high compressive strength, so that it is particularly suitable for use in walls and columns.
A) True B)False C) not given.
4. Aggregates can be selected in order to provide a concrete with properties such as low weight, low shrinkage, high thermal insulation, good fire resistance.
A) True B)False C) not given.

Answer the questions according to the text.

- How can the properties of concrete be altered?
- What kind of material must aggregates be?
- How do aggregates influence the volume changes in the concrete?
- How can aggregates be selected?
- What kinds of cement are there?
- What do the blended cements consist of?
- What is the amount of admixtures in the blended cements?
- What will the mix proportions of the concrete control?
- What does the strength of the hardened concrete depend on?
- What properties are connected with the compressive strength of concrete?

2. Write an essay on the topic: Construction Process
3. Speak on the topic: Prefabrication
IV. Listening task.

students.mp3

Being a student _____. I don't think most students understand this. A lot of students complain they have no money and _____. They never complain that they have

_____ time, don't have to go to work and have really long holidays. When students finish being students and go to work, they understand how _____ a student. Being a student at high school _____. You have to study boring things and deal with things like bullying. Going to college or university is _____. Just _____ classes a week and lots of student parties. I'd love to be a student again. I know many people who'd like to be full-time students forever. All you need is _____.

Independent work 1.
Variant 12
CHARACTERISTICS OF STRUCTURAL CONCRETE

The important general characteristics of hardened normal weight concrete and concrete structures, which are made with Portland cement, compared to other building materials and structures are as follows:

- Concrete has a high compressive strength, so that it is particularly suitable for use in walls and columns.
- If it is not in the form of prestressed concrete, concrete has a low strength to weight ratio which results in general choice of steel or timber beams when there are long spans, and light loads which are applied.
- In building, the weight of concrete can provide good sound insulation, for example in floors.

Concrete has good fire resistance. This property often gives it an important advantage over steel. The fire resistance can be made a little lower by aggregates that contain silica.

There is no damage to reinforced concrete at temperatures which are lower than 300°C (580°F) and a limestone aggregate can withstand temperatures up to about 800°C (1,500°F) without great damage.

Unreinforced concrete is able to withstand amounts of tension, up to approximately $^{1}/_{10}$ of its compressive strength. This property is of great importance as it allows concrete to withstand some shear stress without cracking.

1.**Read the text and guess if the statement is true or false or not given**

1. The type of concrete mix and the properties of the hardened concrete may be altered.

A) True B)False C) not given

2. . The rate of shrinkage is rapid in the period which immediately follows the set of the concrete but becomes much slower with time.

A) True B)False C) not given

3. There is no damage to reinforced concrete at temperatures which are lower than 500°C (580°F) and a limestone aggregate can withstand temperatures up to about 800°C (1,500°F) without great damage.

A) True B)False C) not given

4. . In general, moderate temperatures, between 20° C and 40° C (68°F and 86°F), and moist or wet conditions are the best.

A) True B)False C) not given

- **Answer the questions according to the text.**How many important general characteristics of hardened concrete structures are there?
- What are they?
- How can fire resistance of concrete be influenced?
- What temperatures can limestone aggregate withstand?
- How high are the amounts of tension that unreinforced concrete is able to withstand?

2. Write an essay on the topic: Finished building

3. Speak on the topic: The role of sports in the life of people and country .

IV. Listening task.

standard_of_living.mp3

Standard of living is something _____ of us. We all want a better standard of living. We all do our best _____ to improve it. I'm quite happy with my standard of living. I'm not rich, I don't have expensive furniture (in _____ used furniture) and _____ holidays overseas. I don't _____ lot of money to have a good standard of living. As long as you are comfortable in your home and you can buy food _____ times a week, your standard of living _____. Mine is much better than 90 per cent of the world's population. This is _____ you, if you are reading or listening to this. We all need to think how lucky we are.

Independent work 1.

Variant 13

CONCRETE

PART I

A property that is particularly connected with concrete is shrinkage, which is the permanent, contraction of concrete. It is caused by loss of water from the cement paste after hardening. The rate of shrinkage is rapid in the period which immediately follows the set of the concrete but becomes much slower with time. Because of the low tensile strength of concrete, shrinkage when it is limited leads to cracking. Cast-in-place reinforced concrete as a method of construction is able to be applied to non-standard areas and shapes. It forms heavy, rigid, fireproof construction with relative ease. Because all the necessary materials are easily available, construction work in cast-in-place concrete may start almost immediately, which sometimes gives faster completion times than if shop fabricated elements are used, such as those in steel or precast concrete. About 50% of the cost of cast-in-place construction is that of the formwork. Hence, standard dimensions, that enable constant re-use of formwork, will significantly reduce the cost of cast-in-place concrete work. In order to obtain good strength and durability, concrete must be allowed to cure, in conditions of temperature and humidity that are reasonably controlled after the initial set of the concrete. In general, moderate temperatures, between 20° C and 40° C (68°F and 86°F), and moist or wet conditions are the best. The total curing period is extremely long. However, curing is often considered to be over after the concrete has gained a reasonable strength, although curing and strength are not related. A minimum curing period is usually at least seven days.

1.**Read the text and guess if the statement is true or false or not given**

1. The type of concrete mix and the properties of the hardened concrete may be altered.

A) True B)False C) not given

2. It is caused by loss of water from the sand paste after hardening.

A) True B)False C) not given

3. Curing is often considered to be over after the concrete has gained a reasonable strength, although curing and strength are related.

A) True B)False C) not given

4. A minimum curing period is usually at least seventeen days.

A) True B)False C) not given

Answer the questions according to the text.

- What property is associated with concrete?
- What is shrinkage caused by?
- What is the rate of shrinkage?
- Why does shrinkage lead to cracking?
- What is the advantage of “cast-in-place reinforced concrete”?
- Why is the use of cast-in-place concrete sometimes better than the use of shop fabricated elements?
- What is the cost of formwork?
- Why is it useful to re-use the formwork?
- What should be done to obtain good properties of concrete?
- What conditions are these?
- What is the total curing period?
- What is a minimum curing period?

2. Write an essay on the topic: Design Tools and Materials

3. Speak on the topic: Models

4.Listening task.

smoking.mp3

Smoking is a terrible thing. There's _____ it. I don't know how cigarette companies can advertise their products. _____. Smoking is not cool. Last century, cigarette companies tried to make _____. They even told people that cigarettes were good for your health. _____. Everyone today knows that smoking is one of the _____ you can do. Unfortunately, cigarette companies are doing a good job of selling their _____. Smoking is on the increase in countries like China and _____ over Africa. This is sad. Once people get enough information about the dangers of smoking, perhaps millions will quit _____.

Independent work 1.
Variant 14

GLASS REINFORCED POLYESTER

Important general characteristics of GRP elements compared to other building materials and elements are as follows:

GRP has a low weight as well as a high strength to weight ratio.

GRP has moderately good tensile, compressive and shear strength; however, strength is dependent on temperature and at high temperature even moderate stresses can cause failure with time. As the properties of GRP become worse with time, high factors of safety are necessary for long-term loads.

The polyester resin which is used in the production of GRP hardens and cures. However the resin is brittle and needs the strength that is given to it by the glass fibres; generally structural GRP contains between 25% and 60% of glass fibre reinforcement.

GRP has a high coefficient of expansion.

GRP will creep, that is it will continue to deflect, if there is a permanent load on it. The higher temperatures the faster will be the creep. The maximum operating temperature is about 70°C (160°F).

GRP has a low modulus of elasticity and, because it is used in thin sections, deflection is often a critical factor in design. In order to overcome this flexibility GRP is often used in the form of double skin panels in which deflections are easy to control. The modulus of elasticity decreases with increase in temperature and time under load.

1.**Read the text and guess if the statement is true or false or not given**

1. The type of concrete mix and the properties of the hardened steel may be altered.

A) True B)False C) not given

2. GRP has a low weight as well as a high strength to weight ratio.

A) True B)False C) not given

3. GRP has a high weight as well as a high strength to weight ratio

A) True B)False C) not given

4. GRP has a low modulus of elasticity and, because it is used in thin sections, deflection is often a critical factor in design.

A) True B)False C) not given

Answer the questions.

1. What are the advantages of glass reinforced polyester?
2. What are its disadvantages?
3. Why are the glass fibres necessary in GRP?
4. What is the maximum operating temperature of this material?
5. Why is deflection a critical factor with GRP?
6. How is GRP flexibility overcome?
7. What influences the modulus of elasticity of GRP?

4. Listening task

safety.mp3

Safety is something we _____ carefully about. The world around us can _____ place. Even our homes _____. Think about all the electric wiring, gas pipes, chemicals in the building materials, etc. All kinds of things could happen. It's a good job we _____. Our governments make sure builders focus on safety. This is also true for the things we buy. You _____ small logo on electrical products that say the product is safe, and then there are instructions _____. Food safety is also something lots of people work on. It works. People rarely _____ the food we buy in shops. Maybe it's not such a dangerous _____.

Independent work 1.

Variant 15

GLUED LAMINATED TIMBER

Construction with sawn wood is limited by the size, shape, and characteristics of available trees. Lumber longer than 24 ft (7.2 m) or with a cross section dimension greater than 12 in. x 12 in. is difficult to obtain in large quantities. When lumber of these sizes is sawed, each piece much more often has some characteristic that seriously reduces strength or lowers the quality of its appearance than it is with pieces. Heavy timber construction and long spans are not feasible with sawn lumber. Sawn lumber cannot be bent into curves except in cross sections and is generally used straight. However, structural members of any length and cross section and with any required curve can be made if pieces are glued together. The pieces, which are of standard lumber cross section, are glued one over the other, wide face to wide face, as laminations. No one lamination is as long as the member. They are glued end to end to reach the full length. A structural member made this way is called a glued-laminated member. The supporting members for heavy timber construction are glued-laminated timbers. Lumber of 2 in. thickness is generally used for laminations. These laminations can be used straight in columns or beams and can be bent to form arches.

1.**Read the text and guess if the statement is true or false or not given**

1. The type of concrete mix and the properties of the hardened steel may be altered.

A) True B)False C) not given

2. Construction with sawn wood is limited by the size, shape, and characteristics of available trees.

A) True B)False C) not given

3. Lumber of 2 in. thickness is generally used for laminations.

A) True B)False C) not given

4. The supporting members for heavy timber construction are glued-laminated timbers.

A) True B)False C) not given

Answer the questions

1. What are the limitations for construction with sawn wood?
2. Why is large size lumber not good for construction?
3. What is not feasible with sawn lumber?
4. How can structural members of any length and cross section be made of lumber?
5. How are lumber pieces glued to reach the full length?
6. What can laminations be used for?

2. Write an essay on the topic: Types of Structures

3. Speak on the topic : Parts of a building

4.Listening task.

robots.mp3

A long time ago, robots _____ fiction. Children loved looking at movies with robots. Today, robots are real, and _____. In the future, we will all have robots. They will vacuum the floor, wash the dishes, _____ our cars. I even think one day we'll have robot friends. In Japan today, _____ making robots to help old people and to _____. It's still early days. I'd say we are another 20 to 30 years away from robots _____ in our lives. What will happen to us when the world is full of robots? There'll be no jobs. McDonalds will be _____. Maybe one day we won't be able to tell robots and humans apart. Maybe _____ world.

Independent work 2.
VARIANT 1.
Assignment 1. Translate the text into your native language.

Most of the time of a modern man is spent within the walls of some building. Houses are built for dwelling; large buildings are constructed for industrial purposes; theatres, museums, public and scientific institutions are built for cultural activities of the people. The purpose of modern buildings differ widely, but all of them originate from the efforts of primitive men to protect themselves from stormy weather, wild animals and human enemies. Protection was looked for everywhere. In prehistoric times men looked for protection under the branches of trees; some covered themselves with skins of animals to protect themselves from cold and rain; others settled in caves. When the Ice Age had passed Europe remained very cold, at least in winter, and so the people of the Old Stone Age had to find some warm and dry place to shelter from bad weather. They chose caves, dwelling places that storm and cold could not destroy. On the walls of their caves ancient people painted pictures. Such decorated caves are found in Europe, Asia and Africa. When man began to build a home for himself, caves were limited in stone structures, trees were taken as a model for huts built of branches, skins were raised on poles and formed tents. Primitive stone structures, huts and tents are the earliest types of human dwellings; they are lost in the prehistoric past but serve as prototypes for structures of later historic times.

Assignment 2. Write down 10 sentences with Past Indefinite Tense .
Assignment 3. Continue the following topic about Environmental Pollution.
People have always polluted their surroundings. But until now pollution was not such a serious problem. People lived in uncrowded rural areas and did not have pollution — causing machines. ……..
Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Abandon			
Admire			
Be able			
Hide			
Idle			
Jealous			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.
a) The land of Blue Mountains.
b) Beautiful wild forests of Tasmania.
c) The red heart of Australia.
Assignment 6. Explain the meaning of the following proverb.
If wishes were horses, then beggars would ride.
Assignment 7. Listening. Unjumble the words. "United Nations".

united_nations.mp3

is Nations United The organization important very a. It was started after World keep War peace II in to the help world. member a is Earth on country every Nearly of the UN. countries Some because can't but be to want other countries say they aren't countries. This includes places like Taiwan and Palestine. I think the UN works pretty well. are of between There lots arguments countries, but that's normal. The be to seem arguments biggest between America, China and Russia. They never seem to agree. There UN the to parts many so are. There's the Security Council and the General Assembly. These are parts most the important two. But then there are the umbrella agencies like UNICEF and UNESCO.
Assignment 8. Speak on the topic: "Bricks"

Independent work 2.
VARIANT 2.
Assignment 1. Translate the text into your native language.

In the days of early civilization, once men had learnt how to build simple houses for their families, they began to feel a need to have a number of different kinds of houses in one place. At first the difference was mainly in size - the chief or leader had a larger hut or tent than the rest of the people. Much later, when men began to build towns, there grew up a difference between town houses and country houses. The streets in towns were very narrow and there was not much place for building within the town walls, and therefore houses had to be built higher than they were in the country. A typical town house consisted of a shop opening on the street where the man did his work or sold his goods, with a kitchen behind and a bedroom above. In the country ordinary people lived in simple one-storey cottages which did not differ much from the mud and stone huts of an earlier age. The rich people in the country, on the other hand, built huge castle with thick walls and narrow windows. These castles were built not only as dwellings, but also to stand up to enemy attack and to be strong bases in time of war. The earliest houses of which anything is known are those of ancient Egypt. They were built of bricks dried in the sun. Some of them were built around a courtyard or garden with rooms opening into it.

Assignment 2. Write down 10 sentences with Plural of nouns.
Assignment 3. Continue the following topic about ecological problems.
Since ancient times Nature has served Man, being the source of his life. For thousands of years people lived in harmony with environment and it seemed to them that natural riches were unlimited. ……
Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Keen			
Labour			
Macabre			
Naive			
Obedient			
Palace			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.
a) The members of Royal Family.
b) The head of Royal Family.
c) The interests of Queen Elizabeth.
Assignment 6. Explain the meaning of the following proverb.
Ignorance is bliss.
Assignment 7. Listening. Unjumble the words. "Tourism"

tourism.mp3

Tourism past a few lot decades over has the changed. It is actually quite a new thing. It probably didn't exist fifty years ago. The rich were then travelled who people only, and they were called travelers. I guess tourism started in the late 60s became early when travel and 70s airplane cheap. idea foreign suddenly The of travel became very popular with millions. weeks their Everyone two wanted of sun in the summer. Tourism today is a multi-billion-dollar industry. of corner a hardly is There Earth the untouched by tourism. The number of tourists is also rocketing. Millions of people from Russia, India and China are now taking Tourism . vacations making is really the world a global village. if a a sure is or not this good I'm bad thing.
Assignment 8. Speak on the topic: "Building materials"

Independent work 2.
VARIANT 3.
Assignment 1. Translate the text into your native language.

In the country ordinary people lived in simple one-storey cottages which did not differ much from the mud and stone huts of an earlier age. The rich people in the country, on the other hand, built huge castle with thick walls and narrow windows. These castles were built not only as dwellings, but also to stand up to enemy attack and to be strong bases in time of war. The earliest houses of which anything is known are those of ancient Egypt. They were built of bricks dried in the sun. Some of them were built around a courtyard or garden with rooms opening into it. Greek houses, too, had a courtyard in the middle and round their courtyard ran a covered walk, its ceiling supported by pillars. There were special women's quarters, usually upstairs on the second storey. In Rome bricks were used for building and houses were often finished with plaster over bricks on both inside and outside walls. The centre of family life was a garden- courtyard, surrounded by columns and with rooms opening out onto it. The earliest houses in Britain were rounded, built of wood or wicker basket work plastered over with clay. In the centre of the houses was the hearth and light came in through the hole in the roof above it and through the door because there were no windows.

Assignment 2. Write down 10 sentences with Present Indefinite Tense
Assignment 3. Continue the following topic about mass media.
Mass media or mass communications are the press, radio and television. Every day we read newspapers and magazines, listen to radio and watch TV. Nowadays there are so many newspapers and magazines, radio stations and TV channels that we have to be very -selective and give preference to some of them. ……..
Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Quarrel			
Radical			
Sad			
Tactful			
Ugly			
Vacant			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.
a) Talented people of GB.
b) A great romantic English landscape painter.
c) The famous paintings of William Turner.
Assignment 6. Explain the meaning of the following proverb.
It is always darkest before the dawn.
Assignment 7. Listening. Unjumble the words. "Terrorism".

terrorism.mp3

since remember I Ever can, I've seen terrorism on the news. I grew up in London. In the 1970s, we had a lot of a heard even I and bombings once bomb. There has also been terrorism in other countries from Spain to Sri Lanka. terrorism really hit the headlines But after 9-11. Suddenly there was a war on terror. The whole Western prepared attacks for world terrorist. And they came. There that hundreds Bali bombs killed in were and Spain and Iraq and London. Now Pakistan is feeling the terrible force of terrorism. When will it all stop? There has to be a can and happy are people when time live a day without blow to wanting know don't they people up. So much world the in change would happened this if.
Assignment 8. Speak on the topic: "Architecture"

Independent work 2.
VARIANT 4.
Assignment 1. Translate the text into your native language.

Now some of the problems of strength of materials are being tackled by experts. The problems confront experts all over the world, as well as in our country, where research in strength of materials is conducted according to a single state plan by establishments of the Academy of Sciences, sectors in many colleges and research, design and industrial institutes in various parts of the country. All research work in the field is coordinated by the Scientific Council on Strength and Plasticity, Academy of Sciences Department of Mechanics and Control Processes. Strength of materials is a complex concept that includes a wide range of problem. Many research establishments in our country are busy devising such materials, for example, studying optical strength with the help of a laser beam, testing future building materials for thermal shock, testing materials being used in building nuclear power plants and so on. Metallurgists studying a new class of aluminium-lithium-magnesium system alloys have produced a highly durable alloy which is being used in aircraft and rocket engineering. The alloy helps to reduce the weight of apparatuses substantially by effecting a considerable saving of materials. One of the newest trends in research, hardly ten years old, is the creation of extremely tough composite materials.

Assignment 2. Write down 10 sentences with Modal verbs .

Assignment 3. Continue the following topic about magazines.

Magazine is one of the major mass media. Magazine is a collection of articles and stories. Usually magazines also contain illustrations. The earliest magazines developed from newspapers and booksellers catalogs. …….

Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Wait			
Zeal			
Abolish			
Baffle			
Cage			
Easily			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.

a) Types of education in Britain.
b) Private education.
c) The differences between state and public schools.

Assignment 6. Explain the meaning of the following proverb.

It's no use crying over spilt milk.

Assignment 7. Listening. Unjumble the words. "Television"

television.mp3

What do you think? Is television good or bad? I loved it when I was a kid. My screen TV the to glued were eyes for hours and hours. other and cartoons watched I kids' shows non-stop. It was good at the time, but maybe I should been playing doing have outside or something more useful. TV a of on There's lot rubbish. There are so many you're that watch because programmes you just too lazy to do something useful. A lot of people turn on the TV of day and front all all in it or sit night. What a waste of time! I getting are programmes television think worse. Reality TV and celebrity chat shows are the worst. The the on news TV only nowadays good is things, live sport and comedy shows. Plus an interesting documentary or two.

Assignment 8. Speak on the topic: "House"

Independent work 2.
VARIANT 5.
Assignment 1. Translate the text into your native language.

Strength of materials is a complex concept that includes a wide range of problem. Many research establishments in our country are busy devising such materials, for example, studying optical strength with the help of a laser beam, testing future building materials for thermal shock, testing materials being used in building nuclear power plants and so on. Metallurgists studying a new class of aluminium-lithium-magnesium system alloys have produced a highly durable alloy which is being used in aircraft and rocket engineering. The alloy helps to reduce the weight of apparatuses substantially by effecting a considerable saving of materials. One of the newest trends in research, hardly ten years old, is the creation of extremely tough composite materials. The idea is simple enough: a light but fragile base is taken and pervaded with a system of very tough fibres or wires. A new one is aluminium reinforced with boron fibres. In elasticity and strength the material substantially surpasses aluminium alloys, and in specific strength is even better than titanium alloys. Having found such a good principle for designing materials, our experts have gone on to produce a whole range based on alloys, ceramics or plastics reinforced with metal, glass, quartz, organic, graphite and other fibres. Such materials find applications in all spheres of technology, science and in everyday life.

Assignment 2. Write down 10 sentences in Special Questions.

Assignment 3. Continue the following topic about the Road to the stars.

When did man first begin to think of space travel? Man began to think of space travel in the second century A. D. At that time a Greek, Lucian of Samos, wrote a fantastic story about a man who was carried to the Moon by a storm. …….

Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Fail			
Gain			
Handsome			
Ignorant			
Jeer			
Kind			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.

a) Administration of Britain.
b) Assignments of political parties.
c) Numbers of chambers in Britain.

Assignment 6. Explain the meaning of the following proverb.

It takes all sorts to make a world.

Assignment 7. Listening. Unjumble the words. "Telephones"

telephones.mp3

Telephones are these lives our of part major a days. When I was growing up, used phone a perhaps the once I week. it a rang big It event was when almost. Everyone rushed into find the out living who room was to calling. phone , an style course was - Of it old – the size of a football. And to had you table the on it leave because it was plugged into the wall. Today, however, is a totally different matter. Everyone has a phone. Some people I know have several. change They months six every them when the latest models come out. Today's phones aren't really phones. They are like personal entertainment devices that have a phone. I'm waiting for the watch phone. it'll sure I'm soon here be.

Assignment 8. Speak on the topic: "Civil Engineering".

Independent work 2.
VARIANT 6.
Assignment 1. Translate the text into your native language.

One of today's important Assignments is to raise production efficiency and quality. To achieve this requires contributions from many scientific disciplines, among them the science of materials strength. The quality and reliability of machines and structures depend in large measure on its advances. The modern age has confronted this science with Assignments of unprecedented scope demanding urgent solution. The great Galileo is considered to be the father of the science of materials strength, one of the basic engineering disciplines, and the bane of undergraduates at technological colleges. There is probably historic justice in the fact that Galileo was also the first man to whom it occurred to direct an unsophisticated optical instrument skywards in order to see the mountains of the Moon: today we are faced with problems of the strength of instruments and apparatus studying the Moon, Venus, Mars… . But before it could produce mechanisms capable of withstanding cosmic cold and vacuum, the strains and stresses of take-off and return to Earth, the science of materials strength had to cover a long and difficult path. Its progress accelerated markedly in the 19th century, when people began to lay thousands of miles of railway tracks, erect bridges and digs tunnels, build ocean-going ships and complex machines. Our predecessors managed to cope with their Assignments. Many structures built centuries ago have not only survived to our day but even remain in use. In Transcaucasia, for example, a bridge built in 1234, almost 750 years ago, is still open.

Assignment 2. Write down 10 sentences in Possessive Case of Nouns.
Assignment 3. Continue the following topic about Star Signs.
There are 12 star sings. And people who belong to the definite sign have their own character, habits and manners. …….
Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Lack			
Mad			
Naked			
Obey			
Pale			
Raise			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.
a) Ulster is …….
b) The Irish population.
c) Cultural Traditions of this country.
Assignment 6. Explain the meaning of the following proverb.
Justice delayed is justice denied.
Assignment 7. Listening. Unjumble the words. "Technology"

technology.mp3

would What technology without do we? Would we still be living in caves? Probably. I think there are two main kinds of technology. The kinds before and after computers. When before technology about think wee computers, it was quite basic. It was all mechanical. Things like steam trains and fridges. At the time, that was cutting edge technology. But, today's technology is really cutting edge. It's kind technology is the of that out hits as the soon shelves as of it date. I love this. It's so exciting seeing it all happen. I love reading about what future the in have we'll technology, and then buy it a few years later. science from technology buying like It's fiction movies. to be I love to so I'd live 200 can see around technology then is what.

Assignment 8. Speak on the topic: "Building technology".

Independent work 2.
VARIANT 7.
Assignment 1. Translate the text into your native language.

Architecture is the art which makes buildings beautiful to look at as well as useful. A man who designs buildings and makes the plans for them is called an architect. He has to think not only of what he wants the building to look like when it is finished, but also what it is to be used for. He must not forget the sort of material to be used in the building. This may be stone, brick, wood or steel and concrete. There have been many different styles or kinds of architecture in the past and there are many different styles today in different parts of the world. The oldest monuments which are met within architecture are the colossal pyramids of Egypt most of which were constructed about 6ooo years ago. The pyramids are large triangular buildings which were placed over the tombs of Egyptian kings. The best known of the pyramids are a group of three built at Giza south of Cairo. The largest of these is 482 feet high. They tell us of the advanced civilization of ancient Egypt which is much spoken about even in our days. It was a country which had expert mathematicians and engineers, where astronomy and philosophy were known and studied. The country was rich in hard and durable stone, but poor in timber and metal, so that the main material used for construction was granite, and this was the reason for the durability of the pyramids. Large blocks of stone were transported over long distances by land and water, and placed into position with the help of the most primitive equipment. That was done by slaves working for thirty or forty years. All this great amount of work was done; masses of material and a large territory, sometimes of about 52,000 square meters were used only for protecting the body of dead king and constructing a dwelling place for his happy life in the "other world"

Assignment 2. Write down 10 sentences in Disjunctive questions.
Assignment 3. Continue the following topic about the Climate of GB.
Due to the geographic location of Great Britain the type of the climate is oceanic. There are no extreme contrasts in temperature in Britain because of the current of warm water flowing from the Gulf of Mexico called the Gulf Stream. ……
Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Save			
Take care of			
Unacceptable			
Vague			
Wake			
Yell			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.
a) Prominent people of our country.
b) The first Uzbek poet (writer).
c) The scientists awarded by Noble.
Assignment 6. Explain the meaning of the following proverb.
Knowledge in youth is wisdom in age.
Assignment 7. Listening. Unjumble the words. "Standard of living".

standard_of_living.mp3

Standard of living something is all to important very of us. We all want a better standard of living. We all do our lives for to most improve of it our best. I'm quite happy with my standard of living. I'm not rich, I don't have expensive furniture (I furniture have in cheap fact used) holidays and don't luxury overseas I have. I don't think have you lot to good a money a need of standard of living. As long are you as and home your in comfortable you can buy a out week a food few and times go, your standard of living should be

fine. Mine is much better than 90 per cent of the world's population. This is probably true for you, if you are reading or listening to this. lucky need we to are think We how all.

Assignment 8. Speak on the topic: "Strength of materials"

Independent work 2.
VARIANT 8.
Assignment 1. Translate the text into your native language.

The designer must be able to select and adapt such materials of construction that will give the most effective result by the most economical means. In this choice of materials for any work of construction, the civil engineer must consider many factors. These factors include availability, cost, physical properties of materials and others. Lime, gypsum and cement are the three materials most widely used in building construction for the purpose of binding together masonry units, such as stone, brick and as constituents of wall plaster. Cement is furthermore the most important component of concrete. These materials form very important elements in all masonry structures. As a class they are designed as cementing materials. The most important building materials may now be considered to be structural steel and concrete. Concrete may be considered an artificial conglomerate of crushed stone, gravel or similar inert material with a mortar. A mixture of sand, screenings or similar inert particles with cement and water, which has the capacity of hardening into a rocklike mass, is called mortar. The fundamental object in proportioning concrete or mortar mixes is the production of a durable material of requisite strength, water tightness and the other essential properties at minimum cost. To attain this end careful attention must be given to the selection of cement, aggregate and water. The most accurate method of measuring proportion is to weigh the required quantities of each material. This may be done whether the proportions are based upon volumes or weights. This method is being extensively used in road construction and in many central mixing and in central proportioning plants. It is also widely used in large building construction, but in small building construction the less accurate method of measuring proportions by volumes is frequently used. It is always for a building engineer to bear in mind that workability and strength tests are the chief control tests made on concrete. To be able to undergo high compressive loads is a specific characteristic of this material.

Assignment 2. Write down 10 sentences in Gerund.

