FASTENERS

3.1. Vocabulary

Ex. 1. *Match the words to their definitions.*

1. grade 

2. nut 

3. nail 

4. sheet metal screw 

5. screw 

6. pin 

7. anchor 

8. washer 

9. bolt 

a. a flat ring made of metal or rubber, used to distribute the load of a screwed fastening

b. a device used to hold objects tightly together or to prevent movement

c. a heavy object attached to a rope or chain and dropped from a boat to keep it in place

d. the distance between successive crests of a screw's spiral groove

e. a small thin piece of metal used to fasten or hold things together, typically with a sharp point at one end

f. a long metal pin with a head that screws into a nut, used to fasten things together

g. a small block of metal with a threaded hole running through it, used to fasten bolts

h. a screw designed for joining thin sheets of metal together, typically having finer threads than a wood screw

i. a type of screw specifically designed for use in wood, with a tapered shaft and coarse threads

10. wood screw 

j. a cylindrical metal fastener with a threaded shaft and a slotted head, used to join things together by being rotated into or through them

11. clamp 

k. the slope or incline of a surface, especially of a road or railway track

12. thread 

l. a thin pointed piece of metal with a flat head, used for fastening pieces of wood together

Ex. 2. *Complete the text with the given words.*

screw, nut, washer, bolt, nail, anchor, thread, wood, sheet, clamp, pin

I inserted the _____(1) into the lock to secure the door.

The carpenter used a _____(2) to hold the wood in place while sawing.

She hit the _____(3) with the hammer and it went straight into the wood.

He used a screwdriver to tighten the _____(4) in the furniture.

The _____(5) screw fastened the wooden boards together securely.

The _____(6) metal screw is perfect for joining thin metal sheets.

The _____(7) on the bolt has a specific pitch.

They used an _____(8) to keep the boat from drifting away.

Can you pass me the _____(9) so I can attach this piece?

Please place a _____(10) between the nut and the surface to protect it.

He tightened the _____(11) with a wrench to secure the connection.

3.2. Reading

Ex. 1. *Read the text.*

Fasteners Used in Mechanincs

Fasteners are used in mechanics and construction to hold two or more objects together. They can be temporary, as in a clamp, or permanent, as in a nail or screw.

Nails are used to join wood, but they are not very strong when used with metal or plastic. Screws are stronger than nails because the thread gives them extra grip. Wood screws have a sharp point for piercing wood, while sheet metal screws have a flat end for joining thin metal sheets. The length of a screw is measured from the tip to the top of the head. The thread is measured by its pitch (the number of threads per inch) and its diameter.

Anchors are used to fasten objects to walls and floors. They come in many sizes and shapes. A lag shield anchor is often used in concrete, while a hollow wall anchor is used in drywall. An expansion anchor is inserted into a drilled hole, then expanded to secure it.

Bolts are similar to screws, but they are always used with a nut. Bolts are usually bigger than screws and are used to fasten heavy objects. They come in different lengths, diameters, and grades. The grade of a bolt indicates its strength. A grade 2 bolt is the least strong, while a grade 8 bolt is the strongest.

Washers are used to distribute the load of a fastener over a larger area. This helps to prevent the fastener from damaging the material it is holding. There are many types of washers, including flat washers, lock washers, and fender washers. Flat washers are the most common type. They are thin, round, and have a hole in the middle. Lock washers are used to prevent nuts and bolts from loosening. Fender washers are large washers with small holes. They are used to support the heads of screws on thin materials.

In addition to these fasteners, there are many others, such as pins, clips, and rivets.

Ex. 2. *Answer the questions.*

1. What are fasteners used for in mechanics and construction?

2. How do screws differ from nails in terms of strength and grip?

3. What are the different types of screws and their specific uses?

4. How is the length of a screw measured, and how is the thread measured?

5. What are anchors used for, and what are some examples of different types of anchors?

6. How does an expansion anchor work to secure objects?

7. How do bolts differ from screws, and when are they typically used?

8. What factors determine the strength of a bolt, and what is the strongest grade of bolt?

9. Why are washers used with fasteners, and what are some common types of washers?

10. Can you name some other types of fasteners mentioned in the text?

3.3. Communication

Ex. 1. *Make sentences using the following words:*

1. bolt/holds/engine

2. screws/secure/brake

3. nut/attaching/wheel

4. wrench/fits/size

5. washer/prevents/loosening

6. clip/holds/panel

7. pin/connects/chain

8. rivet/joins/metal

9. clamp/holds/pipes

10. spring/provides/tension