Assignment 3. Continue the following topic about Dublin.

Dublin is a fine city, with beautiful grey stone houses. It is situated on the east coast of Ireland. If you go to Dublin you must visit its parks. They have beautiful gardens with deer, and there are markets there on Sundays. ……

Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Zest			
Abundant			
Ban			
Calm			
Dark			
Effect			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.

a) The great fibre crop of the South.
b) A number of species of cotton ranging.
c) Ploughing and cultivation of cotton.

Assignment 6. Explain the meaning of the following proverb.

Knowledge is power.

Assignment 7. Listening. Unjumble the words. "Safety"

safety.mp3

Safety is something more think all should we carefully about. The world dangerous us be pretty around can a place. our are of Even homes full danger. Think about all the electric wiring, gas pipes, chemicals in the building materials, etc. All kinds of things could happen. It's a have we job good standards safety. Our governments builders sure make safety on focus. This is also true for the things we buy. You usually a

logo can find small on electrical products that say the product is safe, and then there are instructions with safety guidelines. Food safety also is on work people of lots something. It works. People rarely get ill because of the food we buy in shops. Maybe it's a world all such dangerous after not.

Assignment 8. Speak on the topic: "Sewerage"

Independent work 2.
VARIANT 9.
Assignment 1. Translate the text into your native language.

In technically developed countries the building industry, comprising skilled and unskilled workers in many trades, building engineers and architects, managerial staff, and designers employs a considerable proportion of the available labour force. Building industry including residential public and industrial construction holds a considerable place in the National Economy and is being carried on a large scale. It is the largest single industry in the country. The problems of construction have grown into major, political issues in most countries. Housing is prominent among the factors affecting the level of living. The improvement of the housing represents a concrete and visible rise in the general level of living. In many countries residential construction has constituted at least 12 per cent and frequently more than 25 per cent of all capital formation. Research and development in housing technology is carried out on a national scale. Present-day design for residential construction envisages all modern amenities for a dwelling, they advocate larger, better built and better equipped flats and houses. There is a marked improvement in the heating and ventilating systems as well as in hot-water supply, kitchen and sanitary fittings. Many tenants now can afford better furnishings, refrigerators, washing machines, etc.

Industrial buildings comprise another significant type of construction. This type of construction involves factories, laboratories, food processing plants, mines, office buildings, stores, garages, hangars and other storage facilities, exhibitions, halls, etc. Modern industrial buildings have demonstrated the advantages of reinforced concrete arches, metal frames, glass walls and etc. Steel was gradually substituted for iron and permitted wider rooms and larger windows. Windows can be enlarged to the extend that they constitute a large fraction of the wall area.

Assignment 2. Write down 10 sentences in Present Continuous Tense.

Assignment 3. Continue the following topic about Margaret Thatcher.

Margaret Thatcher (Margaret Robins) was born in 1925. Her father had a grocer's shop but he was also very interested in local politics. ……

Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Faint			
General			
Hard			
Ill			
Knowledge			
Land			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.

a) Location of the USA.
b) Commercial and industrial cities of the country.
c) The structure of the government of the USA.

Assignment 6. Explain the meaning of the following proverb.

Kill one to warn a hundred.

Assignment 7. Listening. Unjumble the words. "Robots".

robots.mp3

A long time ago, fiction to robots science belonged. Children loved looking at movies with robots. Today, robots are real, and they are helping us. In the future, we will all have robots. will the , They vacuum floor wash the dishes, perhaps even drive our cars. I even think one day robot we'll friends have. In Japan today, robot engineers to old are robots help people making and to keep them company. It's still early days. I'd say we are another 20 robots from away years 30 to being everywhere in our lives. will to when What

happen us the world is full of robots? There'll be no jobs. McDonalds will robots of be smiling full. Maybe one day we won't be able apart humans and robots tell to. Maybe they'll take over the world.

Assignment 8. Speak on the topic: "Roads"

Independent work 2.
VARIANT 10.
Assignment 1. Translate the text into your native language.

A road junction is the point at which, one road meets another; an intersection is the point at which two or more roads cross each other. Both junctions and intersections are the worst danger spots in a road system. The problem of reducing danger at these points is this of cost and space. If junctions and intersections are such that all classes of traffic meet each other at the same level, there is a danger of collision, not only between cars of the same class but between those of different classes. Almost complete segregation of different classes can be achieved, and the need for users of the same class to cross traffic streams, the most dangerous process of all, can be avoided. The perfect example of complete segregation of different classes of traffic and of the avoidance of crossing traffic streams is the clover-leaf junction, at which no collision can occur between vehicles if the drivers of those leaving the junction can manage to avoid those already on the road which they are approaching. All forms of road junction can be classified into two groups: roundabouts and flyover-junctions.

Roundabouts. The success of a roundabout depends greatly upon the ease with which vehicles using it can 'weave' or pass from one traffic lane to another. The greater the length of the road in which the weaving can be carried out and the smaller the angle of approach of converging streams of traffic, the more easily can weaving be performed. The angle should not be greater than 30 degrees. The greater the diameter of the island, the smaller the angle of convergence.

Flyover-junctions. These have been developed chiefly at places where there are no pedestrians. These 'flyovers', which enable high speeds to be maintained, are extremely expensive, costing about ten times as much as a roundabout, so it is much better to have ten roundabouts at ten dangerous junctions than a single flyover at a single junction.

Assignment 2. Write down 10 sentences in Past Continuous Tense.

Assignment 3. Continue the following topic about British religion.

British religion used to be closely connected with kings,ueens and politics. England was a Roman Catholic country until 1534. In 1525 King Henry VIII decided to divorce his queen, Catherine of Aragon, because he fell in love with Anne Boleyn. …….

Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Magnify			
Nameless			
Observe			
Past			
Quick			
Rampant			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.

a) A Russian explorer who made a study of Central Asia.
b) The life and activity of Nikolay Przhevalsky.
c) Works of N.Przhevalsky.

Assignment 6. Explain the meaning of the following proverb.

Kill the goose that lays the golden egg.

Assignment 7. Listening. Unjumble the words. "Radio".

MP3
radio.mp3

It's amazing with still is radio how us. Everyone thought that television would kill radio. It didn't. Then music came and along MTV videos. That didn't really affect radio either. It is more more radio becoming and seems popular these days. to in tune can You radio any almost station in the world nowadays over the Internet. I'm a live can't and radio of fan big without it. I love radio phone-in shows. It's fascinating to

hear callers call in and talk about the latest news. Even though I have a CD player in my car, often more will I not than listen to the radio. I choose to having not like what to listen to. It's useful to get traffic updates also. One of my dreams as a kid was to be a DJ and play my favourite songs all day.

Assignment 8. Speak on the topic: "Tunnels"

Independent work 2.
VARIANT 11.
Assignment 1. Translate the text into your native language.

That cities should have a plan is now admitted in our time of large-scale construction and plan making has become an every- day activity. The purpose of a town plan is to give the greatest possible freedom to the individual. It does this by controlling development in such way that it will take place in the interest of the whole population. The plan is never a complete and fixed thing, but rather one that is continually being adapted to the changing needs of the community for whom it is designed. Until quite recent years town plans were always made as inflexible patterns, but history has shown that a plan of this description inevitably breaks down in time. The flexible plan, preceded by a survey, is one of the most revolutionary ideas that man has ever had about the control of his environment. Most towns today have a characteristic functional pattern as follows: a central core containing the principal shopping centre, business zones, surrounded by suburbs of houses.

Most town planners accept the traditional town pattern. In the preparation of a master plan they are preoccupied with the definition of the town centre, industrial areas, and the areas of housing; the creation of open space for recreation, the laying down of a pattern of main roads which run between the built-up areas (thus leaving them free of through traffic) and connect them to each other.

The master plan thus has to define the ultimate growth of the town, but though the master plan is a diagram, and even a flexible one, it is the structure upon which all future development is to take place.

Assignment 2. Write down 10 sentences in Future Continuous Tense.

Assignment 3. Continue the following topic about outstanding events in the history of Great Britain.

There were many outstanding events in the history of Great Britain. Many different tribes tried to control the territory of Britain. England was added to the Roman Empire in 43 A.D. ……

Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Band			
Candid			
Death			
Eliminate			
Faithful			
Generate			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.

a) Customs and traditions.
b) American holidays.
c) Holidays of GB.

Assignment 6. Explain the meaning of the following proverb.

Learn to walk before you run.

Assignment 7. Listening. Unjumble the words. "Quality of life".

quality_of_life.mp3

Quality important is life of us of all to. It's something we all try to improve. is it easy how wondering just I'm to improve your quality of life. The biggest things that affect job happy are your how you are, house, holidays and friends. Of course there are others. It's quite difficult to change these things. like don't you If job your, it can be difficult to find a better one. My job really affects my quality of life. If it's really stressful, my quality of life goes down. somewhere to You need nice live also. That can be difficult to change. It's important to find a home that feels like home. your can a to Holidays add lot happiness, lots those we have of but don't. And then there are friends. They of quality your improve really life.

Assignment 8. Speak on the topic: "Bridges".

Independent work 2.
VARIANT 12.
Assignment 1. Translate the text into your native language.

Man has always been a builder. The kind of house he built in the beginning depended upon the climate, upon his enemies, and upon the building materials at hand. The first houses in many parts of the world were made of wood, for in those days the greater part of the earth was covered with forests. Men tied together the tops of several trees and covered them with the skins of animals or with leaves and grass. So a tent, or hut, was the first house of the primitive people who lived where there was much wood. In other regions the most convenient building material was stone. Men began building houses out of stone very long ago. Although they were built without cement, the remains of a few of them still exist. It appears that the most ancient homes on the territory of our country were earthen houses. One such home was discovered near Voronezh in 1927. It consisted of a shallow hole of oval shape. The floor was covered with limestone slabs. The roof had been conical and stood on poles covered by branches or animal skins. Such dwellings existed in that part of the country in the Upper Paleolithic Period (from 40,000 to 12,000 years ago) The ancient Egyptians built very simple houses by present standards. Having dried the bricks in the sun, they put up four walls, and above these they placed a flat roof. The roof was flat because there was very little rain in Egypt. Although their buildings were simple in construction, the Egyptian art of building was very beautiful. Their pyramids and monuments, sphinxes and palaces arouse our wonder to this day. An important part in the history of building has been played by the column, and it was ancient Egypt that gave the world it's the first lessons in the art of making columns.

Assignment 2. Write down 10 sentences in Present Perfect Tense.
Assignment 3. Continue the following topic about the Irish Abroad.
People have left Ireland for lots of different reasons. After Ireland became Christian in the fifth century, Irish monks left the country to teach the word of God. …….
Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Hardworking			
Immediately			
Jolly			
Laugh			
Main			
Nasty			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.
a) Picturesque places of Russia.
b) Special geographical features of Russia.
c) The capital city of this country.
Assignment 6. Explain the meaning of the following proverb.
Learning is a treasure that will follow its owner everywhere.
Assignment 7. Listening. Unjumble the words. "Pollution"

MP3
pollution.mp3

I hate pollution. makes It angry really me. I think pollution is greed. People don't care about the environment they the just so pollute air to make lots of money. Big companies are the worst. They pretend they're not polluting. to they have money say They the are "green". Pollution affects us all. We are all less companies pollute healthy of that the because air or our rivers. Everybody needs to think about how we can create reduce the amount of pollution we. Not using the we when car way one is walk can. Turning off lights we don't need is another. Barack Obama says he's going to help his the best Earth to do. I really hope he does pollution if because worse any gets, we'll be in seriously big trouble.
Assignment 8. Speak on the topic: "History of housing"

Independent work 2.
VARIANT 13.
Assignment 1. Translate the text into your native language.

The ancient Egyptians built very simple houses by present standards. Having dried the bricks in the sun, they put up four walls, and above these they placed a flat roof. The roof was flat because there was very little rain in Egypt. Although their buildings were simple in construction, the Egyptian art of building was very beautiful. Their pyramids and monuments, sphinxes and palaces arouse our wonder to this day. An important part in the history of building has been played by the column, and it was ancient Egypt that gave the world it's the first lessons in the art of making columns. he Greeks learned much from Egypt. But they did not borrow the flat roof. They built a slanting roof because there was much rain in their country. The Greeks made the roof slant in two directions from the middle. They also improved on Egypt's columns and soon became the teachers of the world in column making. The Romans, in turn, learned much from the Greeks. First of all, they borrowed the slanting roof and the columns. But they added the arch, thus adding much strength and beauty to their buildings. In our country architecture flourished for the first time in Kiev Russ. Unfortunately, only a few of the church buildings of that period have remained. The churches of the time were strong buildings with thick walls and small windows. They often had to serve as fortresses during enemy invasions.

Assignment 2. Write down 10 sentences in Past Perfect Tense.

Assignment 3. Continue the following topic about the US Congress.

The Congress of the United States is composed of two houses: the Senate and the House of Representatives. The Senate represents the states. Each state is guaranted at least one representative in the House. ……

Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Obstinate			
Patient			
Quickly			
Rarely			
Save			
Tame			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.

a) The busiest cities of Scotland.
b) Two interesting parts of Edinburg.
c) Outstanding people of Scotland.

Assignment 6. Explain the meaning of the following proverb.

Least said soonest mended.

Assignment 7. Listening. Unjumble the words. "Opinions".

opinions.mp3

We everything on opinions have all. Some of us have very strong opinions. have Others opinions not-so-strong. And then there are those who say they have no opinion, which kind suppose of is opinion some I. It's interesting be our so opinions different can how. Even on the smallest of things. It's also interesting to see how your get older opinions change as you. My opinions of other people change a lot. You have first impressions of someone – that's your initial opinion. Then, as you get to know them, of opinions your change can them – for better or worse. Whose opinion is right? I suppose it's the person who is strongest. their opinions They try to force on others. and to listen to important It's consider the opinions of other people.

Assignment 8. Speak on the topic: "Foundation materials".

Independent work 2.
VARIANT 14.
Assignment 1. Translate the text into your native language.

The Greeks learned much from Egypt. But they did not borrow the flat roof. They built a slanting roof because there was much rain in their country. The Greeks made the roof slant in two directions from the middle. They also improved on Egypt's columns and soon became the teachers of the world in column making. The Romans, in turn, learned much from the Greeks. First of all, they borrowed the slanting roof and the columns. But they added the arch, thus adding much strength and beauty to their buildings. In our country architecture flourished for the first time in Kiev Russ. Unfortunately, only a few of the church buildings of that period have remained. The churches of the time were strong buildings with thick walls and small windows. They often had to serve as fortresses during enemy invasions. Tourists from all over the world come to see the famous Cathedral of St. Sophia, the cornerstone of which was laid in 1037 to commemorate a victory over the Pechenegs. Having been forced out of Kiev the German fascists did their best to destroy its finest ancient architecture, although it had no military significance. Great effort has gone into restoring them. Having become very acute in many countries after World War II, the housing problem called for a solution. As a result of the damages caused by the war there has been a great housing shortage. The Government set itself the Assignment of housing all the homeless people, who had lost their flats and of improving the living conditions of those who lived in crowded and uncomfortable flats. To solve the problem great housing construction has started since the end of the war. Millions of people have already moved into new flats.

Assignment 2. Write down 10 sentences in Future Perfect Tense.
Assignment 3. Continue the following topic about the discovery of America.
Christopher Columbus discovered America in 1492. He was born in Italy. His father and both grandfathers were cloth makers. Columbus was a seaman and made many sea voyages. …….
Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Unattached			
Vanish			
Waste			
Acute			
Bend			
Cardinal			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.
a) The heart of England.
b) Industrial cities of GB.
c) The big port of Liverpool.
Assignment 6. Explain the meaning of the following proverb.
Let bygones be bygones.
Assignment 7. Listening. Unjumble the words. "Lifestyle".

lifestyle.mp3

Everyone good wants lifestyle a. I do too. I want a good job that is quite near my house – I don't want to spend on and a time trains buses long. I also want a nice house where I can relax. I like decorating and shopping for furniture. also want lots of friends so I can do stuff I with them. being a happy good My lifestyle idea is of at work, going to the gym or going out for a meal after work, and weekends things with spending friends the doing or going places. Of course year every holiday a have to have I in another country. lifestyle yet I haven't got that because I haven't got enough money. jealous little a I'm my of friend's lifestyle. She has everything and is always going out and having fun.
Assignment 8. Speak on the topic: "Egyptian pyramids".

Independent work 2.
VARIANT 15.
Assignment 1. Translate the text into your native language.

Having become very acute in many countries after World War II, the housing problem called for a solution. As a result of the damages caused by the war there has been a great housing shortage. The Government set itself the Assignment of housing all the homeless people, who had lost their flats and of improving the living conditions of those who lived in crowded and uncomfortable flats. To solve the problem great housing construction has started since the end of the war. Millions of people have already moved into new flats.

5. A very advanced construction technique today is the use of precast concrete. According to this technique, the reinforced concrete units of which a building is to be made are manufactured at a factory and are then simply assembled on the site. The use of precast concrete has many advantages over other building methods. For one thing, building work is industrialized more highly. The site becomes something like an assembly shop which cuts the labour needed for building by 60 to 70%, the main part of the work being done at the factory. The building season is also extended. After all, in the greater part of our country the winter lasts for several months. Precast building units are manufactured in heated premises and can be assembled at the site all the year round in any frost. Furthermore, the duration of building is cut. And, finally, materials and money are saved, as, for example; it is possible to do away with expensive scaffolding. The precast concrete technique, which is continuously being improved in our country, has a big part to play in the country's huge building program.

Assignment 2. Write down 10 sentences in General Questions.
Assignment 3. Continue the following topic about your birthday.
Birthday is a very wonderful day. Everybody likes to celebrate it. It is a good opportunity to spend time with friends, parents, relatives…….
Assignment 4. Write synonyms and antonyms of the following words.

WORD	SYNONYM	ANTONYM	TRANSLATION
Unattached			
Vanish			
Waste			
Acute			
Bend			
Cardinal			

Assignment 5. Write a composition according to the following plan and make a conclusion giving your own opinion.
a) Universities of GB.
b) Teaching and studying at the Cambridge University.
Assignment 6. Explain the meaning of the following proverb.
Let not the sun go down on your wrath.
Assignment 7. Listening. Unjumble the words. "Laws".

laws.mp3

the laws Without end would world. OK, maybe the actual Earth might not end, but know would life we it end as. We'd all end up fighting and killing each other. It would become the the survival strongest of, or perhaps the survival of the nastiest. If there were no laws, people could do anything. no be There'd courts or police to keep control. Law is very important. It keeps order in our society. of ago laws thousands years Our started. Many of today's laws were made centuries ago. New laws need to every be day made. Especially in today's world, where the Internet is so important. It's very difficult to keep new laws to with developments up date. The latest area property is of intellectual law. It's important that people's ideas are protected.

Assignment 8. Speak on the topic: "Non – foundation materials".

GLOSSARY

Air return: A series of ducts in air conditioning system to return used air to air handler to be reconditioned.

Anchor Bolts: (also called J-bolts) Bolts embedded in concrete foundation used to hold sills in place.

Anchor Straps: Straps embedded in concrete foundation used to hold sills in place, most commonly MASAs in our houses.

Apron: A piece of driveway between sidewalk and curb.

Back Fill: The replacement of dirt in holes, trenches and around foundations.

Backing (aka blocking) a non-structural (usually 2x) framed support (i.e. for drywall).

Balloon Framing: A special situationally required type of construction with studs that are longer than the standard length..

Bay: The space between two parallel framing members (i.e. trusses).

Beam: A horizontal structural member running between posts, columns or walls.

Bearing wall (aka partition): A wall which carries a vertical structural load in addition to its own weight.

Bevel: To cut an angle other than a right angle, such as on the edge of a board.

Bird block (aka frieze board): An attic vent located between truss tails.

Bird's Mouth: A notch cut in the underside of a rafter to fit the top plate.

Blocking (aka backing): A non-structural 2x framing support (i.e. for drywall)

Board: Lumber less than 2" thick.

Board Foot: The equivalent of a board 1' square and 1" thick.

Box Header: A horizontal structural member over an opening having a rectangular cross section with a hole in the middle, which we fill with insulation.

Building Code: A collection of rules and regulations for construction established by organizations based on experience and experiment, and enacted and enforced by local municipalities.

California corner: A framing member used at the intersection of two walls, consisting of three studs nailed together to form a U-shaped cross section.

Camber: The slight arch in a beam or truss which prevents it from bending into a downward shape under normal load.

Cantilevered: Extending horizontally beyond support.

Cant Strip: A triangular shaped strip used under the edges of roofing by walls on flat roofs.

Cased Opening: An interior opening without a door that is finished with jamb and trim.

Caulking: A flexible material used to seal a gap in a joint

Ceiling joist: One of a series of parallel framing members (not part of a truss) used to support ceiling loads and supported in turn by larger beams or bearing walls.

Cement: (1) The gray powder that is the "glue" in concrete. (2) An adhesive.

Chalk line: (1) A cord dusted with chalk (2) A line made by snapping a taut string or cord dusted with chalk

Chase: A framed enclosed space or channel in a wall, or through a ceiling for something (usually duct work or plumbing) to pass through.

Circuit Breaker: A device which looks like a switch and is located inside the electrical panel. It is designed to (1) shut off the power to portions or all of the house and (2) to limit the amount of power flowing through a circuit (measured in amperes)

Clean out: A capped opening providing access to a drain line, used to clear blockages.

Column: A vertical structural compression member which supports loads.

Compressor: 1. A piece of equipment that provides compressed air to air powered tools. 2. A mechanical device that pressurizes a gas in order to turn it into a liquid, thereby allowing heat to be removed or added. A compressor is the main component of conventional heat pumps and air conditioners.

Condenser: The part of an air conditioning system containing the compressor and a large fan that sits outside and is responsible for transferring heat to/from the heat transfer medium (Freon).

Concrete: A mixture of cement, sand, gravel, and water.

Control joint: Tooled, straight grooves made in concrete flatwork to "control" where the concrete should crack.

Corner bead: A strip of formed sheet metal or plastic placed on outside corners of drywall before applying drywall 'mud'. Can be either square or bull nose (round).

Counter flashing (aka "Z" flashing): A galvanized sheet metal flashing used at the roofline to cover shingle flashing ("L" flashing) and used to prevent moisture entry.

Course: 1. A row of shingles or roll roofing running the length of the roof. 2. A row of block or brick.

Cricket: A second roof built on top of the primary roof to increase the slope of the roof, designed to encourage water drainage to a scupper on a flat roof.

Cripple: Short vertical framing member installed above or below an opening .

Deadbolt: a tongued throw lock whose bolt must be manually pulled back before the door can open and close.

Deck, decked: To install the plywood or OSB sheeting on the floor joists, rafters, or trusses.

Ceiling joist: One of a series of parallel framing members (not part of a truss) used to support ceiling loads and supported in turn by larger beams or bearing walls.

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Deadbolt: a tongued throw lock whose bolt must be manually pulled back before the door can open and close.

Deck, decked: To install the plywood or OSB sheeting on the floor joists, rafters, or trusses.

Delamination: Separation of the plies in a panel due to failure of the adhesive, usually caused by excessive moisture.

Diaphragm: In structural engineering, a *diaphragm* is a structural element that transmits lateral load to the vertical resisting elements of a structure (such as shear walls or frames) Diaphragms are typically horizontal, but can be sloped such as in a gable roof.

Disconnect: A large electrical ON-OFF switch found at the water heater and AC condenser.

Doorjamb: It consists of two upright pieces, called side jambs, and a horizontal head jamb. For a hinged door these 3 jambs have the "door stop molding" installed on them.

Double hung window: A window with two vertically sliding sashes, both of which can move up and down.

Drip System: An automated low water usage plant watering system.

Dry in: To install the roofing underlayment (tar paper or feltex) on the roof and stucco paper on the walls in preparation for sheet rocking the house.

Drywall (aka Gypsum Wallboard [GWB] & Sheet rock): A manufactured panel made out of gypsum plaster and encased in a thin cardboard. Usually 1/2" thick and 4' x 8' or 4' x 12' in size. The panels are nailed or screwed onto the framing and the joints are taped and covered with a 'joint compound'. 'Non-paper board' type drywall has a greater resistance to moisture and mildew than regular (white) plasterboard and is used in bathrooms and other "wet areas". Soffit board is even more moisture resistant for use on exterior ceilings, and type X board (5/8”) is fire rated for use in separating livable spaces from fire hazard areas (i.e. the garage).

Ducts: The air conditioning system. Usually round or rectangular metal or flexible pipes installed for distributing warm or cold air from the air handler to rooms in the home.

DWV (drain-waste-vent): The section of a plumbing system that carries water and sewer gases out of a home.

Easement: A formal contract which allows a party to use another party's property for a specific purpose. e.g. a Public Utility Easement (PUE) allows communication cables to run across a property.

Eaves: The horizontal exterior roof overhang at the bearing wall.

Egress: A means of exiting the home. An egress window is required in every bedroom. Normally a 4' X 4' sliding window or a 3’ X 5’ single (or double) hung window with a sill no higher than 44” above the floor is the minimum required by code.

Elbow (ell): A plumbing or electrical fitting (usually 45 or 90 degrees) that lets you change directions in runs of pipe or conduit.

Electrical Panel: Main power cabinet where electric enters a home’s wiring system.

Electrical Rough: Work performed by the electrician after the plumber and heating contractor are complete with their phase of work. All electrical wires, and outlet, switch, and fixture boxes are installed (this is part of the work is required for Pre-Drywall Inspection).

Electrical Trim: Work performed by the electrician when the house is nearing completion. The electrician installs all plugs, switches, plates, light fixtures, smoke detectors, wires the ventilation fans & the HVAC, and "makes up" the electric panel. The electrician does all electrical work necessary to get the home ready to pass the municipal final inspection.

Elevation sheet: The page on the blue prints that depicts the house as if a person is looking straight at each of the sides (there is no perspective in this drawing).

Evaporator coil: The part of a cooling system that absorbs heat from air in your home and is located in the compressor unit.

Expansion joint: Fibrous material (1/2" thick) installed in and around a concrete slab to permit it to move up and down (seasonally) along the non-moving foundation wall. Also between the house and adjacent flatwork (drive, sidewalk, etc.) or adjacent sections of flatwork.

Expansive soils: Earth that swells and contracts depending on the amount of water that is present. ("Betonite" is an expansive soil). It is a common problem in Arizona. Solving this problem requires the use of a post-tensioned slab.

Fascia: Lumber (usually 2x6) attached to rafter/truss ends at the eaves and outriggers at the gables.

Felt (aka underlayment): Tar paper or feltex, installed under the roof shingles.

Female: Any part, such as a nut or fitting, into which another (male) part can be inserted. Internal threads are female.

Field measure: To take measurements (cabinets, countertops, stairs, shower doors, etc.) in the home itself instead of using the blueprints.

Finger joint: A manufacturing process of interlocking two shorter pieces of wood end to end to create a longer piece of dimensional lumber or molding. Often used in jambs, casings and baseboard which are painted instead of stained.

Fire-resistive or Fire rated: Applies to materials that are not combustible in the temperatures of ordinary fires and will withstand such fires for at least 1 hour. Drywall used in the garage and party walls are to be fire rated, 5/8", Type X.

Fire stop: (1) A solid, tight closure of a concealed space, placed to prevent the spread of fire and smoke through such a space. (2) All work performed to slow the spread of fire and smoke in the walls and ceiling (behind the drywall) and includes filling wire holes in the top and bottom plates with fire rated caulk or spray foam, and installing blocks of wood between the wall studs at the drop soffit line. This is integral to passing a Pre-Drywall Inspection.

Fish tape: A long strip of spring steel used for pulling wires and cables through conduit or enclosed wall, ceiling or floor cavities.

Flashing: Sheet metal or other material used in roof and wall construction to protect a building from water seepage.

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Fish tape: A long strip of spring steel used for pulling wires and cables through conduit or enclosed wall, ceiling or floor cavities.

Flashing: Sheet metal or other material used in roof and wall construction to protect a building from water seepage.

Flat paint: A paint that contains a high proportion of pigment and dries to a flat or lusterless finish.

Flatwork: Common word for concrete floors, driveways, basements, and sidewalks.

Floating: Is the next-to-last stage in concrete work. It is when you smooth off the job and bring water to the surface by using a hand float or bull float.

Floor Plan (aka Plan View): the drawing of a structure with the view from overhead, looking down.

Fluorescent lighting: A fluorescent lamp is a gas-filled glass tube with a phosphor coating on the inside. Gas inside the tube is ionized by electricity which causes the phosphor coating to glow.

Footer, footing: Continuous thick concrete pad installed before and supporting the stem (foundation) wall or a post.

Forced air heating/cooling: A common form of AC. Air is treated in the air handler and distributed through a set of ducts to various areas of the house.

Form: Temporary structure erected to contain concrete during placing and initial hardening.

Foundation: The supporting portion of a structure, below the first floor construction, or below grade, including the footings.

Framing: The act of building the house frame. Lumber used for the structural members of a building, such as studs, joists, rafters and trusses.

Frieze board (aka bird block): non-structural framing member between trusses or rafters at top plate seals attic access. Can be vented but usually is solid 2x material.

GF C I, or G F I: Ground Fault Circuit Interrupter- an ultra sensitive plug designed to shut off all electric current. Used in bathrooms, kitchens, exterior waterproof outlets, garage outlets, and "wet areas". Has a small reset button on the master outlet.

Gable: The end, upper, triangular area of a home, beneath the roof.

Garage door buck: a frame of wood or metal set in a partition, to support door hardware.

Girder truss: A large or principal truss used to support concentrated loads at isolated points along its length.

Glulam (Glued Laminated Beam): A structural beam composed of wood laminations or lams. The lams are pressure bonded with adhesives to attain a typical thickness of 1 ½" . (It looks like multiple 2x's are glued together). Be sure to identify and install TOP side up.

Grade: Ground level, or the elevation at any given point. Also, the work of leveling dirt, or the designated quality of a piece of wood.

Grain: The direction, size, arrangement, appearance, or quality of the fibers in wood.

Green board (aka pressure treated lumber): Lumber that has been saturated with chemical preservatives to prevent rot and infestation.

Grid: The decorative slats (muntins) installed between glass panels.

Ground wire: The green or un-insulated wire, always connected to metal, to prevent electrical shock.

Gusset: A flat member used to provide a connection at the intersection of wood members. Most commonly used at joints of wood trusses.

H V A C: An abbreviation for **H**eat, **V**entilation, and **A**ir **C**onditioning.

HVAC Rough: Work performed by the Heating Contractor after the interior walls are built. This includes installing all duct work and the air handler.

HVAC Trim: Work done by the Heating Contractor to get the home ready for the municipal Final Heat Inspection. This includes installing all vent grills, registers, air conditioning condenser, and thermostats, and venting range hoods.

Header: The horizontal structural member over an opening (e.g. over a door or window).

Heat pump: A mechanical device which uses compression and decompression of gas to heat and/or cool a house.

Heel cut: A notch cut in the end of a rafter to permit it to fit flat on a wall and on the top, doubled, exterior wall plate.

Hip: A roof with four sloping sides. The external angle formed by the meeting of two sloping sides of a roof.

Hip roof: A roof that rises by inclined planes from all four sides of a building.

Home run (electrical): The electrical cable that carries power from the main circuit breaker panel to the first electrical box, plug, or switch in the circuit.

Hose bib: An exterior water faucet (sill cock).

Hot wire: The wire that carries electrical energy to a receptacle or other device (normally the black wire) —in contrast to a neutral (the white wire), which carries electricity away again.

Hurricane clip: Metal connectors (usually H2.5s) that are nailed, and secure the roof rafters or trusses to the top horizontal wall plate.

I-beam: A beam with a cross section resembling the letter **I.**

I-joist: Manufactured structural building component resembling the letter "I". Used as floor joists and rafters. I-joists include two key parts: **flanges** and **webs**. The **flanges** of the I joist may be made of laminated veneer lumber or dimensional lumber, usually formed into a 1 ½" width. The **web** or center of the I-joist is commonly made of plywood or oriented strand board (OSB). Large holes can be cut in the web to accommodate duct work and plumbing waste lines. I-joists are available in lengths up to 60 feet long.

Incandescent lamp: A lamp employing an electrically charged metal filament that glows at white heat. A traditional light bulb.

Infiltration: The passage of air from indoors to outdoors and vice versa; term is usually associated with drafts from cracks, seams or holes in buildings.

Inside corner: The point at which two walls form an internal angle, as in the corner of a room.

Insulating glass (aka thermal glass): Window or door glazing in which multiple panes of glass are used with a sealed gas space between.

Insulation: (1) Any material high in resistance to heat transmission that, when placed in the walls, ceiling, or floors of a structure will reduce the rate of heat flow. (2) the material around an electrical wire to prevent the transmission of electricity.

Irrigation: Plant watering system.

J Channel (aka Weep Screed): Metal edging used on stucco to give the edge a better finished appearance and to allow water to drain.

Jamb: The side and head lining of a doorway.

Joint: The location between the touching surfaces of two members or components joined and held together by nails, glue, cement, mortar, or other means.

Joint compound (aka drywall mud.): A powder that is usually mixed with water and used for joint treatment in gypsum-wallboard finish.

Joist: Wooden members that run parallel to one another and support a floor or ceiling, and are supported in turn by larger beams, girders, or bearing walls.

Joist hanger: A metal "U" shaped fastener used to support the end of a joist or truss and attached with hardened nails to another bearing member.

Jump Duct (aka) transfer Grill); duct/vent between two spaces to allow air movement and pressure equalization between them.

Kilowatt (kw): One thousand watts. A kilowatt hour is the base unit used in measuring electrical consumption.

King stud: The vertical, full height "2 X" framing member that runs continuously from the bottom plate to the top plate.

Knot: In lumber, the portion of a branch or limb of a tree that appears on the edge or face of the piece.

L Flashing: L-shaped galvanized metal shingle flashing.

Ladder blocking: Pieces of cross blocking used to connect building members.

Laminated shingles (aka architectural or 3 dimensional shingles): Shingles that have added dimensionality because of extra layers or tabs, giving a shake-like appearance.

Laminating: Bonding together two or more layers of materials.

Landing: The floor at each story in a flight of stairs.

Lap: To overlap the surface of one piece with another (e.g. shingles).

Latch: A beveled metal tongue operated by a spring-loaded knob or lever. The tongue's bevel lets you close the door and engage the locking mechanism, if any, without using a key, unlike a dead bolt.

Lath: A building material of metal wire that is fastened to the frame of a building to act as a base for stucco or plaster.

Ledger: A structural member attached to the face of a wall which supports a joist or truss.

Level: (1) True horizontal. (2) The name of a tool used to determine level.

Load bearing wall: Any wall that carries structural load. Normally, any wall that has a double horizontal top plate.

Lookout (aka Outrigger): A wooden cantilever that supports the overhanging portion of a rake roof.

MDF (Medium Density Fiberboard): A manufactured wood product made of fine saw dust and resin. We use it for shelving cleats and the stairway treads.

Male: Any part, such as a bolt, designed to fit into another (female) part. External threads are male.

Manufactured wood: A wood structural product such as a gluelam or microlam, or sheet goods such as OSB, MDF, particle board or finger jointed trim, which are manufactured out of smaller wood pieces and glued to form a larger piece.

Masonry: Stone, brick, concrete, hollow-tile, concrete block, or other similar building units or materials. Normally bonded together with mortar to form a wall.

Mending Plates (aka Fascia Gusset, MP14): toothed metal plates used to join two pieces of fascia.

Microlam (aka laminated veneered lumber [LVL]): A manufactured structural wood beam. It is constructed of pressure and adhesive bonded wood strands. They have a higher strength rating than solid sawn lumber. Normally comes in 1 ½" thickness' and 9 ½", 11 ½" and 14" depth.

Millwork: Generally all building materials made of finished wood and manufactured in mill-work plants. It includes all doors, windows, moldings and interior trim.

Miter joint: The joint of two pieces at an angle that bisects the joining angle. For example, the miter joint at the side and head casing at a door opening is made at a 45° angle.

Mortar: A mixture of cement (or lime) with sand and water used in masonry work.

Muntin: A small member which divides the glass or openings of sash or doors.

Natural finish: A transparent finish which does not seriously alter the original color or grain of the natural wood.

Neutral wire: Usually color-coded white, this carries electricity from an outlet or switch back to the service panel. Also see hot wire and ground.

Nonbearing wall: A wall supporting no load other than its own weight.

Nosing: The projecting front edge of a stair tread.

O. C. (On Center): The measurement of spacing for studs, rafters, joists and trusses in a building from the center of one member to the center of the next.

Oriented Strand Board (aka OSB): A manufactured 4' X 8' wood panel made out of 1"- 2" wood chips and glue. Often used as a substitute for plywood.

Outrigger (aka Lookout): An extension from a rafter or truss beyond the wall line to form a roof overhang on a rake end, as a rafter tail or truss tail does on an eave.

Outside corner: The point at which two walls form an external angle, one you usually can walk around.

Overhang: Outward projecting eave-soffit area of a roof; the part of the roof that hangs out past the outside wall.

Padding: A material installed under carpet to add foot comfort, isolate sound, and to prolong carpet life.

Paint: A combination of pigments with suitable thinners or oils to provide decorative and protective coatings. It can be oil based or water based.

Pallets: Wooden platforms used for storing and shipping material. Forklifts and pallet jacks are used to move these wooden platforms around.

Panel: A thin flat piece of wood, plywood, or similar material, framed by stiles and rails as in a door (or cabinet door), or fitted into grooves of thicker material with molded edges for decorative wall treatment.

Parapet: An extension of a wall past the plane of the roof to hide roof clutter (i.e. the Territorial look) and originally intended as protection, though now mostly decorative.

Particle board: Plywood substitute made of course sawdust that is mixed with resin and pressed into sheets. We use it for shelving.

Penny: As applied to nails, it originally indicated the price per hundred. The term now serves as a measure of nail length and is abbreviated by the letter "**d**". Normally, 10d (10 "penny") nails are used for framing.

Permit: A governmental municipal authorization to perform a building process as in:

· Zoning\Use permit - Authorization to use a property for a specific use e.g. a garage, a single family residence, etc.

· Building permit - Authorization to build or modify a structure.

· Demolition permit - Authorization to tear down and remove an existing structure.

· Grading permit - Authorization to change the contour of the land
· Electrical permit - A separate permit required for most electrical work.
· Plumbing permit - A separate permit required for new plumbing and larger modifications of existing plumbing systems.

Pigtail, electrical: The electrical cord installed on an appliance, or another name for an electrical splitter.

Pier: A pad of concrete used to support a post.

Pilot Hole: A small diameter pre-drilled hole to guide a nail or screw.

Pitch: The slope of a roof expressed as vertical rise to horizontal run (i.e. 4/12 means a 4" rise for every 12" of run).

Plan view (aka Floor Plan): Drawing of a structure with the view from overhead, looking down.

Plate: Normally a 2 X 4 or 2 X 6 that lays horizontally within a framed structure, such as:
Sill plate- A horizontal member anchored to a concrete or masonry wall.
Top plate- Top horizontal member of a frame wall supporting ceiling joists, rafters or other members.

Platform: (1) The flat section of floor between stories in a flight of stairs (2) Raised surface supporting an object (i.e. Water Heater Platform).

Plot plan: An overhead view plan that shows the location of the home on the lot and includes all easements, property lines, set backs, and legal descriptions of the home.

Plumb: Exactly vertical and perpendicular.

Plumb bob: The tool used in determining plumb, which is usually a lead weight attached to a string.

Plumbing jack (aka Roof Jack): Sleeve (whose purpose is to prevent water leaks) that fits around drain and waste vent pipes at, and are nailed to, the roof sheeting.

Plumbing rough: Work performed by the plumbing contractor including installing all plastic ABS drain and waste lines, water lines and bath tubs.

Plumbing stack: A plumbing vent pipe that penetrates the roof.

Plumbing trim: Work performed by the plumbing contractor to get the home ready for a final inspection, which includes installing all toilets, hot water heaters, sinks, disposal, dishwasher, and all other needed plumbing items.

Plumbing waste line: Plastic pipe used to collect and drain sewage waste.

Ply: A term to denote the number of layers in built-up materials, or in any finished piece of such material (i.e. plywood).

Plywood: A panel (normally 4' X 8') of wood made of three or more layers of veneer, compressed and joined with glue, and usually laid with the grain of adjoining plies at right angles to give the sheet strength.

Portland cement: Cement made by heating clay and crushed limestone into a brick and then grinding to a pulverized powder state.

Post: A vertical framing member (often a 4" x 4" or a 6" x 6") usually designed to carry a beam.

Post-and-beam: A basic building method that uses just a few hefty posts and beams to support an entire structure, in contrast to our usual stud framing.

Pressure Relief Valve (PRV): A device mounted on a hot water heater or boiler which is designed to release any high steam pressure in the tank to prevent tank explosions.

Pressure-treated wood (aka green board): A wood product that has been impregnated with chemical preservatives to prevent rot and infestation.

Primer: The first, base coat of paint when a paint job consists of two or more coats. A first coating formulated to seal raw surfaces and hold succeeding finish coats.

P trap: Curved, "**U**" shaped section of drain pipe that holds a water seal to prevent sewer gasses from entering the home through a fixture's water drain.

Punch list: A list of discrepancies that need to be corrected.

Putty: 1. A type of dough used for filling small holes and crevices in wood, and for similar purposes. 2. Used in plumbing to seal joints to prevent water leakage.

PVC or CPVC: Poly Vinyl Chloride, a type of white or light gray plastic pipe sometimes used for water supply lines.

Quarter round: A small trim molding that has the cross section of a quarter circle.

Rafter: One of a series of single roof frame pieces spanning between supports to carry the roof sheathing and roofing.

Rafter, hip: A rafter that forms the intersection of an external roof angle.

Rafter, valley: A rafter that forms the intersection of an internal roof angle. The valley rafter is normally made of double 2x members.

Rake: Sloped or slanted.

Rake fascia (aka Barge Rafter): The vertical face of the sloping end of a roof eave.

Rebar (aka reinforcing bar): Ribbed steel bars installed in foundation, concrete walls, footers, and poured in place concrete structures designed to strengthen concrete. Comes in various thicknesses and strength grades.

Receptacle: An electrical outlet.

Redhead (aka wedge anchor): A substitute for anchor bolts that is added (into a drilled hole) after the concrete has set.

Reducer: A fitting with different size openings at either end and used to go from a larger to a smaller pipe.

Refrigerant: A substance that remains a gas at low temperatures and pressure and can be used to transfer heat. Freon is the most well known example.

Register: A grill placed over an HVAC duct to direct/balance air flow.

Relief valve: A device designed to open if it detects excess temperature or pressure, such as the T & P valve on a water heater.

R factor (or R value): A measure of a materials resistance to the passage of heat. Our home walls are usually insulated with 6" of batt insulation with an R value of R-19, and 12" of ceiling insulation of R-38.

Ridge: The horizontal line at the junction of the top edges of two sloping roof surfaces.

Ridge blocks: Framing members that tie rafters or trusses together at the peak.

Ridge Cap: Shingles used to cover the ridge.

Rim joist: A joist that runs around the perimeter of the floor joists.

Rise: The vertical distance from the eave line to the ridge. Also the vertical distance from stair tread to stair tread (and not to exceed 7 3/4").

Riser: Each of the vertical boards closing the spaces between the treads of stairways.

Riser and panel: The exterior vertical pipe (riser) and metal electric box (panel) the electrician provides and installs.

Roll, rolling: To install the roof or floor joists or trusses in their correct place. (To "roll the roof" means to install the roof trusses).

Roof jack (aka Boot): Sleeves that fit around roof penetrations at, and are nailed to, the roof sheeting to prevent water leaks.

Roof joist: The rafters of a flat roof.

Roof sheathing or sheeting: The wood panels (OSB) fastened to the roof rafters or trusses on which the shingles or other roof covering is laid, and which creates a structural diaphragm.

Roof valley: The "**V**" created where two sloping roofs meet.

Rough opening: The horizontal and vertical measurement of a window or door opening at rough framing

Roughing-in: The initial stage of a plumbing, electrical, heating, carpentry, and/or other project, when all components that won't be seen after the finishing phase are assembled and installed.

Run, roof: The horizontal distance from the eaves to a point directly under the ridge. One half the span.

Run, stair: the horizontal distance of a stairway from end to end.

Sandwich header: a horizontal structural member over an opening made of 2xs or 2xs and sandwiched OSB.

Sanitary sewer: A sewer system designed for the collection of waste water from the bathroom, kitchen and laundry drains, that is usually not designed to handle storm water.

Sash: The frame that holds the glass in a window, often the movable part of the window.

Schedule (window, door, etc.): A table on the blueprints that list the sizes, quantities and locations of windows, doors etc.

Scratch coat: The first coat of stucco, which is scratched to form a bond for a second coat.

Screed: To level off concrete to the correct elevation during a concrete pour.

Scribing: Cutting and fitting woodwork to an irregular surface.

Scupper: (1) An opening for drainage in a wall, curb or parapet. (2) The drain off a flat roof, sometimes connected to a downspout.

Sealer: A finishing material, either clear or pigmented, that is usually applied directly over the surface (sometimes as an undercoat for the final finish).

Semi-gloss paint: A paint or enamel made so that its coating, when dry, has some luster but is not very shiny.

Service entrance panel (aka electrical panel): The main power cabinet where electricity enters a home's wiring system, which contains circuit breakers or fuses, and switches.

Service lateral: Underground power supply line from the main line to the house.

Setback Thermostat: A thermostat with a clock which can be programmed to come on or go off at various temperatures and at different times of the day/week. Usually used as the HVAC system thermostat.

Settlement: Shifts in a structure caused by improperly compacted soil or expansive soils.

Sewer lateral: The portion of the sanitary sewer which connects the interior waste water lines to the main sewer lines.

Sewer stub: The junction at the municipal sewer system main where the home's sewer line is connected.

Sewer tap: The physical connection point where the home's sewer line connects to the main municipal sewer line.

Shake shingle: A wood roofing material, normally cedar or redwood, produced by splitting a block of the wood along the grain line. Modern shakes are sometimes machine sawn on one side.

Sheathing, sheeting: The structural wood diaphragm covering, usually OSB, used over studs, floor joists or rafters/trusses of a structure.

Shed roof: A roof containing only one sloping plane.

Sheet metal duct work: The HVAC system ductwork.

Sheet rock: A brand of Gypsum Wall Board (GWB). Also used generically for any GWB (drywall).

Shim: 1. A small piece of scrap lumber or shingle, usually wedge shaped, which when forced behind a furring strip or framing member forces it into position. Also used when installing doors and placed between the door jamb legs and 2x door trimmers. 2. The act of using a shim.

Shingles: Roof covering of asphalt. wood, tile, slate, or other material cut to stock lengths, widths, and thicknesses.

Short circuit: A situation that occurs when hot and neutral wires come in contact with each other. Fuses and circuit breakers protect against fire that could result from a short.

Shutter: Usually lightweight louvered decorative frames in the form of doors located on the sides of a window. Some shutters are made to close over the window for protection.

Sill: (1) The 2X wood plate framing member that lays flat against and bolted to the foundation wall (with anchor bolts). The sill plate is treated lumber. **(2)** The member forming the lower side of an opening, as a door sill or window sill.

Sill cock (aka hose bib): An exterior water faucet.

Sill seal: Foam insulation installed between the foundation wall and sill (wood) plate, which is designed to seal any cracks or gaps.

Single hung window: A window with one vertically sliding sash.

Skylight: A more or less horizontal window located on the roof of a building.

Slab, concrete: Concrete floors.

Slab, door: A rectangular door without hinges or frame.

Slab on grade: A type of foundation where a concrete floor is placed directly on the soil.

Sleeve(s): Pipe installed under driveway, sidewalk, wall or fence that will be used later to run sprinkler pipe or low voltage wire through.

Slope (aka pitch): The incline angle of a roof surface, given as a ratio of the rise (in inches) to the run (in inches).

Slump: The "wetness" of concrete. A 3 inch slump is dryer and stiffer than a 5 inch slump.

Soffit: The area below the eaves and overhangs. (2) An area of dropped ceiling such as above cabinetry.

Soil stack: A plumbing vent pipe that penetrates the roof.

Solid bridging: A solid member placed between adjacent floor joists near the center of the span to prevent joists or rafters from twisting (a type of blocking).

Spacing: The distance between individual members in building construction.

Span: The clear distance that a framing member carries a load without support.

Specifications or Specs: Written elaboration in specific detail about construction materials and methods used to supplement working drawings.

Square: (1) A unit of measure (100 square feet) usually applied to roofing material. (2) a situation that exists when two elements are at right angles to each other. (3) a tool for checking right angles.

Square-tab shingles (aka3 tab): Shingles on which tabs are all the same size and exposure.

Standard practices of the trade(s): One of the more common basic and minimum construction standards. This is another way of saying that the work should be done in the way it is normally done by the average professional in the field.

Starter strip: An asphalt roofing material applied at the edges of the roof deck that provides protection by filling in the spaces under the cutouts and joints of the first course of shingles.

Stair rise: The vertical distance from stair tread to stair tread (and not to exceed 7 3/4").

Stick built: A house built without prefabricated parts, also called conventional framing.

Stile: An upright framing member in a panel door.

Stool: Another name for toilet.

Stops: Moldings along the inner edges of a door or window frame.

Stop valve: A device installed in a water supply line, usually near a fixture, that permits an individual to shut off the water supply to one fixture without interrupting service to the rest of the system.

Story: That part of a building between any two floors or between the floor and roof.

Strike: The plate on a door frame that engages a latch or dead bolt.

Stringer: The supporting member for stair treads. Usually a LVL member notched to receive the treads and risers.

Stucco: Refers to an outside plaster finish made with Portland cement as its base.

Stud (aka wall stud or king stud): A vertical framing member, attached to the horizontal bottom plate below and the top plate above (2x @92 5/8"for an 8' ceiling).

Stud framing: A building method that distributes structural loads to each of a series of relatively lightweight studs (how we build). Contrasts with post-and-beam.

Suspended ceiling: A ceiling system supported by hanging it from the overhead structural framing.

Sweep: The metal housing and rubber gasket attached to the bottom of a door that seals against the threshold.

Switch: A device that completes or disconnects an electrical circuit.

T & G, tongue and groove: A joint made by a tongue (a rib on one edge of a board) that fits into a corresponding groove in the edge of another board to make a tight flush joint (our subfloor sheets are T & G).

Tab: The exposed portion of strip shingles defined by cutouts.

Take off: A list of the material necessary to complete a job.

Taping: The process of covering drywall joints with paper tape and joint compound.

Teco nail: The type of hardened nail used to attach metal straps.

Tee: A "T" shaped plumbing fitting.

Tempered: Strengthened. Tempered glass will not shatter nor create shards, but will "pelletize" like an automobile window. Required in tub and shower enclosures, entry door and sidelight glass, and in windows when the window sill is less than 16" from the floor.

Thermostat: A device which regulates the temperature of a room or building by switching heating or cooling equipment on or off.

Three-dimensional shingles (aka architectural shingles): Laminated shingles which have added dimensionality because of extra layers or tabs, giving a shake-like appearance.

Threshold: The bottom metal or wood plate of an exterior door frame. Generally they are adjustable to keep a tight fit with the door sweep.

Toe-nailing: To drive a nail in at an angle to connect two members.

Top chord: The upper or top member of a truss.

Top plate: Top horizontal member of a frame wall supporting ceiling joists, rafters, or other members.

Transfer grill (aka Jump Duct): The grill covered opening through a wall or ceiling used for air pressure balancing.

Trap: A plumbing fitting that holds water to prevent air, gas, and vermin from backing up into a fixture.

Tread: The walking surface board of a stairway with a 10" minimum depth.

Treated lumber (aka green board): A wood product which has been impregnated with chemicals and pesticides, to reduce damage from wood rot or insects. Used for the bottom plates of a structure which are likely to be in contact with moisture.

Trim: The work that the "mechanical" contractors perform to finish their respective aspects of work when the home is nearing completion and occupancy. (2) The finish materials in a building, such as moldings applied around openings (window trim, door trim) or at the floor and ceiling of rooms (baseboard, cornice, and other moldings). Also, the physical work of installing these items.

Trimmer (aka jack stud): The vertical stud that supports a header at a door, window, or other opening.

Truss: An engineered and manufactured roof or floor support member with internal "zig-zag" webbing.

Truss Joist or TJ: A brand of manufactured structural building component resembling the letter "**I**". Used as floor joists and rafters. I-joists include two key parts: **flanges** and **webs**. The **flange** of the I joist may be made of laminated veneer lumber or dimensional lumber. The **web** or center of the I-joist is commonly made of plywood or oriented strand board (OSB). Large holes can be cut in the web to accommodate duct work and plumbing waste lines. I-joists are available in lengths up to 60" long.

Turpentine: A petroleum product, (a volatile oil) used as a thinner & solvent in paints and as a solvent in varnishes.

UL (Underwriters' Laboratories): An independent testing agency that checks electrical devices and other components for possible safety hazards.

Underground plumbing: The water and drain lines that are installed beneath a slab.

Underlayment (aka tar paper, roofing paper, felt paper, Feltex): A secondary roofing layer that is waterproof or water-resistant, installed on the roof deck beneath shingles.

Union: A plumbing fitting that joins pipes end-to-end so they can be easily dismantled.

Utility easement: The area of the earth that has electric, gas, or telephone lines. These areas may be owned by the homeowner, but the utility company has the legal right to enter the area as necessary to repair or service the lines.

Valley: The "**V**" shaped area of a roof where two sloping roofs meet. Water drains off the roof at the valleys.

Valley flashing: Galvanized sheet metal flashing that is sometimes used and lays in the "V" area of a roof valley to prevent moisture penetration.

Veneer: (1) Extremely thin sheets of wood. (2) A thin slice of wood, brick or stone covering a framed wall.

Vent: A pipe or duct which allows the flow of air and gasses to the outside.

Voltage: A measure of electrical potential. Most homes are wired with 110 and 220 volt lines. The 110 volt power is used for lighting and most of the other circuits. The 220 volt power is usually used for the kitchen range, hot water heater, AC and dryer.

Walk-Through: A final inspection of a home before "Closing" to look for and document problems that need to be corrected.

Warping: Any distortion in a material.

Waste pipe and vent: Plastic plumbing pipe that carries waste water to the municipal sewage system and waste gasses out of the house through the roof.

Water closet: Another name for toilet.

Water meter box: The concrete box and cast iron bonnet that contains the water meter.

Water tap: The connection point where the home water line connects to the main municipal water system.

Weatherstrip: Narrow sections of thin metal, foam or plastic installed to prevent the infiltration of air and moisture around windows and doors.

Weep holes: Small holes in window frames that allow moisture to escape.

Whole house fan: a type of **fan** commonly venting into a building's **attic**, designed to circulate air in a home.

Window frame: The stationary part of a window unit; the window sash fits into the window frame.

Window sash: The operating or movable part of a window; the sash is made of window pane(s) and their border.

Wire nut: A plastic device used to connect bare wires together.

Wrapped, drywall: Areas that get complete drywall covering, as in walk through openings, or the doorway openings of bi-fold closet doors.

Y: A "Y" shaped plumbing fitting.

Yard, concrete: One cubic yard of concrete is 3' X 3' X 3' in volume, or 27 cubic feet. One cubic yard of concrete will pour 80 square feet of 3 ½" sidewalk or slab.

Z Flashing (aka counter flashing): Z-shaped galvanized metal flashing used to cover L flashing to prevent moisture penetration.

Zone: (1) The section of a building that is served by one heating or cooling loop because it has noticeably distinct heating or cooling needs. (2) The section of property that will be watered from an irrigation system.

Zoning: A governmental process and specification which limits the use of a property e.g. single family use, high rise residential use, industrial use, etc. Zoning laws may limit where you can locate a structure.

APPENDIX

ЎЗБЕКИСТОН РЕСПУБЛИКАСИ
ОЛИЙ ВА ЎРТА МАХСУС ТАЪЛИМ ВАЗИРЛИГИ

Рўйхатга олинди:

№ БД – _____ – 1.05

2018 йил "26" 05

Олий ва ўрта махсус таълим вазирлиги

_____

2018 йил "14" 06

ХОРИЖИЙ ТИЛ

ФАН ДАСТУРИ

(Барча таълим йўналишлари учун)

ТОШКЕНТ - 2018

Ўзбекистон Республикаси Олий ва ўрта махсус таълим вазирлиги 2018 йил

“ 14” июндаги “ 531” – сонли буйруғининг 1-иловаси билан фан дастури рўйхати тасдиқланган.

Фан дастури Олий ва ўрта махсус, касб-ҳунар таълими йўналишлари бўйича Ўқув-услубий бирлашмалар фаолиятини Мувофиқлаштирувчи кенгашнинг 2018 йил “ 26” майдаги 2 - сонли мажлис баённомаси билан маъқулланган.

Фан дастури Ўзбекистон давлат жаҳон тиллари университетида ишлаб чиқилди.

Тузувчилар:

Боқиева Г. Ҳ.	- ф.ф.д., профессор, Ўзбекистон давлат жаҳон тиллари университети
Саматова Б. Р.	- кафедра мудири, Тошкент давлат юридик университети, Тил ўргатиш маркази
Турсунов М. М.	- катта ўқитувчи, Бухоро давлат университети, Инглиз тили ва адабиёти кафедраси
Дадаходжаева М.С	- п.ф.н. доцент, Ўзбекистон давлат жаҳон тиллари университети, немис тили ўқитувчиси
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Фан дастури Ўзбекистон давлат жаҳон тиллари университети Илмий кенгашида кўриб чиқилган ва тавсия қилинган (2018 йил “ 26” апрелдаги 9 – сонли баённома).

I. Ўқув фанининг долзарблиги ва олий касбий таълимдаги ўрни

Узлуксиз таълим тизимининг чет тиллар бўйича давлат таълим стандартидаги “Чет тиллар бўйича таълимнинг барча босқичлари битирувчиларининг тайёргарлик даражасига қўйиладиган талаблар”га мувофиқ олий таълим муассасаларининг ихтисослиги чет тили бўлмаган факультетлари битирувчилари чет тили бўйича B2 даражасини эгаллашлари белгилаб берилган.

Хорижий тил фан дастури мазмун-моҳиятига кўра умумий илмий (академик) тил кўникмаларини ривожлантиришга қаратилган, талабаларнинг бўлғуси касбий фаолиятларида фойдаланадиган тил компетенцияларини ривожлантиришга мослаштирилган. Мустақил таълим талабаларда тилдан эркин фойдаланиш кўникма ва малакаларини эгаллаш мотивациясини шакллантириш ва ривожлантиришга қаратилган.

Ушбу дастур “Хорижий тил” фанини ўқитиш даврида талабаларнинг умумий, академик ва касбга йўналтирилган тил кўникма ва малакаларини ривожлантиришга қаратилган. Хорижий тилни ўрганишнинг мустақил мулоқот (B2) даражаси талабаларда кўпроқ академик ва касбга йўналтирилган тил кўникмаларини ривожлантиришни тақозо этади.

II. Ўқув фанининг мақсади ва вазифаси

Хорижий тилни ўргатишдан асосий мақсад – бўлғуси мутахассисларда кундалик ҳаётлари, илмий ва касбий фаолиятларида чет тили ёки бир неча тиллардан эркин фойдаланувчи мутахассисларни тайёрлаш. Шу билан бирга, уларда ватанпарварлик ҳиссини ривожлантириш, мустақил изланиш, билим ва кўникмаларини дарсдан ташқари, ОТМни битирганларидан кейин ҳам ривожлантириш малакаларини ҳамда умумбашарий ва соҳага оид илмий мавзуларда мантиқий фикрлаш қобилиятларини ривожлантиришдан иборат.

Ушбу мақсадга эришиш учун қуйидаги **вазифалар** илгари сурилади:

– талабаларнинг нутқий (ўқиш, ёзиш, тинглаб тушуниш, гапириш), тил (лексик, грамматик), ижтимоий-маданий ва прагматик компетенцияларини ДТСи талабларига биноан ривожлантириш;

– илмий, касбий ва маиший фаолиятга боғлиқ мавзулар юзасидан оғзаки ва ёзма равишда баён этиш кўникма ва малакаларини ривожлантириш;

– умумбашарий ва миллий қадриятлар билан таништириш, маданиятлараро бағрикенглик ва миллатлараро ҳамдўстлик ҳисларини сингдириш;

– илмий ва касбий фаолиятда қўлланиладиган термин ва атамаларни ўргатиш;

– талабаларнинг илмий ва соҳавий йўналишларидан келиб чиққан ҳолда мустақил ишларини ташкил этиш.

Фан бўйича талабаларнинг билим, кўникма ва малакаларига қуйида келтирилган талаблар қўйилади. Давлат таълим стандартларига кўра чет тили бўйича B2 даража битирувчилари тайёргарлиги даражасига қўйиладиган талаблар асосида қуйидаги компетенцияларни эгаллаш кўзда тутилган.

Лингвистик компетенция

Нутқий компетенция:

Тинглаб тушуниш:

кенг кўламли нутқ ёки қатор мураккаб фикрлар баёнини;
маъруза, нутқ, баёнот, тафсилотли йўриқномалар, илмий ва ихтисослик тақдимотлар, сўров ва фикрларнинг моҳиятини;
эълон ва хабарларни;
таниш ва нотаниш контекстдаги мураккаб аутентик нутқни;
ўрганилаётган тил эгаси бўлган сўзлашувчиларнинг суҳбат ёки мунозарасининг аксарият қисмини;
радио, интернет ва телевидение дастурлари, интервьюларнинг аксарият қисмини тушуна олади.

Гапириш:

Диалог:
ўрганилаётган тилда сўзлашувчилар билан мулоқотга киришиш;
олдиндан тайёргарлик кўрилмаган жонли муҳокама ва мунозара юритиш;
ўз соҳаларига оид интервьюда иштирок эта олиш;
битимга келишув ёки муаммо ечимини топишда расмийлик ва хушмуомалаликдан фойдаланиш;
расмий муҳокама доирасида ўз фикр ва мулоҳазаларини аниқ ифодалаш;
ўз ҳамкорлари билан музокара юриштиш;
маълум масала юзасидан маданий тартибга амал қилиб маълумот ёки илтифот сўраш;
муҳокамаларда ўз фикрларини асослаш, ўзгартириб талқин эта олиш ва тузатиш;
расмий доираларда (масалан, семинар ва ҳоказолар) хос равишда савол-жавоб қилиш.

Монолог:
маълум мавзу бўйича яхши тақдимот қилиш;
ўз соҳаси бўйича маълумотларни аниқ ва батафсил баён этиш;
маълум мавзу бўйича оғзаки маъруза қилиш;
мақола, маъруза ёки муҳокама юзасидан аниқ умумлашган хулоса қилиш; таниш мавзуга оид қараш ёки фикрни ривожлантириш, далиллар, мисоллар келтириш орқали асослаш.

Ўқиш:

таниш ва нотаниш мавзулардаги матнларнинг асосий/айрим жиҳатларини;
ўз соҳалари ва қизиқишларига мос ёзишмаларни;
жадвал, графикларнинг қисқа изоҳини;
мураккаб номаларни;
махсус ва мураккаб ёзма йўриқнома ва йўналишларни;
тезислар, маъруза матнлари, конференция дастурлари, мундарижа ва шу каби матнларни;
касбий соҳаларига оид мақола ва маърузалардан тегишли маълумотни ажрата олади.

Ривожлантириладиган малакалар: Чет тилидаги материалларнинг умумий мазмунини тушуниш, айрим маълумотларни олиш, тафсилотларни тушуниш ва йўналишни аниқлаш учун ўқиш (белгилар, кўрсаткичлар ва б).

Ёзув:

Махсус расмий ва норасмий нома/хатлар;
шаклан ва мазмунан тўғри ташкиллаштирилган иншо ва маърузалар;
етарли даражада грамматик, мазмун жиҳатдан тўғри тузилган ва мос услубдаги илмий мақолалар;
таклифлар, хулосалар, аннотациялар ва тезислар;

зарур ҳолда ўз соҳалари бўйича битирув малакавий ишлар ёза олиш.

Тил компетенцияси:

Лексик:

B2 даражасидаги лексикани эгаллаш;

сўз ясалиши (қўшма сўзлар ва аффиксация), ўзлашма (байналмилал) ва ўзакдош сўзлар;

антонимлар, синонимлар ва бошқа умумлексик муносабатларни қўллай олиш.

Грамматик:

ўтилган грамматик материал (феъл замонлари, модал феъллар, сифат ва равишларнинг қиёсий даражалари, детерминатив сўзлар, предлоглар ва ҳоказо)ни кундалик, илмий ва соҳавий контекстларда тўғри қўллай олиш.

Социолингвистик компетенция

Ўзбекистон ва тили ўрганилаётган мамлакатлар маданиятлари мисолида (ижтимоий ва таълим доираларида) **маданиятлараро мулоқотни** чуқурроқ тушуниб етиш ва унинг мулоқот билан боғлиқ хусусиятлари, жумладан, саломлашиш, мурожаат шакллари, хушмуомалалик ва ҳоказо;

турли маданиятлардаги коммуникациянинг новербал элементлари: хатти-ҳаракатлар, имо-ишоралар устида ишлашни давом эттириш;

электрон мулоқотларнинг чет тилида ёзиш хусусиятларини билиш ва амалиётда қўллай олиш.

Прагматик компетенция тақдимот қилиш маҳоратини янада такомиллаштириш; фикрларни оғзаки ва ёзма нутқда мантиқан ифодалаш;

турли ижтимоий, таълим ва мутахассислик доираларида мос равишда тилни тегишли расмий шаклда қўллашни англаш;

мулоқот жараёнида нутқни бўлиш, аниқлик киритиш, бошқача талқин этиш, жумлаларни тузатиш, тўлдириш ва бошқа стратегияларини идрок этиш ва амалиётда қўллай олиш.

III. Асосий қисм (амалий машғулотлар)

Нутқий мавзулар

Ижтимоий мавзулар (атроф-муҳит, маиший масалалар, шахс ва касб психологияси, глобал муаммолар)

Ижтимоий-маданий мавзулар (илмий ва соҳага оид вазиятларда маданий тафовутлар, дунё ва тили ўрганилаётган мамлакатларнинг маданий, ижтимоий хусусиятлари)

Таълим мавзулари (таълим тизими, давомли таълим, маърузалар, мақола, тезис ва илмий ишлар ёзиш, ўқиш ва ўрганиш стратегиялари ва ҳ.к.)

Интернет ва ахборот технологияларига оид мавзулар. (жаҳон ва юртимиз миқёсидаги фан ва техника янгиликлари, ютуқлари, интернет тармоқларидан фойдаланиш)

Мутахассислик соҳасига оид мавзулар (соҳа йўналишлари, долзарб мавзулари, масъулият, ҳужжатлар юритиш, касбий этика, музокаралар олиб бориш, мутахассислик соҳасидаги илмий ва амалий ютуқлар, инновацион ғоялар ва янгиликлар)

Грамматик мавзулар

Инглиз тили:

- сифат ва равишлар;

- келаси прогрессив феъл;
- келаси тугалланган феъл;
- келаси тугалланган давом феъли;
- аралаш шарт эргаш гаплари;
- модал феъллар – can't have, needn't have;
- ҳикоя феъллари;
- мажҳул нисбатлар;
- ўтган тугалланган;
- ўтган тугалланган давом феъллари;
- қўшма гаплар;
- ўзлаштирма гап;
- герундий,сифатдош, равишдошли қурилмалар;
- wish;
- would (одатларни ифодалаш, ўтган замон).

Немис тили:

- дарак, сўроқ, инкор шаклдаги феъл ва от-кесимли содда гапларнинг қўлланилиши;
- буйруқ майли, инкор шаклининг қўлланилиши;
- аниқ, ноаниқ артикларнинг қўлланилиши;
- модал феълларнинг қўлланилиши;
- феълнинг шахссиз шакллари;
- und, aber, den, oder боғловчилари билан боғланувчи қўшма гаплар;
- dass, ob, wenn, wer, wie, was, woran боғловчили эргашган қўшма гаплар;
- шарт майлининг ясалиши.

Француз тили:

- дарак, сўроқ, инкор шаклдаги феъл ва от-кесимли содда гапларнинг қўлланилиши;
- буйруқ майли, инкор шаклининг қўлланилиши;
- модал феълларнинг қўлланилиши;
- феълнинг шахссиз шакллари;
- мажҳул нисбатнинг қўлланилиши;
- герундий, сифатдош, равишдошли қурилмаларнинг ясалиши.

IV. Амалий машғулотлар бўйича кўрсатма ва тасиялар

Дастур талабалар учун белгилаб берилган B2 (ДТС) ва ундан юқори даражаларни эгаллашга қаратилган. Ушбу даражага эришиш талабаларда илмий ва соҳавий фаолиятда юзага келадиган тил билан боғлиқ вазиятларда эркин мулоқотга киришишларини ва вазиятни самарали ҳал қилишларини таъминлайди.

Фан дастури тил кафедралари томонидан ишчи дастурлар, ўқув-услубий мажмуалар, ўқув қўлланмалар ва дарсликлар яратилишига асос бўлади. Ишчи дастурлар асосида педагог ходимлар ўзларининг календар режаларини ишлаб чиқадилар.

Амалий машғулотларни ташкиллаштиришда дастурларда белгиланган мавзулар асосида талабаларнинг илмий ва соҳавий эҳтиёжларидан келиб чиқиб кенгайтирилган вазифалар белгилаб олинади ва улар юзасидан талабаларга белгиланган вазифани ўзлаштиришга қаратилган амалий машғулотлар режаси тузилади.

Нутқий компетенциянинг тинглаб тушуниш, гапириш, ўқиб тушуниш, ҳамда ёзиш кўникма ва малакалари дарсларда **интеграциялашган равишда** олиб борилади. Мавзунинг моҳияти ва мутахассислик хусусиятларидан келиб чиқиб, у ёки бу кўникма ва малака дарсларда асосий деб олинади.

Талабаларни баҳолаш ОТМда белгиланган тартиб асосида, жорий, оралиқ ва якуний назоратлар воситасида амалга оширилади.

IV. Мустақил таълим ва мустақил ишлар

Чет тили фанидан мустақил ишларнинг мақсади – амалий машғулотлар давомида олинган билим ва кўникмаларни янада мустаҳкамлаш ва такомиллаштиришдан иборат.

Дарс машғулотларида кўтарилган мавзуларни ўз мутахассислик соҳаларига боғланган ҳолда лойиҳа ишларини амалга оширишлари, портфолио ва тақдимотлар (слайд, ҳисобот, муаммоли вазият ва ҳ.з. кўринишида) тайёрлашлари кўзда тутилади.

Ўқиш: амалий машғулотларда ўтилган мавзулар юзасидан қўшимча материалларни мустақил ёки гуруҳлар билан ўқиш, таҳлил қилиш ва уларни ихтисосликларига боғлаш.

Тинглаш: ўқитувчи томонидан белгиланган аудио ёки видео материаллар билан ишлаш.

Гапириш: тайёрланган тақдимотларни гуруҳ олдида оғзаки тақдим этиш, савол-жавобларда иштирок этиш ва фикр билдириш.

Ёзув: машғулотларда ёритилган мавзулар асосида берилган ёзма ишларни амалга ошириш, портфолио талабларига асосан ўз фикрларини қисқача ёзма баён қилиш, ёзма ҳисоботлар, тақдимотлар, соҳага оид шакллар тайёрлаш.

Мустақил ишларнинг мавзулари амалий машғулотларда ёритилган мавзуларга мос ҳолда бўлиши лозим. Мавзулар талабаларнинг соҳаларига боғланган ҳолда кенгроқ ёритилиши ва ёзма ёки оғзаки тақдимот сифатида ўқитувчиларга тақдим этилиши лозим.

VI. Асосий ва қўшимча ўқув адабиётлар ҳамда ахборот манбалари[1]

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O‘ZBEKISTON RESPUBLIKASI

OLIY VA O’RTA MAXSUS TA’LIM VAZIRLIGI

BUXORO MUHANDISLIK – TEXNOLOGIYA INSTITUTI

Ro‘yxatga olindi № 0076

2021 yil «30» 08

“TASDIQLAYMAN”

O‘quv ishlari bo‘yicha prorektor

dots. Xodjiyev Sh.M.

«____» _____ 2021 yil

INGLIZ TILI fanining

ISHCHI O‘QUV DASTURI

Bilim sohasi: 310000 – Ishlab chiqarish – texnik soha

Ta’lim sohasi: 320000 – Ishlab chiqarish texnologiyalari

Ta’lim yo‘nalishi (mutaxassislik) kodi va nomi	Talabaning o‘quv yuklamasi, soat								Semestrlar, soat	
	Umumiy yuklama hajmi	Auditoriya mashg’ulotlari						Mustaqil ish	V	VI
		Jami	Ma’ruza	Amaliy mashg‘ulot	Labor. ishi	Seminar	Kurs ishi(loyihasi)			
5340500–Qurilish materiallari, buyumlari va konstruktsiyalarini ishlab chiqarish	58	28		28				30	2	
	58	28		28				30		2
Jami:	**116**	**56**		**56**				**60**		

Buxoro-2021

Fan/modul kodi AXTIL		**O‘quv yili** 2021-2022	**Semestr(lar)** 5, 6	
Fan/modul turi Majburiy		**Ta’lim tili** Ingliz		**Haftadagi dars soatlari** **2**
1	**Fanning nomi**	**Auditoriya mashg‘ulotlari (soat)**	**Mustaqil ta’lim (соат)**	**Jami yuklama (soat)**
	Ingliz tili	56	60	116

2

I. Fanning mazmuni

Fanni o‘qitish maqsadi va vazifalari

Fanni o‘qitishdan maqsad – o‘rganilayotgan ingliz tili bo‘yicha amaliy kommunikativ kompetensiyani shakillantirish, shuningdek talabalarning o‘rganayotgan chet tillardan birida ravon va aniq so‘zlashishlariga va hozirgi paytda dunyoda sodir bo‘layotgan siyosiy, iqtisodiy va ijtimoiy voqelikka o‘z munosabatlarini bildira olishlarini hamda mustaqil fikrlash, izlanish, bilim, ko‘nikma va malakalarini shakillantirishdan iborat.

Fanning vazifasi – talabalarga o‘rganilayotgan ingliz tilidan ona tiliga yozma va og‘zaki tarjima masalalari, leksik, grammatik va stilistik sathlaridagi o‘xshash va tafovutli jihatlari, o‘ziga xos xususiyatlari to‘g‘risida ma’lumotlar berish, talabalarning matnni leksik, semantik va stilistik tahlil qilish ko‘nikmalarini rivojlantirish, ma’lumotni turli kontekstlarda qilish orqali uning ma’nosini qayta ifoda etish usullarini o‘rgatish, turli vaziyatlarda o‘rganilayotgan ingliz tilida ravon muloqot qilishga o‘rgatishdan iborat.

II. Amaliy mashg‘ulotlar bo‘yicha ko‘rsatma va tavsiyalar

2.1. Fan tarkibi mavzulari:

(5 – semestr 28 soat)

Lesson 1. Clay and its classifications

Clay products are one of the most important classes of structural materials.

Lesson 2. Bricks and their classifications

One of the oldest building material brick continues to be a most popular and leading construction material because of being cheap, durable and easy to handle and work with.

Lesson 3. Different forms of Bricks

Some of the common type of bricks, depending upon the places of use are spoken in the text. Round ended and bull nosed bricks are used to construct open drains. For door and window jambs, cant brick, also called splay brick.

Lesson 4. Clay Tiles

Tiles are thin slabs of low inching clays used for various purposes in engineering constructions. These give a very pleasing appearance and good service properties, roofing tile, flooring tiles, wall tiles and partition tiles are some of the examples.

Lesson 5. Terracotta

Terracotta is refractory clay product and is used in ornamental parts of buildings. The clay used for its manufacture should be of superior quality and should have sufficient iron and alkaline matters.

Lesson 6. Application of Clay products

Universal availability of raw materials, comparative simplicity of manufacture and excellent durability of ceramic materials have put them in the forefront among other constructional materials.

Lesson 7. Rock forming minerals

Being aggregations of minerals, the properties of rocks are dependent upon the character of these constituents, identified by their physical properties such as hardness, cleavage, streak, colour, luster, specific gravity and shape of crystals.

Lesson 8. Classification of Rocks

According to different geological conditions, rock is generally classified into three main types: magmatic rock, sedimentary rock and metamorphic rock.

Lesson 9. Quarrying of Stones

The only operation involved in the production of natural stone is the quarrying process. The open part of the natural rock from which useful stone is obtained is known as quarry.

Lesson 10. Uses of Stones

The history of mankind is supposed to have begun with the stone age marked by the use of implements and weapons made of stone.

Lesson 11. Artificial Stones

Where durable natural stone is not available at reasonable cost, artificial stone, also known as cast stone becomes the choice. Artificial stone is made with cement and natural aggregates of the crushed stone and sand with desired surface finish.

Lesson 12. Application of Stones

Of the total amount of stone quarried for the building industry, about 75 per cent are used directly for concrete constructions and road making, the balance find applications in the manufacture of cement and other binding materials, in the chemical industry, as metallurgical fluxes, and for making wall from natural stones.

Lesson 13. Classification of Trees

Wood is a hard and fibrous substance which forms a major part of the trunk and branches of a tree. It can also be defined as a natural polymeric material which practically does not age.

Lesson 14. Classification of Timber

The terms timber and wood are often used synonymously, but they have distinct meanings in the building industry. Wood is the hard, fibrous material that makes up the tree under the bark, whereas timber may be defined as a wood which retains its natural physical structure and chemical composition and is suitable for various engineering works.

(6 – semestr 28 soat)

Lesson 1. Structure of Timber

A tree can be divided into three portions, crown-composed of branches and leaves, trunk, and roots. The trunk accounts for about 80 per cent of the total bulk of wood.

Lesson 2. Defects in Timber

Defect can occur in timber at various stages, principally during the growing period and during the conversion and seasoning process. The defects in the wood are due to irregularities in the character of grain. Defects affect the quality, reduce the quantity of useful wood, reduce the strength, spoil the appearance and favour its decay.

Lesson 3. Wood products

Many wood based products have been developed to economise on the use of timber. These wood products are manufactured under controlled conditions in factories. As such, these have desired shape and dimensions, appearance, strength and durability.

Lesson 4. Application of Wood and Wood products

In modern building practice, wood is extensively used for wall and floors of buildings, carpentry and graded plank items, as well as prefabricated standard wooden cottages. A great quantity of wood is consumed in building and installation work for making piles, poles, various load-bearing components formworks, scaffolds, etc.

Lesson 5. Portland Cement

It is a cementing material resembling a natural stone quarried from Portland in U.K. Portland cement may be defined as a product obtained by finely pulverizing clinker produced by calcining to incipient fusion, an intimate and properly proportioned mixture of argillaceous and calcareous materials.

Lesson 6. Chemical composition of Raw Materials

The three constituents of hydraulic cement arc lime, silica and alumina. In addition, most cements contain small proportions of iron oxide, magnesia, sulphur trioxide and alkalis.

Lesson 7. Composition of Cement clinker

The various constituents combine in burning and form cement clinker. The compounds formed in the burning process have the properties of setting and hardening in the presence of water.

Lesson 8. Hydration of Cement

The chemical reaction between cement and water is known as hydration of cement. The reaction takes place between the active components of cement (C_4AF, C_3A. C_3S and C_2S) and water.

Lesson 9. Manufacture of Cement

Calcareous and argillaceous raw materials are used in the manufacture of Portland cement. The calcareous materials used are cement rock, limestone, marl, chalk and marine shell.

Lesson 10. Types of Cement

Cements of unique characteristic for desired performance in a given environment are being manufactured by changing the chemical composition of OPC or by using additive, or by using different raw materials.

Lesson 11. Classification of Concrete

Concretes are classified as lime concrete, gypsum concrete and cement concrete.

Lesson 12. Production of Concrete

A good quality concrete is essentially a homogeneous mixture of cement. coarse and fine aggregates and water which consolidates into a hard mass due to chemical action between the cement and water.

Lesson 13. Prestressed Concrete

One of the serious limitations of reinforced cement concrete is the cracking which is a natural phenomenon for concrete constructions.

Lesson 14. Polymer Concrete

The strength of concrete is greatly affected by porosity and attempts to reduce it by vibration, pressure application, spinning, etc. are of little help in reducing the water voids and the inherent porosity of gel which is about 28 per cent.

№	**Mashg‘ulot turi**	**Mavzular**	**soat**
		TERM V	
1	Amaliy	Lesson 1. Clay and its classifications	2
2	Amaliy	Lesson 2. Bricks and their classifications	2
3	Amaliy	Lesson 3. Different forms of Bricks	2
4	Amaliy	Lesson 4. Clay Tiles	2
5	Amaliy	Lesson 5. Terracotta	2

	6	Amaliy	Lesson 6. Application of Clay products	2
	7	Amaliy	Lesson 7. Rock forming minerals	2
	8	Amaliy	Lesson 8. Classification of Rocks	2
	9	Amaliy	Lesson 9. Quarrying of Stones	2
	10	amaliy	Lesson 10. Uses of Stones	2
	11	amaliy	Lesson 11. Artificial Stones	2
	12	amaliy	Lesson 12. Application of Stones	2
	13	amaliy	Lesson 13. Classification of Trees	2
	14	amaliy	Lesson 14. Classification of Timber	2
	Term I:			**28**
	TERM VI			
	1	amaliy	Lesson 1. Structure of Timber	2
	2	amaliy	Lesson 2. Defects in Timber	2
	3	amaliy	Lesson 3. Wood products	2
	4	amaliy	Lesson 4. Application of Wood and Wood products	2
	5	amaliy	Lesson 5. Portland Cement	2
	6	amaliy	Lesson 6. Chemical composition of Raw Materials	2
	7	amaliy	Lesson 7. Composition of Cement clinker	2
	8	amaliy	Lesson 8. Hydration of Cement	2
	9	amaliy	Lesson 9. Manufacture of Cement	2
	10	amaliy	Lesson 10. Types of Cement	2
	11	amaliy	Lesson 11. Classification of Concrete	2
	12	amaliy	Lesson 12. Production of Concrete	2
	13	amaliy	Lesson 13. Prestressed Concrete	2
	14	amaliy	Lesson 14. Polymer Concrete	2
	Term II			**28**
	Total:			**56**

III. Mustaqil ta’lim va mustaqil ishlar

Talaba mustaqil ishni tayyorlashda muayyan fanning xususiyatlarini hisobga olgan holda quyidagi shakllardan foydalanish tavsiya etiladi:

- Darslik va qo‘llanmalar bo‘yicha fan mavzularini o‘rganish;
- Tarqatma materiallar bo‘yicha amaliy mashg‘ulotlar qismini o‘zgartirish;
- Avtomatlashtirilgan va nazorat qiluvchi tizimlar bilan ishlash;

- Maxsus adabiyotlar bo‘yicha fanlar bo‘limlari yoki mavzular ustida ishalsh;
- Yangi texnikalarni, apparaturalarni, jarayonlar va texnologiyalarni o‘rganish;
- Talabaning o‘quv – ilmiy – tadqiqot ishlarini bajarish bilan bog‘liq bo‘lgan fanlar bo‘limlari va mavzularini chuqur o‘rganish;
- Faol va muammoli o‘qitish uslubidan foydalaniladigan o’quv mashg‘ulotlari;
- Masofaviy (distansion) ta’lim;

“Ingliz tili” bo‘yicha talabaning mustaqil ta’limi shu fanni o‘rganish jarayoning tarkibiy qismi bo‘lib, uslubiy va axborot resurslari bilan to‘la ta’minlangan.

Talabalarauditoriya mashg‘ulotlarida professor o‘qituvchilarning yangi mavzuni tushuntirishlarini tinglaydilar, topshiriqlarini bajaradilar. Auditoriyadan tashqarida talaba darsga tayyorlanadi, adabiyotlarni konspekt qiladi, uy vazifa sifatida berilgan topshiriqlarni bajaradi. Bundan tashqari ayrim mavzularni kengroq o‘rganish maqsadida qo‘shimcha adabiyotlar o‘qib referatlar tayyorlaydi hamda mavzu bo‘yicha testlar yechadi. Mustaqil ta’lim natijalari reyting tizimi asosida baholanadi.

Uyga vazifalarni bajarish, qo‘shimcha darslik va adabiyotlardan yangi bilimlarni mustaqil o‘rganish, kerakli ma’lumotlarni izlash va ularni topish yo‘llarini aniqlash, internet tarmoqlaridan foydalanib ma’lumotlar to‘plash va ilmiy izlanishlar olib borish, ilmiy to‘garak doirasida yoki mustaqil ravishda ilmiy manbalarda foydalanib ilmiy maqola ma’ruzalar tayyorlash kabilar talabalarning darsda olgan bilimlarini chuqurlashtiradi, ularning mustaqil fikrlash va ijodiy qobiliyatini rivojlantiradi. Shuning uchun ham mustaqil ta’limsiz o’quv faoliyati samarali bo‘lishi mumkin emas.

Uy vazifalarini tekshirish va baholash amaliy mashg‘ulotlarni olib boruvchi o‘qituvchi tomonidan har darsda amalgam oshiriladi.

“Ingliz tili” fani bo‘yicha talabaning mustaqil ta’limi shu fanni o‘rganish jarayonining tarkibiy fanidan mustaqil ish majmuasi fanning barcha mavsularini qamrab olgan va quyidagi mavzular ko‘rinishida shakllantirilgan.

Term	**The me**	**Hour**	**Score**	**Assignments for independent work**	**Form of independer work**
1	2	3	4	5	6
Independent work 1	**Variants 1-15**	30		1. Read the text and answer the questions according the text. 2. Listen to CD and answer the questions. 3. Write a short story about ……. using 300 words. 4. Retell the text in assignment	Reading Listening Writing Speaking

	Independent work 2	**Variants 1-15**	30		1. Read the text and answer the questions according the text. 2. Listen to CD and answer the questions. 3. Write a short story about ……. using 300 words. 4.Retell the text in assignment	Reading Listening Writing Speaking

IV. Baholash mezoni

O‘zbekiston Respublikasi Prezidentining 2018 yil 5 iyundagi PQ-3775 son “Oliy ta’lim muassasalarida ta’lim sifatini oshirish va ularning mamlakatda amalga oshirilayotgan keng qamrovli islohotlarda faol ishtirokini ta’minlash bo‘yicha qo‘shimcha chora-tadbirlar to‘g‘risida”gi qaroriga muvofiq oily ta’lim muassasalarida talabalar bilimini nazorat qilish va baholash tizimi to‘g‘risidagi nizom asosida ushbu baholash tizimi ishlab chiqarildi.

Ingliz tili fani bo‘yicha talabaning mavsum davomidagi o‘zlashtirish ko‘rsatkichi 5 baholik tizimda baholanadi va bunda talabaning fan bo‘yicha o‘zlashtirish ko‘rsatkichini nazorat qilishda quyidagi namunaviy mezonlarga amal qilinadi:

a) 5 (a’lo) baho uchun talabaning bilim darajasi quyidagilarga javob berishi lozim:

- chet tilidagi mavzu yuzasidan xulosa va qaror qabul qilish;
- ushbu mavzu yuzasidan ijodiy fikrlay olish, mustaqil mushohada yuritish;
- chet tilidagi mavzuning mohiyatini tushunish;
- matnni o‘qish jarayonida tushunib olish va uni so‘zlab berish.
- mavzu boyicha tasavvurga ega deb topish

b) 4 (yaxshi) baho uchun talabaning bilim darajasi quyidagilarga javob berishi lozim:

- chet tilidagi mavzu yuzasidan mustaqil fikr yurita oilsh;
- chet tilidan olgan bilimlarini amalda qo‘llay bilish;
- mavzuning mohiyatini tushunish;
- matn yuzasidan tasavvurga ega bo‘lish va uni so‘zlab berish.

c) 3 (qoniqarli) baho uchun talabaning bilim darajasi quyidagilarga javob berishi lozim:

- chet tilidagi bilimini amalda qo‘llay olish
- chet tilidagi matnning mohiyatini tushunish;
- matnni bilish va uni so‘zlab berish;
- matn yuzasidan tasavvurga ega bo‘lish.

d) 2 (qoniqarsiz) baho bilan quyidagi hollarda baholanadi:

- chet tilidagi matn haqida aniq tasavvurga ega bo‘lmasa;
- mavzuning mohiyatini tushunmasa
- mavzu bo‘yicha tasavvurga ega bo‘lmasa.

Talabaning amaliy mashg‘ulotlari va mustaqil ta’lim topshiriqlarini bajarishi, shunungdek, uning ushbu mashg‘ulotlardagi faolligi fan o‘qituvchisi tomonidan nizomga asosan baholab boriladi.

Yakuniy baholashda talabaning bilimlari ushbu fanning umumiy mazmu doirasidan kelib chiqib 4 ta ko‘nikma yoki test sinovi asosida baholanadi. Yakuni nazorat 4 ta ko‘nikma bo‘yicha tuzilgan 15-20 ta variantlar asosida yoki instutut AR da tashkil qilingan 30 ta testdan iborat imtihon sifatida olinadi. Yakuniy nazor topshiriqlariga berilgan javoblariga qo‘yilgan o‘zlashtirish baholari umumlashtirili yakuniy nazorat bo‘yicha umumiy o‘zlashtirish bahosi qo‘yiladi.

Baho	Topshiriqlar	Baholash mezoni
1-5	Reading	a) Matnga oid berilgan 5 ta testdan hammasi to‘g‘ri bajarilsa – 5 baho b) Matnga oid berilgan 4 ta test to‘g‘ri bajarilsa – 4 baho c) Matnga oid berilgan 3 ta test to‘g‘ri bajarilsa – 3 baho d) Matnga oid berilgan 2 ta va undan kam test to‘g‘ri bajarilsa – 2 baho
1-5	Writing	a) Berilgan mavzuga oid ma’lumot to‘liq va xatosiz yozilgan bo‘lsa – 5 baho b) 5-8 tagacha grammatik va orfografik xatolari bo‘lsa – 4 baho c) 9-15 tagacha grammatik va orfografik xatolari bo‘lsa – 3 baho d)16 va undan ko‘p grammatik va orfografik xatolari bo‘lsa – 2 baho
1-5	Listening	a) Topshiriq to‘liq va to‘g‘ri bajarilganda – 5 baho b) 1-2 tagacha xato bo‘lsa – 4 baho c) 3-5 tagacha xato bo‘lsa – 3 baho d) 6 ta va undan ko‘p xato bo‘lsa – 2 baho
1-5	Speaking	a) Mavzu haqida to‘g‘ri va to‘liq gapirib bersa – 5 baho b) Mavzu haqida to‘g‘ri gapirsa, ammo to‘liq bo‘lmasa – 4 baho c) Mavzu haqida noto‘g‘ri gapirsa yoki qisqaroq gapirsa yoki xatolarga yo‘l qo’ysa – 3 baho d) mavzu haqida noto‘g‘ri va juda qisqa gapirib berganda yoki umuman gapirmaganda – 2 baho
1-5	30 ta test	a) 30-26 ta testni to‘g‘ri belgilasa – 5 baho (100%-87%) b) 25-22 ta testni to‘g‘ri belgilasa – 4 baho (83%-73%) c) 21-18 ta testni to‘g‘ri belgilasa – 3 baho (70%-60%) d) 17 va undan kam natija ko‘rsatsa – 2 baho (53%-0%)

3 **V. Fan o‘qitilishining natijalari (shakllanadigan kompetensiyalar)**

Fanni o‘zlashtirish natijasida talaba:

- nutqi (o‘qish, yozish, tinglab tushunish, gapirish), tili (leksik, grammatik), ijtimoiy-madaniy va pragmatic kompetensiyalari oshadi;
- ilmiy, kasbiy va maishiy faoliyatga bog‘liq mavzular yuzasidan atamalarni o‘rganishi natijasida og‘zaki va yozma bayon etish ko‘nikmalari rivojlanadi;

	- umumbashariy va milliy qadriyatlar bilan tanishish orqali madaniyatlararo bag‘rikenglik va millatlararo hamdo‘stlik, vatanparvarlik tuyg‘ulariga ega bo‘ladi.
4	**VI. Ta’lim texnologiyalari va metodlari** Amaliy darslarda zamonaviy kompyuter texnologiyalari yordamida prezentatsion va elektron-didaktik texnologiyalardan foydalaniladi. Jumladan, - “Aqliy hujum”, “Tarozi”, “Bumerang”, “Arra” - keys-stadilar; - mantiqiy fikrlash, tezkor savol- javoblar; - kichik guruhlarda ishlash.
5	**VII. Adabiyotlar** **Asosiy adabiyotlar:** 1. Boqiyeva G., Rashidova F va boshqalar. Scale up. Student’s book. Course 3. Toshkent-2015. 2. Boqiyeva G., Rashidova F. va boshqalar. Scale up. Workbook. Course 3. Toshkent-2015. **Qo‘shimcha adabiyotlar:** 1. S.K. Duggal. Building Materials 3rd Edition. 2008. New Age International (P) Ltd., Publishers. 2. Mr.Mukesh C.Gupta, Mr.A.Murali. Construction Technology and Building Materials. 2015. 3. Technical English. 3 Course book. David Bonamy. England 2011. 4. Yan Li, Shuxia Ren, translation by Yan Zhou and Hong Liu. Building Decorative Materials. 2011. Woodhead Publishing Ltd and Science Press. 5. Haimei Zhang, translation by Shua Ma and Yanyan Wu. Building Materials in Civil Engineering. 2011. Woodhead Publishing Ltd and Science Press. 6. Yves Mouton. Organic Materials in Civil Engineering. 2006. ISTE Ltd. 7. Jamal M. Khatib. Sustainability of Construction Materials. 2009. Woodhead Publishing Limited. 8. Mirziyoyev, Shavkat Miromonovich “Erkin va farovon, demokratik O‘zbekiston davlatini birgalikda barpo etamiz.” 9. Mirziyoyev, Shavkat Miromonovich”Milliy taraqqiyot yo‘limizni qat’iyat bilan davom ettirib, yangi bosqichga ko‘taramiz” / Sh.M.Mirziyoyev. – Toshkent: O‘zbekiston, 2017. - 592 b. **INTERNET SAYTLARI VA MANBALARI:** www.listenaminute.com www.Ziyonet.uz www.examenglish.com http://inspiringteachers.com/
6	**Buxoro muhandislik-texnologiya instituti tomonidan ishlab chiqilgan va tasdiqlangan.**
7	**Fan (modul) uchun mas’ul:** Qurbonov A.Q. - BuxMTI “Xorijiy tillar” kafedrasi mudiri. Qurbonov A.M. - BuxMTI “Xorijiy tillar” kafedrasi o‘qituvchisi.

8	**Taqrizchilar:** Rasulov Z.I. - BuxDU “Ingliz filologiyasi” kafedrasi dotsenti. Yusupova Sh.B. - BuxMTI “Xorijiy tillar” kafedrasi katta o‘qituvchisi

Ishchi o‘quv dasturi “Xorijiy tillar” kafedrasining majlisida ko‘rib chiqildi (2021 yil № 11 -son bayonnoma) va fakultet uslubiy Kengashiga tavsiya qilindi.

Kafedra mudiri: _____ **A.Q. Qurbonov**

Ishchi o‘quv dasturi “Neft va Gaz Sanoati” fakultetining uslubiy Kengashida ko‘rib chiqildi (2021 yil 25.06 № 10 - son bayonnoma) va institut uslubiy Kengashiga tavsiya qilindi.

Fakultet dekani: _____ **dots. Sh.N. Ataullayev**

Ishchi o‘quv dasturi institut uslubiy Kengashida ko‘rib chiqildi va tasdiqlandi (2021 yil 30.06 № 8 - son bayyonnoma).

BuxMTI O‘UB boshlig‘i: _____ **dots. N.Sh. Kuliyev**

HANDOUTS

Activity: Building Challenges

Now that you've been exploring materials, shapes, and forces, it's time to put them together in a structure you design and build.

Choose a challenge, and think BIG!

Bridge Challenge

Design and build the strongest bridge you can that spans a distance of 45 centimeters (about 1.5 ft.), using any of these materials:

- drinking straws
- paper clips
- newspaper
- tape
- string or yarn

Dome Challenge

Design and build the widest dome you can that supports a dictionary, using any of these materials:

- drinking straws
- pipe cleaners
- tape
- string or yarn

Skyscraper Challenge

Design and build the tallest skyscraper you can that supports the load of a golf ball, using any of these materials:

- drinking straws
- paper clips
- newspaper
- tape
- 4 toilet-paper tubes
- salt or sand

Dam Challenge

Design and build a dam that blocks a river in a tub of wet sand, using any of these materials:

- popsicle sticks
- aquarium gravel
- 1/2 cup of modeling clay

Tunnel Challenge

Design and build a tunnel through a tub of sand, without

SAFETY RULES FOR CONSTRUCTION SITE WORKERS.

Tidy up construction sites

- Keep passages clear all the time.
- Sort out materials and pile them up safely. The stacks should not be too high.
- Beware of floor openings and ensure that they are fenced or covered.
- Remove refuse as soon as possible.
- Provide sufficient lighting.
- Familiarize with the location and the operation of fire-fighting equipment.

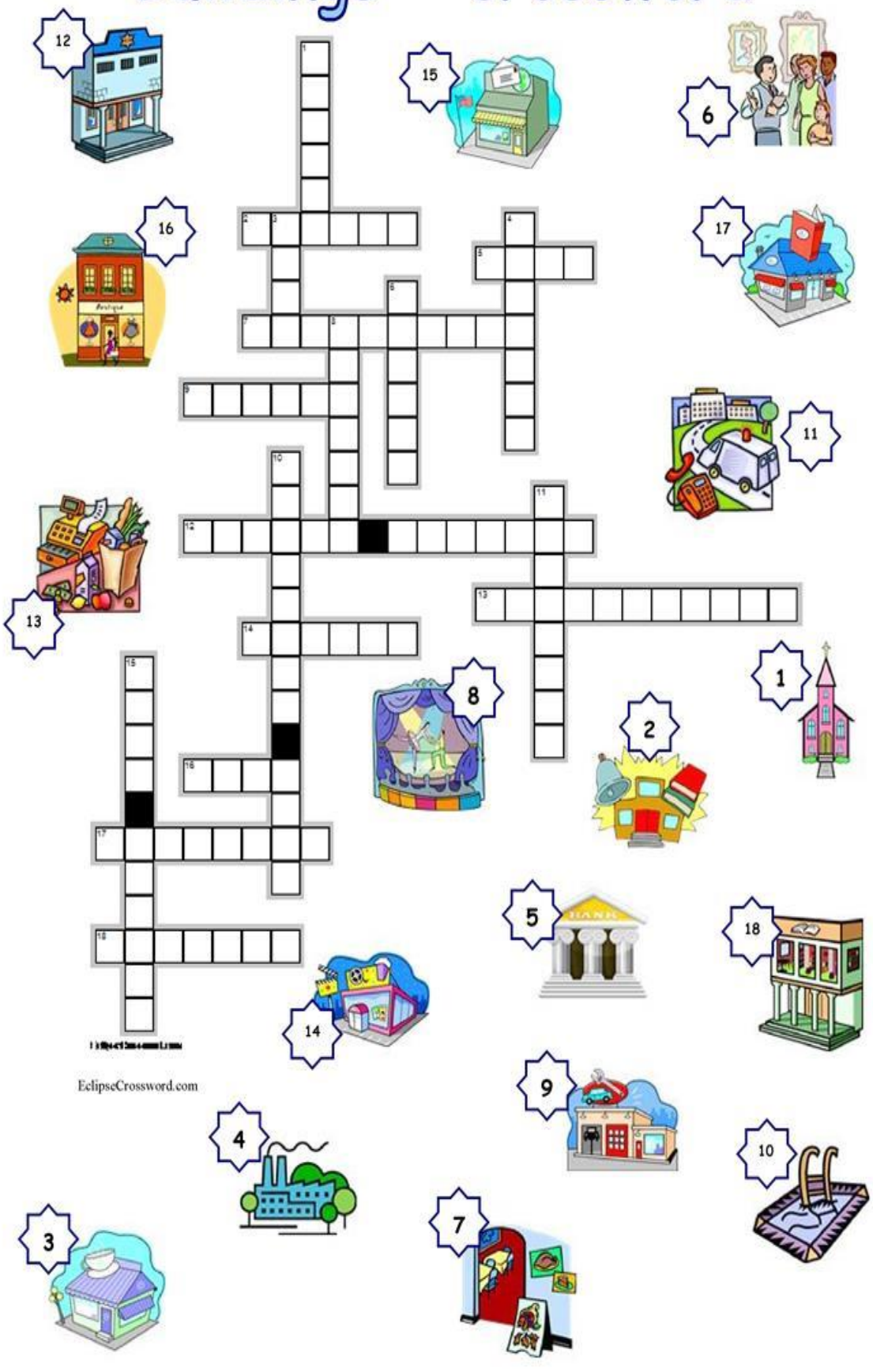
Choose the answer that best fits the sentences.

1. Construction site workers _____keep passages clear all the time.
   a. have to b. mustn't c. shouldn't
2. Materials _____ be sorted out.
   a. have to b. don't have to c. shouldn't
3. Floor openings _____ be covered.
   a. mustn't b. don't have to c. have to
4. Stacks _____ be too high.
   a. must b. shouldn't c. doesn't have to
5. Construction site workers _____ know how fire-fighting equipment works.
   a. must b. mustn't c. don't have to

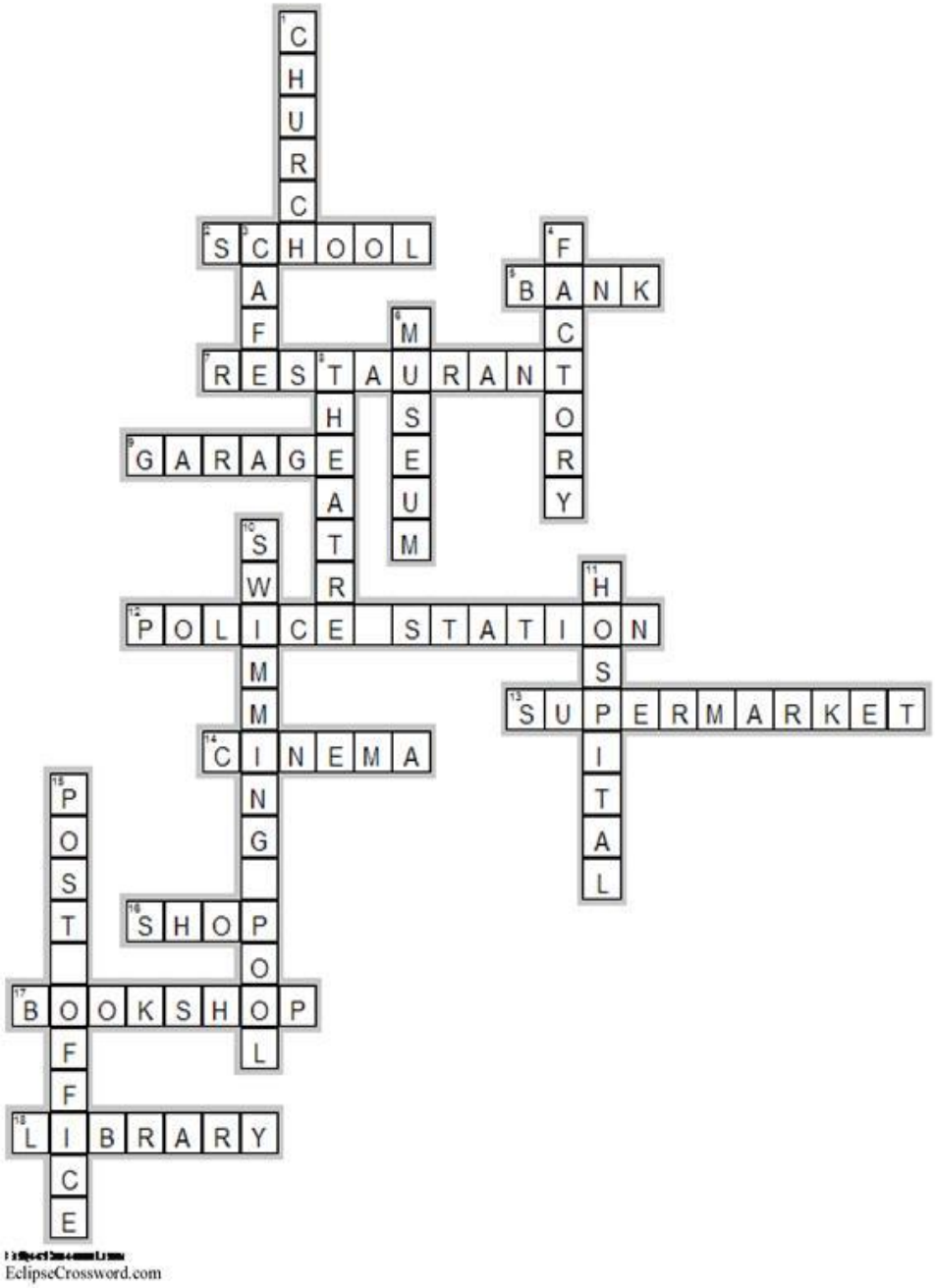
from Safety Handbook for Construction Site Workers
http://www.labour.gov.hk/eng/public/os/D/ConstrutionSite.pdf

cone	shovel	walkie talkie
mason	foreman	cement
excavator	ladder	scaffolding
dump truck	bulldozer	jackhammer
crane	wheelbarrow	

Buildings - crossword



Key


CHURCH
SCHOOL
FACTORY
BANK
MUSEUM
RESTAURANT
GARAGE
HEATER
SWIMMING POOL
POLICE STATION
HOSPITAL
SUPERMARKET
CINEMA
POST OFFICE
SHOP
BOOKSHOP
LIBRARY
EclipseCrossword.com

BUILDINGS & PLACES

Match the definitions to the pictures.

1. A place where you can eat.
2. A place where you go to see a film.
3. A place where trains stop and leave.
4. A building where people go to pray.
5. An office where police officers work.
6. A place where doctors and nurses look after people.
7. A place where you can swim.
8. A place where you go to send letters and to buy stamps.
9. A big shop where you can buy food and other things.
10. A building where people can look at old things.
11. A place where people go to buy and sell things.
12. A room or building where you go to borrow or read books
13. A place where children go to learn.
14. A place where people make things, usually with machines.














Buildings in Town

Find these buildings in town in the word search and then write them below each picture.

• aquarium • chemist • circus • deli • disco • factory • garage • graveyard • gym • hotel •
• laundry • library • mall • market • museum • nursery • planetarium • prison • stadium • theatre •







R	E	S	Y	H	C	J	A	O	P	F	A	C	T	O	R	Y
D	H	J	S	T	A	D	I	U	M	E	N	M	E	T	L	P
W	I	F	X	I	K	A	T	G	A	R	A	G	E	O	F	T
D	E	S	Y	P	L	A	N	E	T	A	R	I	U	M	O	H
V	M	E	C	S	H	O	P	C	I	R	C	U	S	D	G	E
A	U	J	B	O	U	W	L	P	A	T	O	V	I	E	R	A
Q	S	O	W	G	L	A	U	N	D	R	Y	U	N	A	A	T
U	E	Z	F	A	B	R	I	C	E	Y	J	A	U	I	V	R
A	U	K	F	J	O	T	M	Q	C	W	E	G	R	R	E	E
R	M	L	I	B	R	A	R	Y	H	R	P	Y	S	P	Y	A
I	Z	W	A	U	E	I	B	X	U	D	L	M	E	L	A	H
U	V	P	O	R	U	S	T	A	R	B	E	Y	R	A	R	O
M	F	C	H	E	M	I	S	T	C	G	D	L	Y	N	D	T
P	M	A	R	K	E	T	J	R	H	X	M	C	I	E	L	E
E	M	A	L	L	Q	U	W	P	R	I	S	O	N	P	I	L












Buildings in Town Keys

Find these buildings in town in the word search and then write them below each picture.

• aquarium • chemist • circus • deli • disco • factory • garage • graveyard • gym • hotel •
• laundry • library • mall • market • museum • nursery • planetarium • prison • stadium • theatre •


hotel


library


aquarium


theatre


factory


garage


stadium

										F	A	C	T	O	R	Y
D			S	T	A	D	I	U	M							
	I							G	A	R	A	G	E			T
		S		P	L	A	N	E	T	A	R	I	U	M		H
	M		C					C	I	R	C	U	S		G	E
A	U			O											R	A
Q	S				L	A	U	N	D	R	Y		N		A	T
U	E												U		V	R
A	U											G	R		E	E
R	M	L	I	B	R	A	R	Y				Y	S		Y	
I										D		M	E		A	H
U											E		R		R	O
M		C	H	E	M	I	S	T				L	Y		D	T
	M	A	R	K	E	T							I			E
	M	A	L	L				P	R	I	S	O	N			L


chemist


planetarium


circus


museum


mall


disco


gym


nursery


prison


laundry


deli


graveyard


market

Vocabulary Worksheet – Buildings

Match words and pictures

apartments	
castle	
cave	
church	1
factory	
house	
houseboat	
hut	
igloo	
mosque	
palace	
skyscraper	
temple	
townhouses	
tree house	
villa	
warehouse	
wigwam	


1


2


3


4


5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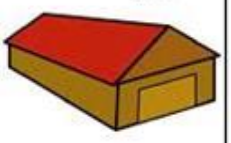
17


18

Write the words (more than 1 answer possible)

1. Where children play : .....
2. Where Neanderthals lived : .....
3. People pray here : .....
4. Medieval building : .....

CITY VS BUILDINGS

MATCH THE IMAGES WITH THE CORRECT WORD/EXPRESSION

1 

2 

3 

4 

5 

6 

7 

8 

9 

10 

11 

12 

HOSPITAL | MECHANIC | SWIMMING POOL | CITY HALL

CHURCH | CINEMA | THEATRE | FIRE DEPARTMENT

SUPERMARKET | BUTCHER'S | GROCER'S | AMUSEMENT PARK

POLICE DEPARTMENT | LIBRARY | BOUTIQUE | GREENGROCER'S

SHOPPING | SCHOOL | AIRPORT | PRISON

BANK | TRAIN STATION | PETROL STATION | FLORIST

13 

14 

15 

16 

17 

18 

19 

20 

21 

22 

23 

24 

KEY:

- HOSPITAL - 4
- MECHANIC – 7
- SWIMMING POOL – 8
- CITY HALL – 6
- CHURCH – 3
- CINEMA – 2
- THEATRE –1 2
- FIRE DEPARTMENT – 10
- SUPERMARKET – 20
- BUTCHER'S – 19
- GROCER'S – 23
- AMUSEMENT PARK – 1
- POLICE DEPARTMENT – 13
- LIBRARY – 15
- BOUTIQUE – 21
- GREENGROCER'S – 22
- SHOPPING – 17
- SCHOOL -9
- AIRPORT – 16
- FLORIST – 18
- BANK – 6
- TRAIN STATION – 11
- PETROL STATION - 24

What's the place called?

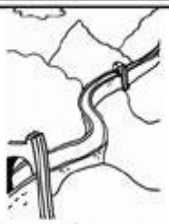
1. A place where children go to learn.....
2. A place where sick people can be made better.....
3. A place where live fish are exhibited.....
4. A place where milk is made into butter and cheese.....
5. The place where monarchs usually live.....
6. A place where a doctor treats his patients.....
7. A place where coins are made.....
8. A building where astronomers look at the sky.....
9. A place where scientific experiments are done.....
10. A room or building where books are kept.....
11. A place where people can buy and eat a meal.....
12. A building in which actors perform plays.....
13. A building in which films are shown to the public.....
14. The chief church of a diocese.....
15. A place where historic objects are shown.....
16. A place where paintings are shown.....
17. A building where things are made by machinery.....
18. A place in which cars are kept or repaired.....
19. The room in prison in which a convict is kept.....
20. A place where bread and cakes are made.....
21. A place where animals are killed for their meat.....
22. A place where birds are kept and exhibited.....
23. Buildings in which soldiers live.....
24. A room for sleeping on board a ship.....
25. A place where beer is made.....
26. A place where nuns live.....
27. A place where monks live.....
28. A place where a blacksmith works.....
29. A building with equipment for physical exercise.....
30. A building in which aircraft are kept.....

Answer Key

1. A place where children go to learn.---------a school
2. A place where sick people can be made better.------a hospital
3. A place where live fish are exhibited.---------- an aquarium
4. A place where milk is made into butter and cheese.------a dairy
5. The place where monarchs usually live.--------a palace
6. A place where a doctor treats his patients.----------a surgery
7. A place where coins are made.--------a mint
8. A building where astronomers look at the sky.----------an observatory
9. A place where scientific experiments are done.-------a laboratory
10. A room or building where books are kept.-----a library
11. A place where people can buy and eat a meal.---a restaurant
12. A building in which actors perform plays.--------a theatre
13. A building in which films are shown to the public.---a cinema
14. The chief church of a diocese.----------a cathedral
15. A place where historic objects are shown.------a museum
16. A place where paintings are shown.----------a gallery
17. A building where things are made by machinery.-----a factory
18. A place in which cars are kept or repaired.-----a garage
19. The room in prison in which a convict is kept.--------a cell
20. A place where bread and cakes are made.------a bakery
21. A place where animals are killed for their meat. ----------an abattoir
22. A place where birds are kept and exhibited.-------an aviary
23. Buildings in which soldiers live.---barracks
24. A room for sleeping on board a ship.----a cabin
25. A place where beer is made.-------a brewery
26. A place where nuns live.------a nunnery
27. A place where monks live.---------a monastery
28. A place where a blacksmith works.------a forge
29. A building with equipment for physical exercise.------a gymnasium
30. A building in which aircraft are kept.------a hangar

World Landmarks Matching

Name: _____ Student Number:____ Class:____

Name of Landmark		**Country**
Big Ben •		• United States
Pyramids •		• Australia
Taj Mahal •		• England
Great Wall •		• France
Eiffel Tower •		• Russia
Statue of Liberty •		• Egypt
St. Basil's Cathedral •		• China
Sydney Opera House •		• India
Leaning Tower of Pisa •		• Italy

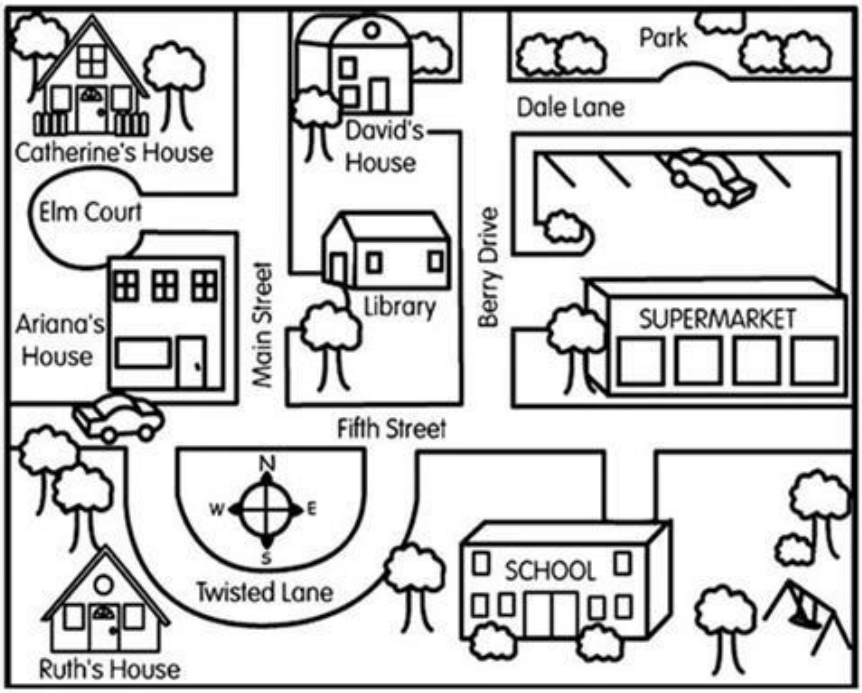
What do you want? => I want to ___.	Where do you go? => I go to a ___.
	
	
	
	
	
	
	

What do you want? => I want to ___.	Where do you go? => I go to a ___.
	
	
	
	
	
	
	

get some money, eat, watch animals, get help, ride a bike, read a book see a doctor	zoo, police station, restaurant, hospital, library, ATM, park
send a postcard, fly away, sleep, buy some water, use a computer, get a map, learn something	supermarket, museum, airport, internet cafe, hotel, tourist information, mail box

Follow the directions

Where am I?



Look at the map, follow the directions and find where you are.

1. You are at the park next to the school. Go straight ahead on Fifth Street and turn right at the second turning. Walk along Main Street and go past Elm court. It's on your left. You are at .....

2. You are at the supermarket. Turn left in Berry Drive and turn right into Fifth Street. Go straight ahead and stop at the corner. It's on your right opposite the library. You are at .....

3. You are at the school. Go straight ahead and turn left at the first corner into Fifth Street. Go straight ahead and turn right at the second corner. Go straight ahead into Main Street and turn right. It's the first building on your right. You are at the .....

4. You are at Rubin's house. Go straight ahead on Fifth Street and turn left at the second turning. Go along Berry Drive and go past the supermarket. Turn right into Dale Lane. It's on your left. You are at .....

Answers

1. Catherine's house
2. Ariana's house
3. Library
4. Park


CHURCH
PRAY(ER)
PRIEST
WOOD(EN)
BELL
RING
1
BOOKSHOP
MAGAZINE, BOOK
COMICS
SHELF, SHELVES
BUY
2
LIBRARY
BOOK
SHELF, SHELVES
BORROW
RESERVE, RESERVATION
3
UNIVERSITY/ COLLEGE
ACADEMIC, ACADEMIA
PROFESSOR
STUDY, STUDIES
LEARN
THESIS
4
SWIMMING POOL/BATH
WATER
SWIM(MER)
SHOWER
BATHING SUIT, BATHE
GOGGLES
5
FIRE STATION/HALL
(FIRE) HOSE
FIRE ENGINE
HELMET
WATER
6
BANK
LOAN
MONEY
SAVE
INTEREST (RATE)
7
TOWN HALL/ CITY HALL
MAIN SQUARE
MARKET
COUNCIL
COMMUNITY
8
RAILWAY STATION
TRAIN
RAIL
TICKET
CONDUCT(OR), CONDUCTRESS
9

HOTEL

BOOK

SERVICE

SLEEP

BED

10

YOUTH HOSTEL

CHEAP

BOOK

DIRT(Y)

SLEEP, BED

11

CINEMA

FILM, MOVIE, VIDEO

CINEPLEXX, MULTIPLEX, IMAX

POPCORN, NACHOS

ACTOR, ACTRESS

12

OPERA HOUSE

VIOLIN, CELLO

ORCHESTRA

MOZART, BACH

MUSIC

13

BREWERY

BEER, BREW

ALCOHOL(IC)

BOTTLE

YEAST

14

PRISON

CRIMINAL

LAW

BAR

HANDCUFFS

GUARD

15

POST OFFICE

LETTER

STAMP

PACKAGE

PARCEL

16

POLICE STATION

ARREST

OFFICER

LAW

EXECUTIVE

17

SUPERMARKET

PRODUCT

TROLLEY, SHOPPING CART

SHOP, BUY

PURCHASE

18

Name : _____

Class : _____

Fill in the blanks with the correct articles "a", "an" and "the".

Upside down House in Sabah is my picture for ___ week. Known locally as Rumah Terbalik, I had to see this to believe it and when I was there, I was amazed by the intriguing architecture involved in building this extra ordinary home. ___ house was built at ___ cost of RM500,000 in Tamparuli by entrepreneur Alexander Yee, it was opened in February 2012. Describing ___ 140sq m house as ___ dream come true, Alexander said ___ house was ___ mix of ethnic Sino-dusun and Dusun style. ___ official opening was done by YB Datuk Haji Masidi Manjun, Sabah's Minister of Tourism, Culture & Environment on ___ 9th of March, 2012.

___ Rumah Terbalik in KK is also fully equipped with kitchen, living room, bedrooms, toilet and veranda in a new perspective – upside down! The interior area is about 1,500 square feet, with master bedroom, child room, living room + kitchen and ___ bathroom. Even ___ garage outside ___ house holds ___ upside down car. ___ unique structure is designed for all ages and nationalities and it is also wheelchair friendly.

Teacher's Copy (Worksheet 5.1.7)

Upside down House in Sabah is my picture for the week. Known locally as Rumah Terbalik, I had to see this to believe it and when I was there, I was amazed by the intriguing architecture involved in building this extra ordinary home. The house was built at a cost of RM500,000 in Tamparuli by entrepreneur Alexander Yee, it was opened in February 2012. Describing the 140sq m house as a dream come true, Alexander said the house was a mix of ethnic Sino-dusun and Dusun style. The official opening was done by YB Datuk Haji Masidi Manjun, Sabah's Minister of Tourism, Culture & Environment on the 9th of March, 2012.

The Rumah Terbalik in KK is also fully equipped with kitchen, living room, bedrooms, toilet and veranda in a new perspective – upside down! The interior area is about 1,500 square feet, with master bedroom, child room, living room + kitchen and a bathroom. Even a garage outside the house holds an upside down car. The unique structure is designed for all ages and nationalities and it is also wheelchair friendly.

Public Buildings

N D I E W C B Y A N K H Y H P

O E Z E R C I U R I Z R M O F

I P K W W T J T G E E U L S X

T A V I K R A Z Y L K I U P K

A R K W G T K E L H C A K I N

T T L B A C C A H E A O B T A

S M A I W H G S S T S L E A B

E E R G E T H T H K E I L L N

R N C M R P A Z I H B I V J X

I T I A K T L O O H C S V K C

F S E H I Y E C F G E U L O Y

T T E O B O O K S T O R E S M

C O N X S F T V R H Y F U N L

K R A P T N E M E S U M A H F

N E B S D G M Z E X Q L K X X

AMUSEMENTPARK
ARTGALLERY
BAKERY
BANK
BOOKSTORE
CHEMIST
CITYHALL
DEPARTMENTSTORE
FIRESTATION
HOSPITAL
MOVIETHEATRE
POLICESTATION
SCHOOL

Buildings & Structures

House

Bridges

Concrete

START	a place where you buy books	a place where passenger trains stop on a railway line, typically with platforms and buildings	a building used for public Christian worship
the building where firefighters have their office and keep their vehicles and equipment	a large building with a lot of shops, restaurants and sometimes a cinema	a place where people pay to sit and eat meals	a tower built next to the sea that has a powerful flashing light at the top to show ships where to go
a large public garden in a town, used for recreation	the main house on a farm, where the farmer lives	a place where you can send a letter	the building where the council members and officials who manage a city work
a place where you can borrow books	a building where bread and cakes are made or sold	a building made of glass that is used for growing plants that need protection from the weather	a place where planes arrive and leave
a place where you can buy medicines	a place with special equipment for washing cars	a restaurant where you get your meal very quickly	an area of land where children can play, especially at a school or in a park
FINISH	a school for children between the ages of three and five	a building in which objects of historical, scientific, artistic or cultural interest are stored and exhibited	a very tall building containing offices or flats

START	a place where you buy books **book shop**	a place where passenger trains stop on a railway line, typically with platforms and buildings **railway station**	a building used for public Christian worship **church**
the building where firefighters have their office and keep their vehicles and equipment **fire station**	a large building with a lot of shops, restaurants and sometimes a cinema **mall**	a place where people pay to sit and eat meals **restaurant**	a tower built next to the sea that has a powerful flashing light at the top to show ships where to go **light house**
a large public garden in a town, used for recreation **park**	the main house on a farm, where the farmer lives **farmhouse**	a place where you can send a letter **post office**	the building where the council members and officials who manage a city work **City Hall**
a place where you can borrow books **library**	a building where bread and cakes are made or sold **bakery**	a building made of glass that is used for growing plants that need protection from the weather **greenhouse**	a place where planes arrive and leave **airport**
a place where you can buy medicines **pharmacy**	a place with special equipment for washing cars **car wash**	a restaurant where you get your meal very quickly **fast food**	an area of land where children can play, especially at a school or in a park **playground**
FINISH	a school for children between the ages of three and five **nursery school**	a building in which objects of historical, scientific, artistic or cultural interest are stored and exhibited **museum**	a very tall building containing offices or flats **skyscraper**

Egyptian Pyramid Facts

•Ancient Egyptian pyramids are the most well known pyramid structures.

•Most Ancient Egyptian pyramids were built as tombs for Pharaohs and their families.

•Over 130 pyramids have been discovered in Egypt.

•The first Egyptian pyramid is believed to be the Pyramid of Djoser, it was built in Saqqara around 4650 years ago (2640 BC).

•Saqqara is a huge ancient burial ground built near the Egyptian city of Memphis.

•The Great Pyramid of Giza is the oldest and largest of three pyramids in the Giza Necropolis.

•Also known as the Pyramid of Khufu, it is the oldest of the Ancient Wonders of the World and the last one still largely intact.

•For over 3800 years, the Great Pyramid of Giza was the tallest man made structure in the world.

•Although it has lost around 10 metres (33 feet) in height, it still stands around 146 metres (480 feet) above the ground.

•As well as Giza and Saqqara, important Egyptian Pyramid sites include Dashur, Abusir, Meidum, Lisht, Abu Rawash and others.

•Nearly all Egyptian Pyramids are located on the west bank of the Nile.

•Egyptian Pyramids often contain multiple chambers and passages.

•Bodies placed in the tombs were preserved by mummification.

•Egyptians buried their dead with burial goods that ranged from everyday items they believed would useful in the afterlife to more expensive items such as jewelry.

• Tomb robbers targeted many of the royal tombs and most were eventually robbed.

•One tomb that was left largely intact was that of Tutankhamun in the Valley of the Kings. Rediscovered in 1922 by Howard Carter, this famous tomb is best known for the solid gold funerary mask of Tutankhamun.

•Tutankhamun was a pharaoh from 1332 BC to 1323 BC.

Change the Active to the passive

I	You	He	She	It	We	They
by **me**	*by* **you**	*by* **him**	*by* **her**	*by* **it**	*by* **us**	*by* **them**

*Verbs are presented in **bold** and objects are <u>underlined</u> in the active sentences.

1) Active: Hatshepsut **ruled** <u>Egypt</u> for 22 years.
   Passive: *Egypt was ruled by Hatshepsut for 22 years.*

2) Active: The ancient Egyptian people **loved** <u>her</u>.
   Passive: _____

3) Active: Hatshepsut **built** <u>many temples and monuments</u>.
   Passive: _____

4) Active: She **improved** <u>the Egyptian economy</u>.
   Passive: _____

5) Active: Hatshepsut **erected** <u>twin obelisks</u> at her temple at Karnak.
   Passive: _____

6) Active: Hatshepsut **received** <u>riches from the Land of Punt</u>.
   Passive: _____

1) Active: Candace of Meroë **ruled** <u>Meroitic Sudan</u>.
   Passive: _____

2) Active: She **defeated** <u>the army of Augustus Caesar</u>.
   Passive: _____

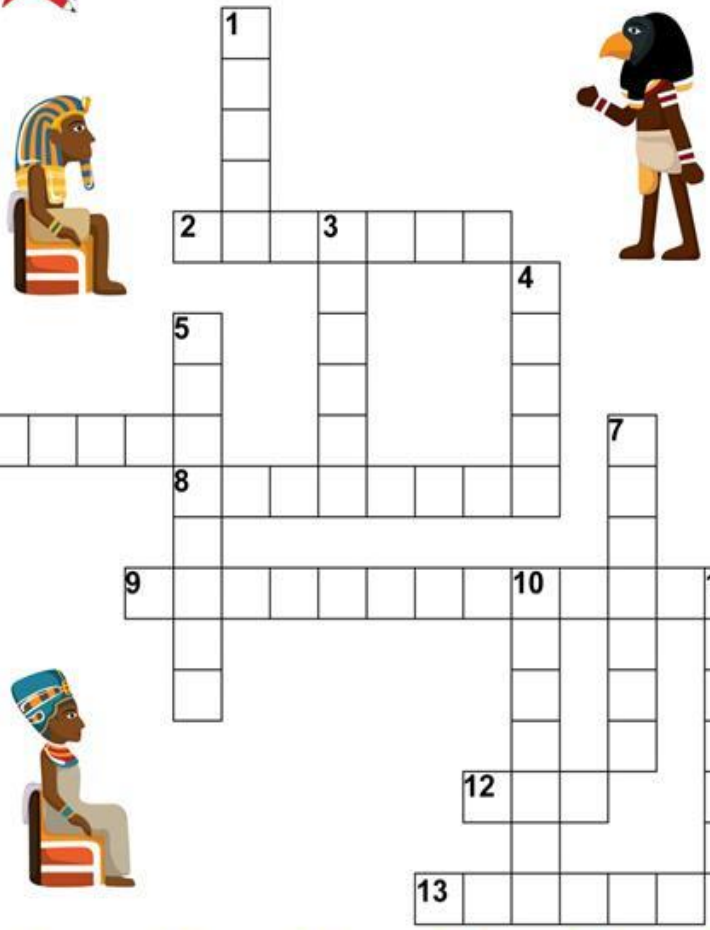
3) Active: She **lost** <u>an eye</u> in battle.
   Passive: _____

Fill in the blanks with the PRESENT, PAST and PAST PARTICIPLE

RUN		
	SWAM	

SEE		
	RODE	
BURN		

EGYPTIAN PUZZLE



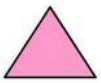
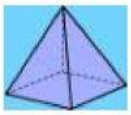
ACROSS :

2 - It has a square base and 4 triangles.
6 - A god or goddes.
8 - A picture of a person.
9 - Pictures that are used for writing.
12 - The animal that Egyptians liked most.
13 - Lion's body and king's head.

DOWN :

1 - Dead body preserved by the ancient Egyptian process.
3 - A charm often with a symbol.
4 - A Mediterranean country in the northeastern corner of Africa.
5 - Someone who comes from Egypt.
7 - Very old.
10 - A ruler of ancient Egypt.
11 - A three-dimentional work of art.

HIEROGLYPHICS
SPHINX
EGYPTIAN
PORTRAIT
ANCIENT
PHARAOH
MUMMY
PYRAMID
AMULET
STATUE
EGYPT
DEITY
CAT

Year	Vocabulary	Definition
Reception		**Properties of Shape**
	shape	The shape of an object is its outline.
	flat	A flat object has a level surface with no ups or downs.
	curved	A line that is not straight or an object that is not flat.
	straight	A line or edge which has no curves is straight.
	round	A round object is shaped like a circle or a ball.
	hollow	A hollow shape has a space inside it.
	solid	A solid shape has no space inside it.
	corner	Two or more edges or sides meet at a corner.   This triangle has 3 corners. This box has 8 corners.
	face	A face is one of the surfaces of a 3D shape.  This pyramid has 5 faces.
	side	A line in a 2D shape is called a side.
	edge	An edge is where 2 faces meet in a 3D shape.
	end	The outer parts of a 3D shape are called the ends.  This rod has 2 ends.
	bigger	Comparing the size of two objects.   The dog is bigger than the cat.
	larger	Comparing the size of two objects.   The butterfly is larger than the ant.
	smaller	Comparing the size of two objects.   The bike is smaller than the car.

THE HOUSE
PREPOSITIONS OF PLACE

CHOOSE THE RIGHT OPTION

1-THE FRIDGE IS BETWEEN/UNDER THE DOOR AND THE CUPBOARD.
2-THE DOOR IS NEXT TO/UNDER THE SHELF.
3-THE CLOCK IS IN/ON THE WALL.
4-THE CHAIRS ARE UNDER/ NEXT TO THE TABLE
5-THE TABLE IS UNDER/OPPOSITE THE COOKER.
6-THE POT IS ON/IN THE COOKER.
7-THE BIN IS NEAR/ IN FRONT OF THE DRAWERS.
8-THE MICROWAVE IS NEXT TO /UNDER THE WINDOW
9-THE SINK IS ABOVE/UNDER THE WINDOW.

TRUE OR FALSE

1- THE CHAIR IS NEXT TO THE DESK
2-THE BEDS ARE OPPOSITE THE WINDOWS
3-THE COMPUTER IS UNDER THE DESK
4-THE BOOKCASE IS ON THE WALL.
5-THE BIN IS BETWEEN THE BED AND THE DESK
6-THE LAMP IS ON THE DESK.
7-THE POSTER IS ABOVE THE SHELF
8-THE WINDOWS ARE ABOVE THE BEDS
9-THE CLOCK IS ON THE BED.

COMPLETE WITH THE RIGHT PREPOSITION

1-THE TOILET IS .....THE BATH
2-THE CURTAIN IS.....THE TOILET AND THE BATH.
3-THE SHELF IS .....THE WALL
4-THE MIRROR IS .....THE WASHBASIN
5-THE CUPBOARD IS .....THE WASHBASIN
6-THA MAT IS .....THE TOILET
7-THE STOOL IS .....THE BATH.
8-THE BIN IS .....THE CUPBOARD.
9-THE TOWELS ARE .....THE CUPBOARD.

MULTIPLE CHOICE

1- THE DOOR IS..... THE TELEPHONE
UNDER - NEXT TO – OPPOSITE
2-THE T.V IS .....THE SOFA
NEAR – OPPOSITE – BEHIND
3-THE MAT IS .....THE TABLE
UNDER – BEHIND – ABOVE
4-THE PICTURE IS .....THE WINDOW AND THE DOOR.
IN – ON – BETWEEN

PARTS OF THE HOUSE

WRITE THE NUMBER IN THE RIGHT CIRCLE

1-WASHBASIN	11-RUG
2-BEDSIDETABLE	12-MIRROR
3-CHAIR	13-TABLE
4-TOILET	14-SINK
5-CUPBOARD	15-BIN
6-FRIDGE	16-PICTURE
7-CLOCK	17-DRAWER
8-BATHTUBE	18-LAMP
9-COOKER	19-BED
10-WARDROBE	

PARTS OF THE HOUSE

A- BATHROOM
B-KITCHEN
C-BEDROOM
D-DINING-ROOM

COMPLETE WITH THERE IS/ISN'T THERE ARE/AREN'T

1-_____ A PLANT IN THE LIVING ROOM
2-_____ A BIN IN THE KITCHEN
3-_____ A CUPBOARD IN THE BATHROOM.
4-_____ FOUR CHAIRS IN THE DINING ROOM
5-_____ TWO TABLES IN THE KITCHEN
6-_____ A PICTURE IN THE BEDROOM.
7-_____ A MIRROR IN THE BEDROOM
8-_____ A CLOCK IN THE KITCHEN.

READ THE SENTENCES, COMPLETE THE WORDS AND MATCH

1-YOU WASH YOUR CLOTHES IN THE W_ _ _ _ _ _ M_ _ _ _ _ _

2-YOU KEEP YOUR BOOKS HERE B_ _ _ _ _ _ _

3-YOU WASH YOUR HANDS HERE W_ _ _ B_ _ _ _

4-YOU KEEP YOUR SOCKS HERE D_ _ _ _ _ _

5-YOU KEEP THE FOOD HERE F_ _ _ _ _

CHOOSE THE RIGHT OPTION

1-THE BEDSIDE TABLE IS..... THE WARDROBE AND THE BED.
a) IN b) BETWEEN c) UNDER

2-THE TOILET IS ..... THE BATH
a) NEXT TO b) UNDER c) OPPOSITE

3-THE FRIDGE IS .....THE COOKER.
a) NEXT TO b) OPPOSITE c) BEHIND

4-THE PICTURE IS .....THE WALL.
a) IN b) ON c) UNDER

5-THE WASHBASIN IS ..... THE BATH
a) BETWEEN b) ON c) NEXT TO

Speaking and listening - Elementary to Intermediate

Let's talk about HOUSES

Conversation cards

Where do you live? Do you live in a house or a flat (also: apartment)?	Describe your house or flat. (both inside and outside)	How many rooms are there in your house? Name them.
What is there in your living room? Name as many things as you can. What do you do there?	What is there in your bedroom? Name as many things as you can. What time do you usually go to bed?	What is there in your kitchen? Name as many things as you can. What do you do there?
What is there in your bathroom? Name as many things as you can. What do you do there?	What is there in your garden? Name as many things as you can. What do you do there?	What is there in your garage? Name as many things as you can. What do you do there?
Do you prefer living in a house or flat? Explain why.	Do you prefer living in the city or the country? Explain why.	Are you in favour of renting or buying a house? Explain why.
How much does an average house or flat cost where you live? Where do people get the money to buy one?	Who does the housework in your family? What do they do?	Give some reasons why people can become homeless.
How many kinds of houses can you name? (e.g. house, flat, apartment, ...)	How many times have you moved house? Did you enjoy it?	Make a list of important things to look for when buying (or renting) a house. (e.g. a garden, near a supermarket)

1  2  3  4 

kitchen	
bathroom	
garden	
cellar	
living room	
dining room	
study	
bedroom	
hall	
attic	
garage	

5  6 

7  8 

9  10  11 

Match BrE (left) with AmE (right)

1	cellar	a	apartment
2	lift	b	yard
3	garden	c	basement
4	flat	d	elevator

Explain and discuss

- Home sweet home.
- Home is where the heart is.
- A man's home is his castle.
- Until the cows come home.
- Charity begins at home.
- Bring home the bacon.

ANSWER KEY

	There is/There are	
Living room: sofa, TV, armchair, coffee table, rug, table, chairs, computer, lamp, bookcase, cupboard, shelves, picture	**Bedroom**: bed, wardrobe, nightstand(s), pillows, mattress, sheets, duvet/comforter, mirror, dressing table/vanity	**Kitchen:** cupboard, shelves, cooker/stove, pots & pans, microwave oven, sink, dishwasher, table, chairs
Bathroom: toilet, bath, shower, washbasin, mirror, medicine cabinet	**Garden:** flowers, grass, trees, shrubs, swimming pool, garden furniture, swing, sandbox, flower beds,	**Garage**: car, bicycle, motorbike, lawn mower, shelves, tools, garden hose
Discuss prices Introduce: savings, inheritance, mortgage	Cleaning, cooking, washing, ironing, doing the dishes, setting the tables, taking out the rubbish/garbage	
bungalow, detached house, semi-detached house, villa, palace, castle, mansion, farm, cottage, terraced house (also row house or town house), studio, houseboat, igloo, tent/wigwam, treehouse, condo (or condominium), cabin, stilt house, A-frame, hut, trailer		

kitchen	8
bathroom	3
garden	2
cellar	10
living room	9
dining room	4
study	11
bedroom	5
hall	6
attic	7
garage	1

Match BrE (left) with AmE (right)

1	Cellar C	a	apartment
2	Lift D	b	yard
3	Garden B	c	basement
4	Flat A	d	elevator

Explain and discuss

- Home sweet home.
- Home is where the heart is.
- A man's home is his castle.
- Until the cows come home.
- Charity begins at home.
- Bring home the bacon.

Vocabulary Worksheet – Buildings

Match words and pictures

apartments	
castle	
cave	
church	1
factory	
house	
houseboat	
hut	
igloo	
mosque	
palace	
skyscraper	
temple	
townhouses	
tree house	
villa	
warehouse	
wigwam	


1


2


3


4


5


6


7


8


9


10


11


12


13


14


15


16


17


18

Write the words (more than 1 answer possible)

1. Where children play : .....
2. Where Neanderthals lived : .....
3. People pray here : .....
4. Medieval building : .....

Describing housing

In the boxes below you will find many **adjectives** you can use to describe the different "houses". Can you also come up with suggestions of your own for describing the many "houses"?

S I Z E	S H A P E	C O L O U R	A P P E A R A N C E
heavy, light, big, small, little, tiny, tall, short, puny, thin, skeletal, giant, long, scrawny,	round, square, straight, triangular, oval, square, blobby, flat, elliptical, curved, wavy	pink, red, orange, black, yellowish, blue, dark, green, purple, white, grey, brown	beautiful, clean, elegant, plain, magnificent, drab, old-fashioned, quaint, adorable, fancy,

1

1. _____
2. _____
3. _____
4. _____
5. _____

2

1. _____
2. _____
3. _____
4. _____
5. _____

3

1. _____
2. _____
3. _____
4. _____
5. _____

4

1. _____
2. _____
3. _____
4. _____
5. _____

5

1. _____
2. _____
3. _____
4. _____
5. _____

6

1. _____
2. _____
3. _____
4. _____
5. _____

7

1. _____
2. _____
3. _____
4. _____
5. _____

8

1. _____
2. _____
3. _____
4. _____
5. _____

9

1. _____
2. _____
3. _____
4. _____
5. _____

10

1. _____
2. _____
3. _____
4. _____
5. _____

11

1. _____
2. _____
3. _____
4. _____
5. _____

12

1. _____
2. _____
3. _____
4. _____
5. _____

What's in the tool shed?

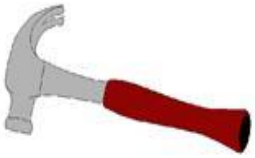
Label these things found in the shed:

hammer - saw - screwdriver - pliers – tape measure - file - adjustable spanner - work bench - anvil - spanner - bolt - nut - square – power saw – nails – electric drill - shelves

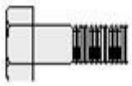
1 .....

2.....

3 .....



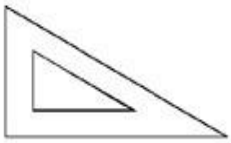
4.....



5. .....

6. .....

7 .....



8. .....

9. .....

10. .....

11. .....

12. .....

13 .....

14. .....

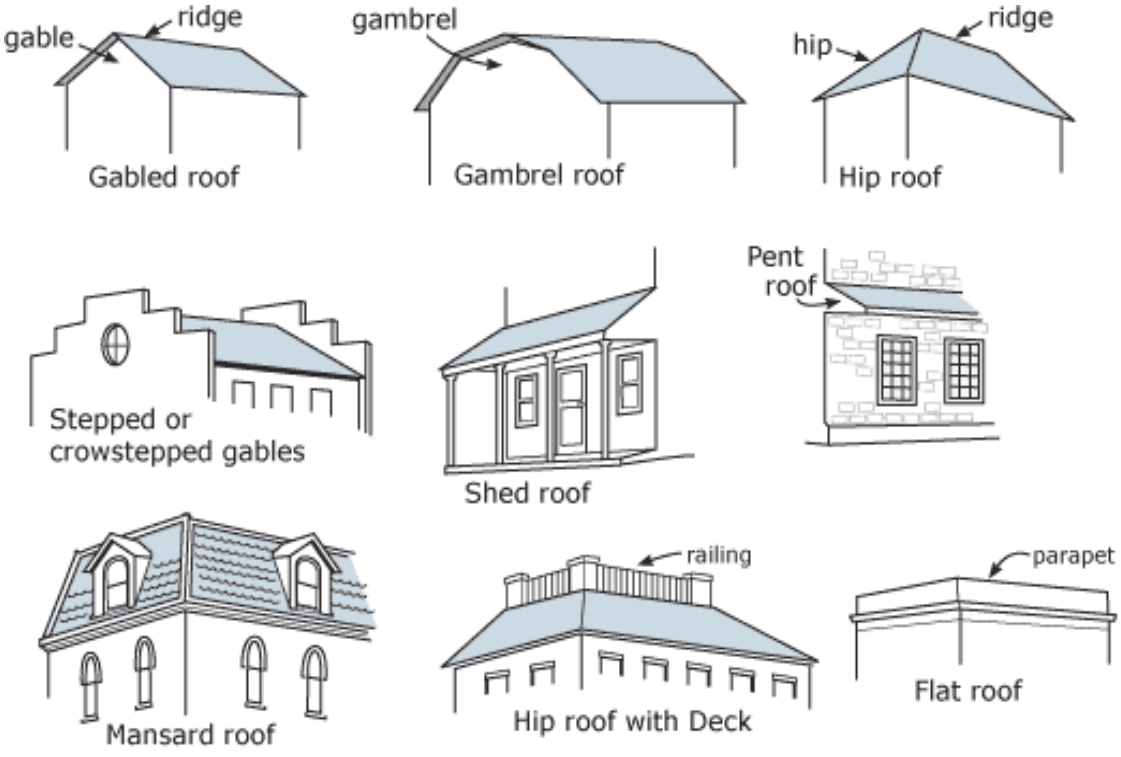
15. .....

16. .....

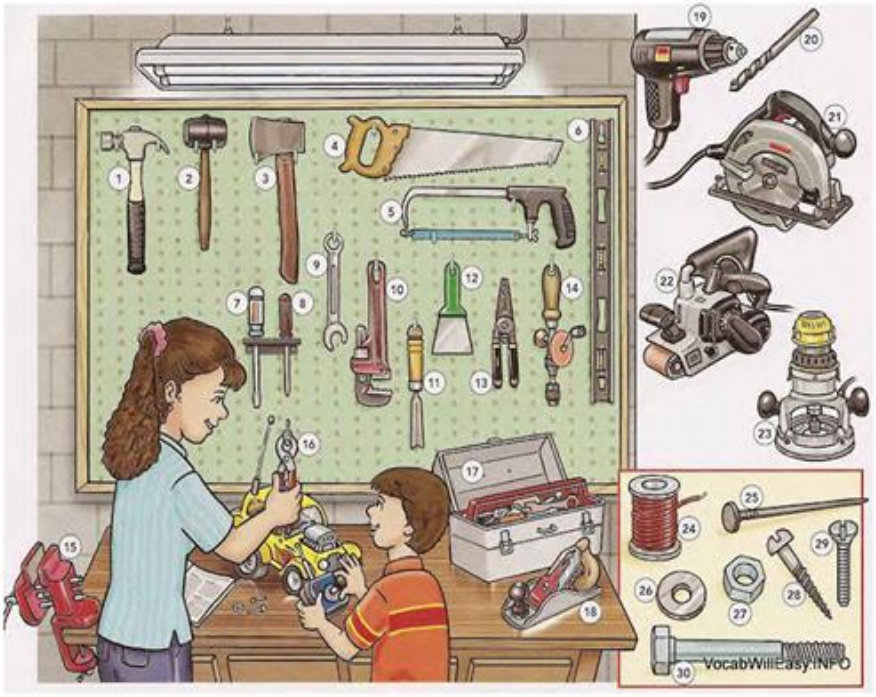
17. .....

Answers:

1. Screwdriver
2. Saw
3. Adjustable spanner (or wrench)
4. Hammer
5. Bolt
6. Anvil
7. Nut
8. Square (or Carpenter's square)
9. Power saw (or circular saw)
10. Electric drill (or Power drill)
11. Tape measure
12. Work bench
13. Spanner (or Open ended spanner or wrench)
14. Shelves
15. Nails
16. Pliers
17. File



TOOLS AND HARDWARE



1 hammer
2 mallet
3 ax
4 saw/handsaw
5 hacksaw
6 level
7 screwdriver
8 Phillips screwdriver
9 wrench
10 monkey wrench/ pipe wrench
11 chisel
12 scraper
13 wire stripper
14 hand drill
15 vise
16 pliers
17 toolbox
18 plane
19 electric drill
20 (drill) bit
21 circular saw/ power saw
22 power sander
23 router
24 wire
25 nail
26 washer
27 nut
28 wood screw
29 machine screw
30 bolt

21. (paint) pan
22. (paint) roller
23. paintbrush/brush
24. Paint

25. paint thinner
26. Sandpaper

AMAZING BUILDINGS

Longaberger Home Office, Ohio, USA
Crooked House, Sopot, Poland
'That Roundhouse', Wales
The Headington Shark, UK
Dancing House, Prague, Czech Republic

a. It is a seven storey head office of the Longaberger Company.
b. It's a three storey building inspired by Jan Marcin Szancer's fairytale illustrations and the art of Per Dahlberg.
c. The unusual shape of this building was inspired by the dancing form of Ginger Rogers and Fred Astaire.
d. It's become the country's most photographed building.
e. It is in a residential street.
f. It's made of wood, a straw insulated turf roof and recycled materials.
h. It was created by sculptor John Buckley and installed at the request of owner Bill Heine in 1986.
i. It relies on solar power and a wind turbine for electricity, and has a compost loo.
j. It was designed to be a political statement to reflect the times.

1. 

2. 

3. 

4. 

5. 

KEY

1. 'That Roundhouse', Wales /f, i

2. The Headington Shark, UK /e, h, j

3. Dancing House, Prague, Czech Republic /c

4. Longaberger Home Office, Ohio, USA /a

5. Crooked House, Sopot, Poland /b, d

Strange Architecture

Match the depicted buildings with the corresponding descriptions and discuss with your partner a) which of these buildings you (don't) find appealing and why, b) what kind of weird buildings you've already seen in your life and where, and c) how you'd like your future home (house or apartment) to be once designed (both internally and from the outside).

What looks like left-over **boulders** from the Stone Age is actually a house. Casa do Penedo or the 'House of Stone', was built in 1974 with four different boulders. The Portuguese **getaway** has no electricity so the homeowners use candlelight to see when indoors. That said, the house **boasts** a cozy fireplace, a swimming pool carved into stone and logs for stairs.

WonderWorks is an entertainment center focused on science exhibits with five locations in the United States. The company's slogan is "Let Your Imagination Run Wild". The exhibits are housed in a **themed building** designed by architect Terry Nicholson, looking as if it were picked up by severe weather and dropped upside down on an existing building.

The original idea of these cubic houses came about in the 1970s. Piet Blom has developed a couple of these cubic houses that were built in Helmond.

The city of Rotterdam asked him to design housing on top of a **pedestrian bridge** and he decided to use the cubic houses idea. The concept behind these houses is that he tries to create a forest by each cube representing an abstract tree; therefore the whole village becomes a forest.

The "Crooked House" is an unusual piece of architecture located on Monte Cassino Street in Sopot, Poland. Completed in 2004, the building was designed by Szotyńscy & Zaleski who were inspired by the fairytale illustrations and drawings of Jan Marcin Szancer and Per Dahlberg as well as designs by Antonio Gaudi. The magical effect draws many visitors to the property which **houses** restaurants, cafés and shops.

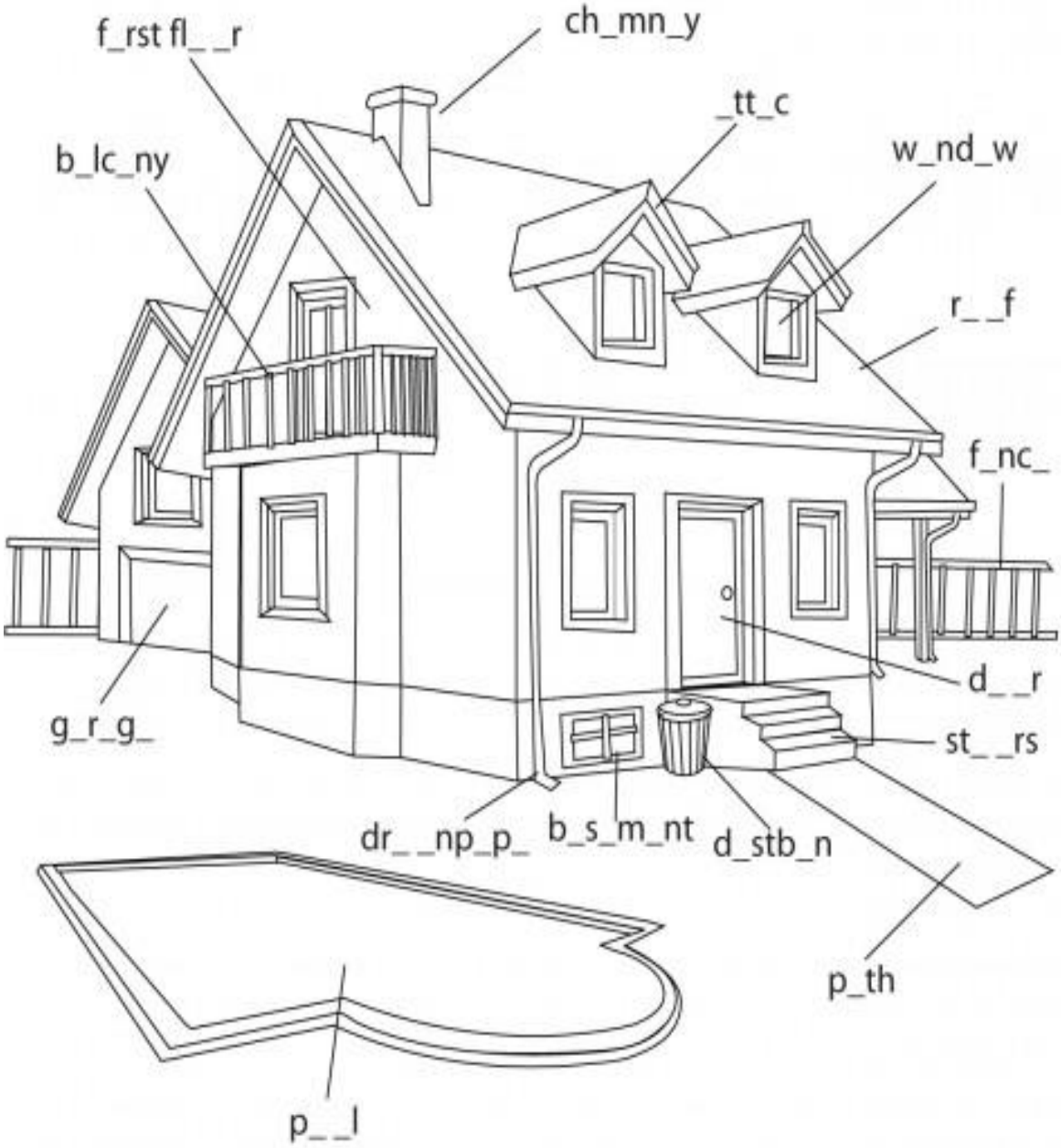
This project, located in the heart of Kansas City, represents one of the pioneer projects behind the **revitalization** of downtown. The people of Kansas City were asked to help pick highly influential books that represent Kansas City. Those titles were included as 'bookbindings' in the innovative design of the parking garage exterior, to inspire people to utilize the downtown Central Library.

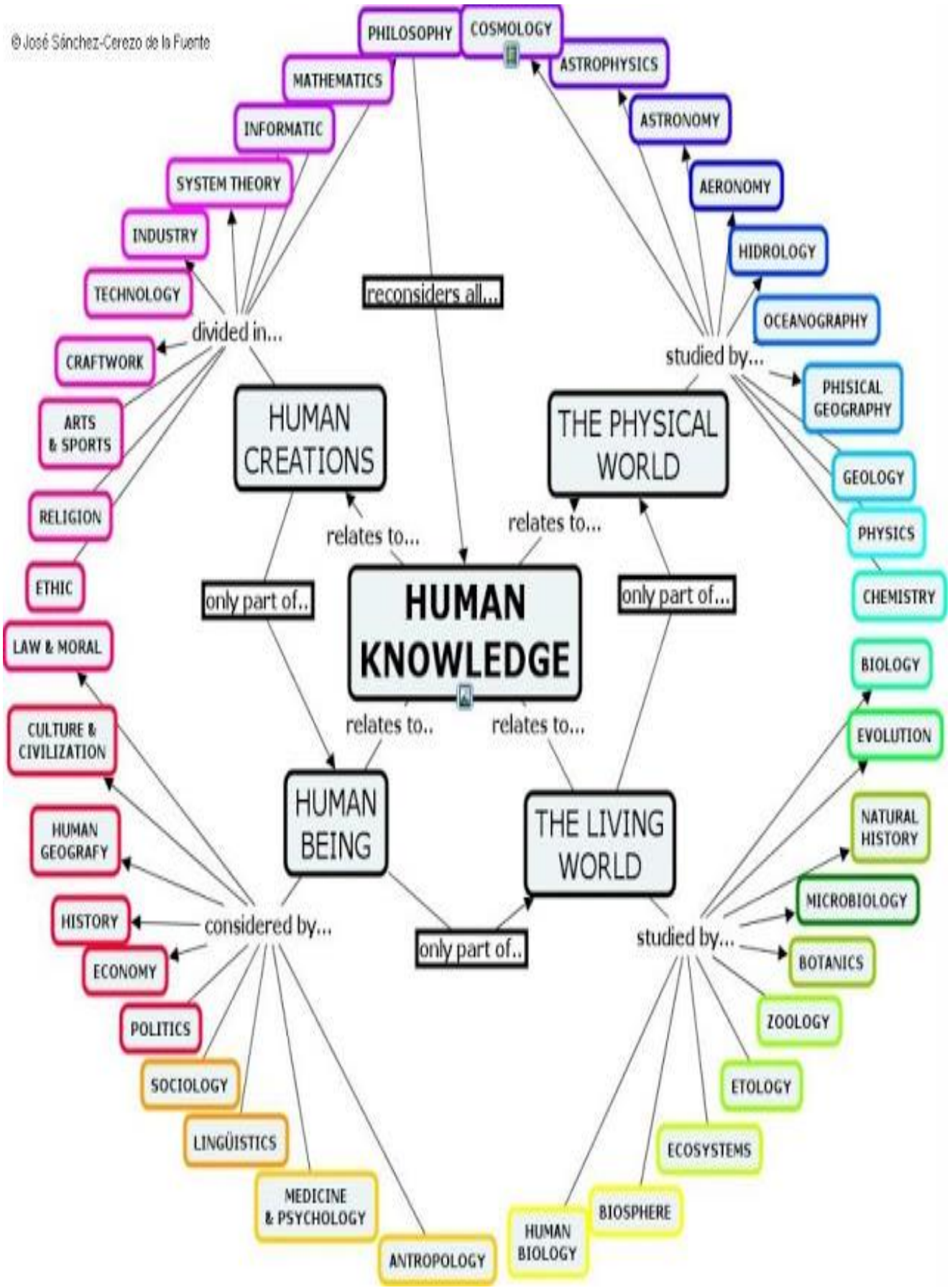
A trend that started and continues to this day in town Waikato in New Zealand is the use of old, **discarded**, **corrugated** iron to create "works of art". Perhaps the most significant of these are the "Sheep" and "Dog" buildings on Main Road, Tirau. Housing a wool and craft store the "Sheep" building would be considered a great example of **mimetic** architecture. The "Dog" building houses the town's Information Center.

Parts of The House

Fill in the vowels

Fill in the missing vowels for each of the following words:

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PHILOSOPHY
COSMOLOGY
ASTROPHYSICS
MATHEMATICS
ASTRONOMY
INFORMATIC
AERONOMY
SYSTEM THEORY
HIDROLOGY
INDUSTRY
OCEANOGRAPHY
TECHNOLOGY
reconsiders all...
divided in...
studied by...
CRAFTWORK
PHISICAL GEOGRAPHY
HUMAN CREATIONS
THE PHYSICAL WORLD
ARTS & SPORTS
GEOLOGY
RELIGION
relates to...
relates to...
PHYSICS
ETHIC
only part of..
HUMAN KNOWLEDGE
only part of...
CHEMISTRY
LAW & MORAL
BIOLOGY
relates to..
relates to...
CULTURE & CIVILIZATION
EVOLUTION
HUMAN BEING
THE LIVING WORLD
HUMAN GEOGRAFY
NATURAL HISTORY
MICROBIOLOGY
HISTORY
considered by...
only part of..
studied by...
BOTANICS
ECONOMY
ZOOLOGY
POLITICS
ETOLOGY
SOCIOLOGY
ECOSYSTEMS
LINGÜISTICS
BIOSPHERE
MEDICINE & PSYCHOLOGY
HUMAN BIOLOGY
ANTROPOLOGY

Great people of their centuries.

Match the pictures to their contributions:

a. 

a. *was born in 1897. He was a writer, the founder of Kazakh modern drama. He died in 1961.*

b. 

b. *was the first Kazakh cosmonaut.*

c. 

c. *created the film studio and was the first film director.*

d. 

d. the great scientist-biologist, the naturalist, the founder of the theory of evolution of life on Earth.

e. 

e. one of the founders of telephony.

f. 

f. **the** great English playwright and poet, one of the most famous world playwrights. He is the author of 12 tragedies, 16 comedies, 6 historical Chronicles, 4 poems and 154 sonnets.

g.

g. the great British bacteriologist. The inventor of *penicillin*, the first in the world antibiotic.

h. 

h. the most brilliant politician of great Britain, a talented journalist, winner of the Nobel prize in literature, an honorary member of the British Academy of Sciences

i. 

i. the great English physical-chemist, founder of the doctrine of the electromagnetic field.

j. 

j. one of the most famous people in the history of science. He discovered the law of motion and the universal law of gravitation.

k. 

k. *is the greatest British architect made a plan for the reconstruction of St. Paul's Cathedral in London. Presented a plan for rebuilding the city of London after the Great fire.*

l. 

l. *was born in 1845. He was the founder of Kazakh written literature.*

m. 

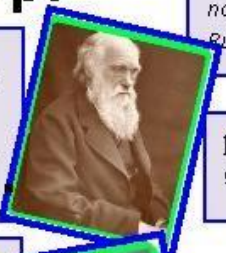
m. *is the first, the only woman who took the post of the Prime Minister of the European States. In USSR has the nickname « iron lady»*

n. 

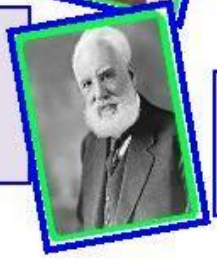
n. *was born in 1841. He was a famous teacher and enlightener for Kazakh people.*

o. 

o. *This outstanding scientist and educator has undertaken a lot of rather fruitful scientific researches in the field of geography, histories, ethnographies, folklore of people of the East and has made the travel interfaced to huge dangers in mysterious at that time the countries. To one of the first among the compatriots he promoted distribution to the Kazakh steppes of progressive ideas, has played a noble role in strengthening friendship of Russian and Kazakh people.*

p. 

p. *was born in 1806. He was one of the greatest Kazakh composers.*

q. 

q. the most outstanding Admiral of the British fleet, as well as ensured the dominance of the British fleet in the sea on a whole hundred years.

LANDMARKS

Using the places listed in the Places Box, identify where each landmark is located.

1. Big Ben _____
2. Colosseum _____
3. Eiffel Tower _____
4. Golden Gate Bridge _____
5. Great Pyramid _____
6. Taj Mahal _____
7. Gateway Arch _____
8. Parthenon _____
9. Empire State Building _____
10. Great Wall _____
11. Space Needle _____
12. Tivoli Gardens _____
13. Chichén Itzá _____
14. Kremlin _____
15. Astrodome _____

PLACES BOX

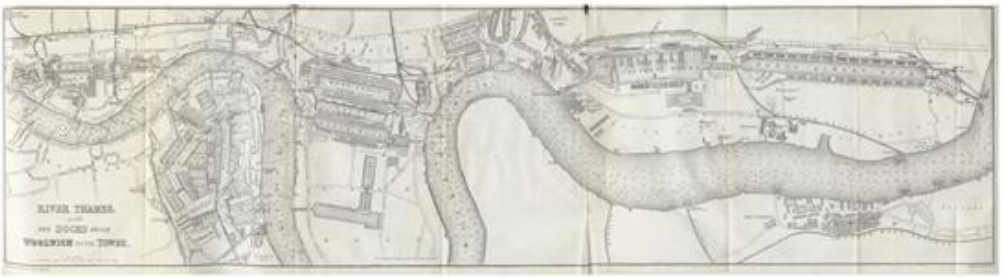
Denmark India New York City Moscow Seattle

London Athens Egypt Rome St. Louis

China Houston San Francisco Paris Mexico

River Thames & The Tower Bridge

Thames is the name of a river in london. It divides the city in to two different parts. The northern part and the southern part. It connects london with the sea and it is 346 kilometers long. In the past the river froze completely in the winter and they used to ice skate on the river.



There are many bridges built on the river. One of them is the "Tower Bridge". Many people call it london bridge but they are wrong. London bridge is the name of the next bridge. This bridge was built in 1884 and it took just 4 years to be built. There is a museum inside the tower about the bridge. The bridge has 2 towers and opens and closes five hundred times a year. The "Tower Bridge" is 243 meters long and 64 meters tall.

Name: _____ Date: _____

The Golden Gate Bridge

Directions: Read the passage. Then answer the questions from the reading.

The Golden Gate Bridge is a suspension bridge spanning the opening of the San Francisco Bay onto the Pacific Ocean. The Golden Gate Bridge was the longest suspension bridge span in the world (8,981 feet) when it was completed in 1937, and has become an internationally recognized symbol of San Francisco and California.

Before the bridge was built, the only practical short route between San Francisco and Marin County was by boat across a section of San Francisco Bay. Many experts said that a bridge couldn't be built across the 6,700 ft strait. Experts said that constant winds of 60 mph and blinding fogs would prevent construction and operation. However Leon Moisseiff, the principal engineer of the project introduced his "deflection theory" by which a thin, flexible roadway would flex in the wind, greatly reducing stress by transmitting forces via suspension cables to the bridge towers.

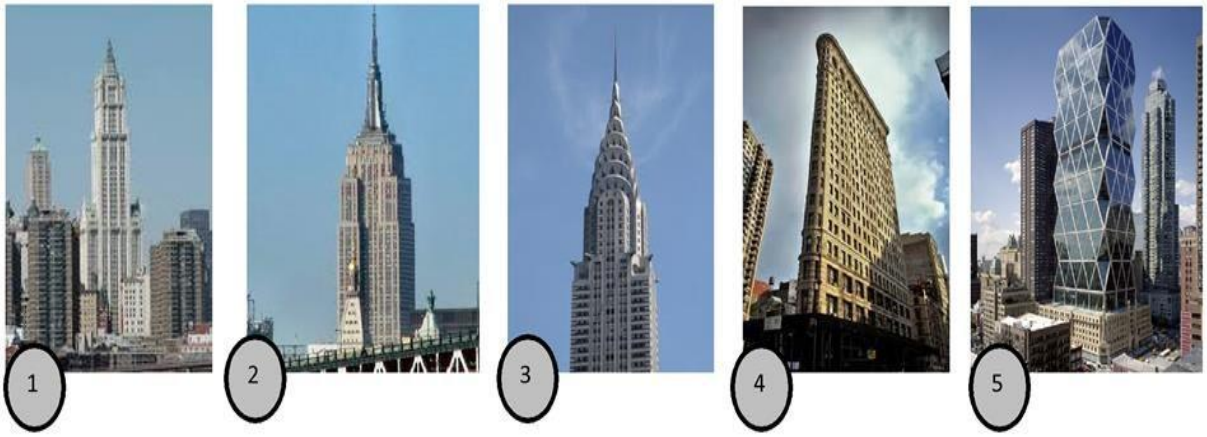
The famous International Orange color was originally used as a sealant for the bridge. Many locals persuaded project leaders to paint the bridge in the vibrant orange color instead of the standard silver or gray, and the color has been kept ever since.

The bridge is considered one of the most beautiful examples of bridge engineering as a structural design challenge and for its appeal. It was declared one of the modern Wonders of the World and is "possibly the most beautiful, certainly the most photographed, bridge in the world."

1. What body of water does the bridge cross? San Francisco Bay
2. What is the constant wind speed at the bridge? 60 mph
3. What type of bridge design was used? Suspension Bridge
4. What is the total length of the bridge? 8,981 feet
5. What color is the bridge? International Orange

NEW YORK – A Brief History of Skyscrapers

Can you identify any of these buildings? What do they all have in common? Which one do you like best?



You are going to watch part of a documentary where architecture critic, Paul Goldbergerg comments on the history of New York's skyscrapers. As you listen, complete the following tasks.

- In New York buildings are not only buildings, they become _____
- Some of the older buildings are _____ of the skyscraper.
- Their fronts are not made of stone, but of _____ (hierro fundido).
- You can test if a building is made of stone or not by using a _____.
- New York took over Chicago as regards skyscrapers in _____.
- The Woolworth building was the tallest building worldwide for _____.
- In 1973, the Empire State Building _____ the crown _____ from the Woolworth building.
- The _____ defined the Manhattan skyline.
- The new skyline aims at providing a _____ for everything that's disappeared and at creating a new _____ in the spirit of the city.
- They are trying to keep a memory of the people who were lost and also to show New York's _____.
- New York stands out from the other cities as the embodiment of _____.

A residential building

Answer true (T), false (F) or we don't know (?)

1. There are 3 floors in the house. ( )
2. All apartments have a balcony. ( )
3. The Meier family lives on the ground floor. ( )
4. The lady on the second floor is holding a plant. ( )
5. On the 1st floor there is a red umbrella. ( )
6. The cyclist is going to work. ( )
7. The man on the ladder is hanging up a picture. ( )
8. The woman who is helping him is called Christine. ( )
9. It is raining. ( )
10. It's early in the morning. ( )
11. The woman on the last floor is hanging a dress in the closet. ( )
12. There is satellite TV. ( )
13. A woman is baking a cake on the ground floor. ( )
14. Her husband is 52 years old. ( )
15. All rooms have a window. ( )
16. There are some attic rooms ( )
17. A plane is flying over the house.( )
18. There is a chandelier in each room. ( )
19. The man on the first floor is wearing a gray suit. ( )
20. He's just coming back from a trip. ( )

MATERIALS

ALUMINIUM 	BRASS 
CARDBOARD 	CLAY 
CLOTH / FABRIC 	COTTON 
GLASS 	LEATHER 
METAL 	PAPER 
PLASTIC 	POTTERY 
RUBBER 	SILK 
TIN 	VELVET 
WOOD 	WOOL 

Things are made of...

What are they made of?

Complete the sentences with the following words.

book • candles • mittens • box • fork • bottle • chairs • bucket • briefcase

metal • plastic • leather • wool • wax •cardboard • wood • glass • paper

The ____ ____

made of ____

The ____ ____

made of ____

The ____ ____

made of ____

The ____ ____

made of ____

The ____ ____

made of ____

The ____ ____

made of ____

The ____ ____

made of ____

The ____ ____

made of ____

The ____ ____

made of ____

MATERIALS

Match the objects below to the materials they are made of.

• ball • bench • box • bridge • brooch • bucket • bucket hat •
• candle • cannon • carpet • castle • ceiling lamp • cup • flip flops •
• helmet • ladder • medal • mug • nail • panama hat • plane • pocket watch
• saucepan • tank top • tie • tombstone • tuba • wall • wallet • wire •

- aluminium
- brass
- bronze
- carbon fibre
- cardboard
- clay
- concrete
- copper
- cotton
- denim
- felt
- fur
- glass
- gold
- iron
- leather
- marble
- paper
- plastic
- porcelain
- rubber
- sand
- silk
- silver
- steel
- stone
- straw
- wax
- wood
- wool

/

Plastics - Harm to Sea Environment

A new report says plastics are responsible for $13 billion in **damage** to the oceans and the undersea environment.

The report tells about **harm** to sea life and what should be done to improve the situation.

If plastic is thrown away carelessly, it will **make its way** into rivers and other waterways. The plastic eventually reaches ocean waters. And it never goes away. Scientists say plastic is not destroyed by **natural** processes. Instead, it just breaks up into smaller pieces over time.

The oceans **contain** a lot of **chemicals** and other **pollutants**. The remains of such products may find their way to plastics floating in seawater. Then, fish may eat the plastics. That means harmful material may get into our **food supply**.

Experts say people can make a big difference. They suggest throwing plastics away correctly. They also like plastic recycling programs – where old bottles and other plastics are collected, broken down and used to make new products. When we **get rid of** plastic, we can recycle it and reuse it. By putting a new value on plastic, industry can save money, and it also has a special reason to **clean up** the environment. But all of society must join to protect the environment. Human beings cause **pollution** and they should take steps to stop it.

pollutant	chemical	contain	natural	damage	harm
pollution	clean up	food supply	get rid of	make its way	

a. Find the word in the box that means:

1. a substance that pollutes something, especially air and water .....
2. a substance used in a chemical process .....
3. existing in nature; not made or caused by humans .....
4. to move or get somewhere .....
5. provision of food .....
6. eliminate .....
7. harmful effects on somebody/something (x2) ..... ; .....
8. to have something inside .....
9. to make something free from pollutants .....
10. contamination .....

b. Answer the questions:

11. Can natural processes destroy plastic? .....
12. What are done in plastic recycling programs? .....

.....

13. How can industry save money? .....
14. Who should be responsible for stopping pollution? .....

TESTS

1. Choose the correct answer. During the Stone Age, people had a nomadic …….. and kept moving from one place to another in search of food.
lifestyle
live
lives
vacation
2. Choose the correct answer. Most of the time of a modern man is spent within the …… of some building.
walls
house
flat
garden
3. Choose the correct answer. The purpose of modern buildings differ widely, but all of them originate …… the efforts … primitive men to protect themselves …. stormy weather, wild animals and human enemies.
from/ of/ from
to/of/from
on/in/under
for/of/off
4. Choose the correct answer. What had the people of the Old Stone Age to do when the Ice Age had passed Europe?
The people of the Old Stone Age had to find some warm and dry place to shelter from bad weather.
They built new houses.
They began to build a home for themselves.
They moved to another country.
5. Choose the correct answer. On the walls of their caves ancient people …….. pictures.
painted
wrote
read
put
6. Choose the correct answer. Primitive stone structures, huts ……. tents are the earliest types of human dwellings; they are lost in the prehistoric past but serve as prototypes for structures of later historic times.
and
but
so
with
7. Choose the correct answer. In …… days of early civilization, once men had learnt how to build simple houses for their families.
the
a
an
this
8. Choose the correct answer. ….. streets in towns were very narrow and there was not much place for building within …. town walls.
the/the
a/the
the/a
an/the
9. Choose the correct answer. …. the country ordinary people lived in simple one-storey cottages which did not differ much …. the mud and stone huts … an earlier age.
in/from/of

of/from/in
from/-/in
from/of/from
10. Choose the correct answer. The rich people in the country, on the other hand, built huge castle with thick ….. and narrow ….. .
walls/windows
walls/floor
floor/carpet
roof/ceiling
11. Choose the correct answer. They were built of ….. dried in the sun.
bricks
iron
plastics
sand
12. Choose the correct answer. Greek houses, too, had a courtyard in the middle and round …… courtyard ran a covered walk, ….. ceiling supported by pillars.
their/its
they/its
his/he
it is/its
13. Choose the correct answer. In Rome bricks were used for building and houses were often finished with plaster over bricks on both …….. and ……. walls.
inside/outside
between/on
in/onto
upon/among
14. Choose the correct answer. The earliest houses in Britain ….. rounded, built of wood or wicker basket work plastered over with clay.
were
was
is
been
15. Choose the correct answer. In the centre of the houses ….. the hearth and light came in through the hole in the roof above it and through the door because there ….. no windows.
was/were
were/is
is/was
was/was
16. Choose the correct answer. Where were decorated caves found?
Decorated caves are found in Europe, Asia and Africa.
Such decorated caves aren't found in Europe, Asia and Africa.
Such decorated caves are found in Moscow.
Such decorated caves are found in Glasgow.
17. Choose the correct answer. The ….. houses in many parts of the world were made of wood, for in those days the greater part of the earth was covered with forests.
first
one
last
new
18. Choose the correct answer. So a tent, or hut, was the ….. house of the primitive people who lived where there was much wood.
first

one
yard
new
19. Choose the correct answer. In other regions the most convenient building material …….
stone.
was
is
were
are

20. Choose the correct answer. Men ……..building houses out of stone very long ago.
began
begin
to begin
beginning
21. Choose the correct answer. Who has always been a builder?
Man has always been a builder.
Pupil has always been a builder.
He has always been a builder.
Kate has always been a builder.
22. Choose the correct answer. How did the ancient Egyptians build very simple houses by present standards?
Having dried the bricks in the sun, they put up four walls, and above these they placed a flat roof.
The ancient Egyptians built very simple houses by present standards.
Their pyramids and monuments, sphinxes and palaces arouse our wonder to this day.
Their buildings were simple in construction, the Egyptian art of building was very beautiful.
23. Choose the correct synonym to the underlined word. An <u>important</u> part in the history of building has been played by the column, and it was ancient Egypt that gave the world it's the first lessons in the art of making columns.
essential
hard
interesting
difficult
24. Choose the correct answer. The ……. learned much from Egypt.
Greeks
Uzbeks
Russians
Tadjiks
25. Choose the correct answer. They built a slanting roof because there was much rain in ……
country.
their
they
them
theirs
26. Choose the correct answer. The Romans, in turn, …… much from the Greeks.
learned
learn
to learn
learning
27. Choose the correct answer. Unfortunately, only a few of the church ……..of that period have remained.
buildings

to build
built
builder
28. Choose the correct answer. The churches of the time …….. strong buildings with thick walls and small windows.
were
was
been
is
29. Choose the correct answer. They often …….. serve as fortresses during enemy invasions.
had
has to
having
have
30. Choose the correct answer. As a result of the damages caused by the war there …. been a great housing shortage.
has
was
to have
having
31. Choose the correct answer. To solve the problem great housing construction has started since the end …. the war.
of
for
off
after
32. Choose the correct answer. According to this technique, the reinforced concrete units of which a building is to be made are manufactured at a ……..and are then simply assembled on the site.
factory
school
hospital
institute
33. Choose the correct answer. Of all the arts architecture most vividly reveals the life of time, its social, economic, aesthetic and technological attitude to building…… .
techniques
house
plant
factory
34. Choose the correct answer. The historian needs only glance at the new buildings to appreciate that within rather a short period of time our ……., designers, engineers and builders have been captivated by fresh forms, fresh materials and fresh techniques.
architects
teachers
historians
scientists
35. Choose the correct answer. ……. have done some very good work in designing new houses.
Architects
Gardeners
Engineers
Pilots
36. Choose the correct answer. What is the new technology exemplified by?

The new technology is exemplified by a selection of outstanding buildings. Everything taken together illustrates that the building technology has made more progress in the last twenty years than in the previous forty or fifty.
The technology shows how the traditional building is rapidly being superseded by structures of factory - made components fastened together.
I don't know.
37. Choose the correct answer. Where have a countless number of new buildings and sky-scrapers come into existence as well as in the new suburbs?
A countless number of new buildings and sky-scrapers have come into existence in the centre of Tashkent as well as in the new suburbs.
In England
In the USA
Nowhere
38. Choose the correct answer. Many of these houses ….. built out of prefabricated ferro–concrete blocks and panels.
are
was
is
been
39. Choose the correct answer. The ……. needs only glance at the new building techniques.
historian
he
she
they
40. Choose the correct answer. The new …….. have logically led to new forms.
techniques
pictures
drawings
photos
41. Choose the correct answer. Many of these houses are built out of prefabricated ferro–concrete blocks ……. panels.
and
between
among
but
42. Choose the correct answer. Today mass construction of dwelling – houses and public ……. cultural establishments has top priority in every city.
and
but
for
when
43. Choose the correct answer. Many production lines for large panels have been built in ……. country.
our
we
hers
they
44. Choose the correct answer. Present-day housing projects ……. essentially different from those of former years.
are
is
was

been
45. Choose the correct answer. Tall buildings need …… elevators, recent developments have led to elevators that can travel up to.
fast
slow
fastest
faster
46. Choose the correct answer. In technically developed countries the …… industry, comprising skilled and unskilled workers in many trades, …….. engineers and architects, managerial staff, and designers employs a considerable proportion of the available labour force.
building/building
trade/building
builders/shopping
architects/engineering
47. Choose the correct answer. The ……..of construction have grown into major, political issues in most countries.
problems
marks
discussion
theme
48. Choose the correct answer. Housing ….. prominent among the factors affecting the level of living.
is
are
been
be
49. Choose the correct answer. Research ……. development in housing technology is carried out on a national scale.
and
but
while
when
50. Choose the correct answer. Present-day design ….. residential construction envisages all modern amenities …. a dwelling, they advocate larger, better built and better equipped flats and houses.
for/for
for/off
on/in
in/on
51. Choose the correct answer. There is a marked improvement in the heating …. ventilating systems as well as in hot-water supply, kitchen …. sanitary fittings.
and/and
but/and
with/and
and/with
52. Choose the correct answer. Many tenants now …. afford better furnishings, refrigerators, washing machines, etc.
can
has
make
do
53. Choose the correct synonym to the underlined word. Industrial buildings comprise another <u>significant</u> type of construction.

important
majority
best
interesting
54. Choose the correct answer. Modern industrial …….. have demonstrated the advantages of reinforced concrete arches, metal frames, glass walls and etc.
buildings
school
factory
plants
55. Choose the correct antonym to the underlined word. Windows can be enlarged to the extend that they constitute a large fraction of the wall area.
small
beautiful
ugly
small
56. Choose the correct answer. What holds a considerable place in the National Economy?
Building industry including residential public and industrial construction holds a considerable place in the National Economy.
It is being carried on a large scale.
It is the largest single industry in the country.
The problems of construction have grown into major, political issues in most countries.
57. Choose the correct answer. What is carried out on a national scale?
Research and development in housing technology is carried out on a national scale.
Housing is prominent among the factors affecting the level of living.
The improvement of the housing represents a concrete and visible rise in the general level of living.
Present-day design for residential construction envisages all modern amenities for a dwelling.
58. Choose the correct answer. Present-day design for residential construction envisages all modern amenities for a dwelling, …….. advocate larger, better built and better equipped flats and houses.
they
it
I
we
59. Choose the correct answer. How can windows be enlarged?
Windows can be enlarged to the extend that they constitute a large fraction of the wall area.
Windows can not be enlarged.
There are four windows in this hall.
I don't know.
60. Choose the correct answer. What do industrial buildings comprise?
Industrial buildings comprise another significant type of construction.
Modern industrial buildings have demonstrated the advantages of reinforced concrete arches.
Steel was gradually substituted for iron and permitted wider rooms and larger windows.
Many tenants now can afford better furnishings, refrigerators, washing machines, etc.
61. Choose the correct answer. That cities should ….. a plan is now admitted in our time of large-scale construction.
have
has
was
were
62. Choose the correct answer. The purpose of a town plan is to give the …….. possible freedom to the individual.
greatest

big
interesting
important
63. Choose the correct answer. The plan is never a complete ….. fixed thing.
and
or
either
neither
64. Choose the correct answer. The flexible plan, preceded …. a survey.
by
with
and
for
65. Choose the correct answer. Most town planners accept the traditional …… pattern.
town
school
street
house
66. Choose the correct answer. ….. master plan thus has to define … ultimate growth of ….. town.
the/the/the
an/the/the
the/a/a
the/an/an
67. Choose the correct answer. In the preparation of a master plan they are preoccupied with the definition of the town centre, ……..areas.
industrial
musical
modern
industry
68. Choose the correct answer. The master plan is a diagram, and even a flexible one, it is the structure upon which all future development is to ….. place.
take
took
take
to take
69. Choose the correct answer. Until quite recent years town plans …… always made as inflexible patterns.
were
was
is
be
70. Choose the correct answer. What is the purpose of a town plan?
The purpose of a town plan is to give the greatest possible freedom to the individual.
The purpose of a town plan is to build schools.
The flexible plan, preceded by a survey.
Most towns today have a characteristic functional pattern.
71. Choose the correct answer. This tool is used to measure. What is it?
meter
nail
stone
mixture

72. Choose the correct answer. This tool is used in formwork to remove nails from boards. What is it?
nail puller
meter
hammer
sand
73. Choose the correct answer. A ……. is a person who designs the plans.
designer
teacher
fireman
pilot
74. Choose the correct answer. A ……. is a person who builds a block of flats.
builder
teacher
fireman
pilot
75. Choose the correct answer. What is the flexible plan?
The flexible plan, preceded by a survey, is one of the most revolutionary ideas that man has ever had about the control of his environment.
The purpose of a town plan is to give the greatest possible freedom to the individual.
The flexible plan, preceded by a survey.
Most towns today have a characteristic functional pattern.
76. Choose the correct answer. Most Ancient Egyptian …….. were built as tombs for Pharaohs and their families.
pyramids
schools
churches
monuments
77. Choose the correct answer. The Great Pyramid of Giza is the …… and …….. of three pyramids in the Giza Necropolis.
oldest/largest
big/new
old/new
new/smallest
78. Choose the correct answer. …… is the art which makes buildings beautiful to look at as well as useful.
Architecture
Medicine
Sculpture
Physician
79. Choose the correct answer. A man who ……. buildings and makes the plans for them is called an architect.
designs
paints
draws
destroys
80. Choose the correct answer. He must not forget the sort of material to be used in the…… .
building
destroying
planning
improving

81. Choose the correct answer. There have been …….. different styles or kinds of architecture in the past and there are ……. different styles today in different parts of the world.
many/many
no/many
many/less
two/no
82. Choose the correct answer. The oldest monuments which are met within architecture are the colossal pyramids of…… .
Egypt
Bukhara
London
Africa
83. Choose the correct answer. The pyramids are large ……. buildings which were placed over the tombs of Egyptian kings.
triangular
square
round
big
84. Choose the correct answer. The best known of the pyramids ….. a group of three built at Giza south of Cairo.
are
is
been
has been
85. Choose the correct answer. Pyramids tell us of the advanced civilization of ancient ……. which is much spoken about even in our days.
Egypt
Bukhara
London
Africa
86. Choose the correct answer. The pyramids are large triangular buildings which were placed over the tombs of ……. kings.
Egyptian
English
American
Russian
87. Choose the correct answer. Who is an architect?
A man who designs buildings and makes the plans for them is called an architect.
Architecture is the art which makes buildings beautiful to look at as well as useful.
He builds schools.
This may be stone, brick, wood or steel and concrete.
88. Choose the correct answer. When were the colossal pyramids of Egypt constructed?
Colossal pyramids of Egypt were constructed about 6ooo years ago.
Colossal pyramids of Egypt were not constructed.
Colossal pyramids were constructed in Italy.
Colossal pyramids of Spain were constructed about 6ooo years ago.
89. Choose the correct answer. What kind of buildings are pyramids and where were they placed?
The pyramids are large triangular buildings which were placed over the tombs of Egyptian kings.
The pyramids are large triangular buildings.
The pyramids were placed over the tombs of Egyptian kings.
I don’t know
90. Choose the correct answer. How were the stones transported over long distances?

Large blocks of stone were transported over long distances by land and water. Large blocks of stone were not transported over long distances.
Large blocks of stone were transported over long distances by car.
Large blocks of stone were transported over long distances by plane.

91. Choose the correct answer. A …….. is a man-made building material used to make walls and make places to walk.
brick
door
wall
floor

92. Choose the correct answer. Wood is the main substance in …… .
trees
flower
grass
ground

93. Choose the correct answer. When wet, clay……. a plastic quality, and can be used to make pottery and bricks and other things.
has
can
do
be

94. Choose the correct answer. The designer must be able to select and adapt such materials of ……that will give the most effective result by the most economical means.
construction
treating
touching
fixing

94. Choose the correct answer. …… factors include availability, cost, physical properties of materials and others.
these
this
that
a

95. Choose the correct answer. Lime, gypsum and cement are the three …….most widely used in building construction for the purpose of binding together masonry units.
materials
refrigerator
house
pyramids

96. Choose the correct answer. Cement …. furthermore the most important component of concrete.
is
do
make
can

97. Choose the correct answer. The …….. building materials may now be considered to be structural steel and concrete.
most important
important
the most important
more important

98. Choose the correct answer. A mixture of sand, screenings or similar inert particles with cement and water, ……. has the capacity of hardening into a rocklike mass, is called mortar.

which
when
why
what

99. Choose the correct answer. To attain this end careful attention ……... given to the selection of cement, aggregate and water.
must be
can
do
has

100. Choose the correct answer. The most accurate method ….. measuring proportion is …. weigh the required quantities of each material.
of/to
to/-
of/two
off/for

101. Choose the correct answer. This method is being extensively used in road …….. and in many central mixing and in central proportioning plants.
construction
to construct
construction
constructing

102. Choose the correct answer. It is always for a …….. engineer to bear in mind that workability and strength tests are the chief control tests made on concrete.
building
builder
to build
builders

103. Choose the correct answer. What are lime, gypsum, and cement most widely used for?
Lime, gypsum and cement are the three materials most widely used in building construction for the purpose of binding together masonry units, such as stone, brick and as constituents of wall plaster.
Lime, gypsum and cement are the three materials most widely used in building construction for the purpose of binding together masonry units.
Lime, gypsum and cement are the three materials don't used in building construction for the purpose of binding together masonry units.
The most important building materials may now be considered to be structural steel and concrete.

104. Choose the correct answer. What is cement?
Cement is furthermore the most important component of concrete.
Cement is used in building.
Cement isn't an important building material.
Cement is important building material.

105. Choose the correct answer. What is mortar?
A mixture of sand, screenings or similar inert particles with cement and water, which has the capacity of hardening into a rocklike mass, is called mortar.
Mortar is a mixture.
Mortar is used in construction.
Using mortar in construction is important.

106. Choose the correct answer. ……. , polymeric material that has the capability of being molded or shaped, usually by the application of heat and pressure.
plastic
brick
cement

mortar
107. Choose the correct answer. One of today's ……. tasks is to raise production efficiency and quality.
important
interesting
boring
picturesque
108. Choose the correct answer. To achieve this requires contributions …… many scientific disciplines, among them the science of materials strength.
from
of
on
in
109. Choose the correct answer. ….. quality and reliability of machines and structures depend in large measure on its advances.
the
these
those
an
110. Choose the correct answer. The modern age ……. confronted this science with tasks of unprecedented scope demanding urgent solution.
has
do
can
must
111. Choose the correct answer. The great Galileo …… considered to be the father of the science of materials strength, one of the basic engineering disciplines, and the bane of undergraduates at technological colleges.
is
were
are
be
112. Choose the correct answer. ……. progress accelerated markedly in the 19th century.
Its
It is
It's
It was
113. Choose the correct answer. Our predecessors managed to cope with ……. tasks.
their
our
his
your
114. Choose the correct answer. Many structures …….. centuries ago have not only survived to our day but even remain in use.
built
building
builder
build
115. Choose the correct answer. Yet more often than not the cause of mishaps was not …… lack of knowledge on the part of the experts.
any
some

no
same
116. Choose the correct answer. The …… of strength of materials are hidden so deep in the mysteries of atomic and molecular structure.
problems
pictures
position
portrait
117. Choose the correct answer. This was none too early: mankind was entering the age …. electricity, electronics, aviation, automobiles and nuclear physics.
of
under
upon
onto
118. Choose the correct answer. In our day …. speed is approaching 3,000km per hour.
Its
It is
It's
It was
119. Choose the correct answer. What is one of the most important tasks of today?
One of today's important tasks is to raise production efficiency and quality.
One of today's important tasks is to come to the lessons in time.
One of today's important tasks is to build buildings.
One of today's important tasks is to solve the problems.
120. Choose the correct answer. Who is considered to be the father of the science of materials strength?
The great Galileo is considered to be the father of the science of materials strength.
The great Shakespeare is considered to be the father of the science of materials strength.
The great Newton is considered to be the father of the science of materials strength.
The great Alfred Noble is considered to be the father of the science of materials strength.
121. Choose the correct answer. Where was the bridge built in 1234?
A bridge was built in 1234 in Transcaucasia.
A bridge was built in 1235 in Turkey.
A bridge was built in 1243 in Khiva.
A bridge was built in 1234 in Kiyev.
122. Choose the correct answer. People began to lay the railway tracks and erect bridges in the 19th century, didn't they?
Yes, they did.
Yes, they are.
No, they were not.
Yes, they have.
123. Choose the correct answer. The importance of the …….. in our national economy is enormous as its output governs both the rate and the quality of construction work.
building industry
food industry
modern industry
industry
124. Choose the correct answer. Now some of the problems of …… of materials are being tackled by experts.
strength
substance
finding

writing
125. Choose the correct answer. Strength of materials …. a complex concept that includes a wide range of problem.
is
were
are
be
126. Choose the correct answer. The alloy ……. to reduce the weight of apparatuses substantially by effecting a considerable saving of materials.
helps
says
draws
paints
127. Choose the correct answer. One of the …… trends in research, hardly ten years old, is the creation of extremely tough composite materials.
newest
newer
new
the newest
128. Choose the correct answer. The idea …. simple enough: a light but fragile base …. taken and pervaded with a system of very tough fibres or wires.
is/is
is/are
are/is
are/are
129. Choose the correct antonym to the underlined word. A <u>new</u> one is aluminium reinforced with boron fibres.
old
boring
funny
sold
130. Choose the correct antonym to the underlined word. In elasticity and strength the material substantially surpasses aluminium alloys, and in specific strength is even <u>better</u> than titanium alloys.
worse
good
bad
interesting
131. Choose the correct answer. Such materials find applications in all spheres … technology, science and … everyday life.
of/in
in/in
of/of
of/for
132. Choose the correct answer. How is the strength of materials conducting?
Strength of materials is conducted according to a single state plan by establishments of the Academy of Sciences, sectors in many colleges and research, design and industrial institutes in various parts of the country.
Strength of materials is conducted according to a single state plan.
Strength of materials is conducted according to a single state plan by establishments of the Academy of Sciences.
Strength of materials is conducted according to a single state plan by sectors in many colleges and research.

133. Choose the correct answer. Who co-ordinates all research work in the field?
Scientific Council on Strength and Plasticity, Academy of Sciences Department of Mechanics and Control Processes co-ordinates all research work in the field.
Academy of Sciences Department of Mechanics and Control Processes co-ordinates all research work in the field.
Scientific Council on Strength and Plasticity and Control Processes co-ordinates all research work in the field.
Scientific Council on Strength and Plasticity and Academy of Sciences Department of Mechanics co-ordinates all research work in the field.
134. Choose the correct answer. Is a highly durable alloy used in aircraft and rocket engineering?
Yes, it is.
Yes, they are.
Yes, I am.
No, I am not
135. Choose the correct answer. Is the creation of extremely tough composite materials one of the newest trends in research?
Yes, it is.
Yes, they are.
Yes, I am.
No, I am not
136. Choose the correct answer. There ….. many different types of soil that may be beneath your house.
are
is
was
shall be
137. Choose the correct answer. Termites ….. be extremely detrimental to the foundation of your home.
can
had
was
are
138. Choose the correct antonym to the underlined word. Cracks are the <u>first</u> sign that you're experiencing foundation issues.
last
second
third
fourth
139. Choose the correct answer. A dam …….. be founded on any kind of material from silt to the most solid rock.
may
had
was
are
140. Choose the correct answer. Silt and fine sand are successfully …….. as foundations for low masonry dams.
used
to use
using
use

141. Choose the correct answer. Seepage through such foundations is expected, but the base lengths and cutoff wall depths …. …….. sufficient to reduce the velocities of the percolating water to a non – erosive rate.
are made
to make
make
made
142. Choose the correct answer. The bearing power … such soils untreated, may be as low as 1 …… 2 tons per square foot.
of/to
to/of
under/to
of/behind
143. Choose the correct antonym to the underlined word. The bearing power of clay is greatly reduced by moisture and the securing of a dry foundation for a dam in such material is impracticable.
wet
solid
dried
hot
144. Choose the correct answer. Foundations on clay soils may generally be considered capable of …….. from 2 to 4 tons per square foot without treatment.
carrying
to carry
carried
carry
145. Choose the correct answer. The use of pilling may be of advantage, or drainage may be applied in …….cases with beneficial results.
some
somewhere
something
somebody
146. Choose the correct answer. What materials are used as foundations?
Silt and fine sand are used as foundations.
Sand is used as foundations.
Silt is used as foundations.
Fine sand was used as foundations.
147. Choose the correct answer. What reduces the bearing power of clay?
The bearing power of soils may be increased through artificial compression.
Power of soils may be increased through compression.
The bearing power of soils may be increased.
Bearing power of soils may be increased through compression.
148. Choose the correct answer. Stress cracks start ….. show up when your foundation can no longer properly support the weight of your home.
to
onto
behind
across
149. Choose the correct answer. Foundation piers under particular areas of your home are also indicative that …. foundation is moving or falling.
the
thin
an

any
150. Choose the correct synonym to the underlined word. When conditions return to dry, the soil shrinks.
come back
to bring
rewrite
to solve
151.This branch of engineering has gradually come to be associated …..… cleaning of air.
with
on
in
at
152.The Pyramids which are amongst …… monuments, were religious in origin.
the oldest
old
older
oldest
153.Going home I …… a new type of crane working at a building site.
saw
to see
seen
have seen
154.What industry …… rapidly?
is expending
expends
has expend
expend
155.The city was planned …… a French engineer.
by
of
in
about
156. Washington is one…… the most carefully planned cities… the USA
of/in
of/of
at/in
of/at
157. Uzbekistan … much attention to the construction of modern buildings.
pays
pay
paying
was paid
158. Who is fond of building ?
I am
He was
I was
She was
159. Will you please pass me the brick?
Here it is.
I can
Please.
I shall

160. **I can’t find the hammer.**
neither can I
me too
I don’t
I couldn’t
161. Who is a carpenter ?
A man who makes things from wood
A man who makes things out of metal
A man who looks after air passengers
Someone who secretly watches what other people are doing.
162. **How long does it take you to get to the building site?**
It takes me twenty minutes to get there.
I get to the building site by bus.
I don't take any meal to the building site.
I leave for the building site at 8 a.m.
163."Why don't you want to go to the presentation of the new building ?"
Because I have nothing to put on.
Because I've been to London.
Yes, I do. I need money.
I don't want to play tennis.
164. They are pulling down all those buildings to build a new _____.
car park
letter box
parking
car place
165. The bridge was planned … a French engineer.
by
of
in
about
166. Cement Mortars…….
are prepared from Portland cement or its varieties, sand and water
is prepared from a sand and a water
is prepared a water and an air
are prepared from gypsums or anhydride

167.**Mud mortars…….**
are prepared from clay nodules
are prepared from cement
are prepared from gypsums or anhydride binding materials
are prepared from gypsums and water
168.What are the mud mortars used for?
used in construction of houses for poor and temporary construction works.
used only for hardening materials
used in construction of bridges
used only for softing materials
169.Lime mortars ……
are mixture of air hardening lime or hydraulic lime, sand and water.
are mixture of sand and water
are mixture of cement and water
are mixture of cement and sand
170. Gypsum mortars are…..

prepared from gypsums or anhydride binding materials
are prepared from clay nodules
are prepared from cement
are mixture of cement and sand

171. Give the definitions of the verb to shape

to make the form of something
particular, certain needs
to do business or connection
a manner or method of doing something

172.Give the definitions of the verb to design

a drawing showing how something is to be made
to make the form of something
particular, certain needs
to do business or connection

173. What is building site?

place where people do building work
place where people have a rest
place where people eat
place where people buy things

174. Machinery and equipment designers have made important contributions by creating better ……. and …….. for the industry.

machines / tools
furniture / tools
tools / machines
furniture / machines

175. Concrete yard runways should be …….the level of the surrounding yard so that they will remain free pebbles and other obstructions that might interfere with the operation of trucks or other equipment.

slightly above
slightly below
slightly flat
slightly rough

176.Regardless of the general layout of the plant, aggregates and cement should be stored as …….. to the mixers as possible.

close
far
behind
long distance

177.Thermocol is ……..plastic material used for sound and heat insulation of ceiling, walls, refrigerators and for air conditioning of the buildings.

a light and cellular
hard and cellular
liquid and cellular
sandy and a light

178.What is used to climb to the top of a wall?

ladder
hammer
crowbar
bucket

179.What is used to move things that are too heavy to carry?

wheelbarrow
ladder

hammer
crowbar
180.What is used to carry small quantities of sand or water?
bucket
ladder
hammer
crowbar
181.What is used to knock down walls of old buildings?
sledgehammer
bucket
wheelbarrow
hammer
182. Nowadays most of the homes are heated by …..... .
natural gas
oil
wood
sun
183. It can have many ……. in it which can also cause harm to animals and humans.
chemicals
useful things
natural minerals
useful minerals
184. The tallest building in a big city is usually a(n) _____ .
skyscraper
airport
hospital
parking
185. Most Ancient Egyptian pyramids were built as tombs … Pharaohs and their families.
for
at
in
about
186. …… 130 pyramids have been discovered …… Egypt.
over/in
in/in
over/ by
at/by
187.The Great Pyramid of Giza is the …… and …… of three pyramids in the Giza Necropolis.
oldest/largest
younger/ bigger
modern/ bigger
big / large
188. The pyramids were constructed for:
a dead king;
slaves to live;
military purposes
ordinary people
189. ……. is used to make buildings and furniture, and also for art.
wood
water
sand
air

190. Paper is made from …… ……. .
wood fibres
plastic materials
sand
cement
191. Bricks are made of …… .
clay
plastic
wood
paper
192. The most important building materials may now be considered to be structural ….. and……. .
steel, concrete
furniture, concrete
steel, furniture
wood, furniture
193. There is …. gypsym in the box .
a little
a few
many
few
194. …… polymeric material that has the capability of being molded or shaped, usually by the application of heat and pressure.
plastic
sand
water
rock
195. What materials are used as foundations?
cement
wood
brick
nail
196. Building materials
wood, stone, brick, metal
furniture, wood, metal, cotton
wood, metal, brick, cotton
water, fire, cotton, paper
197. Stones are very …. material.
hard
soft
liquid
flexible
198. Iron, steel and Aluminium are …….. .
metals
minerals
liquid
textile
199. Why were the lead or clay pipes used ?
to conduct water to the houses
to carry heavy things
to lift the things
to move things
200. The weather was too bad and we …….. stop building.
had to
must
can not
may not