Science Department

2023/2024

Year 4

Term 1, Unit1

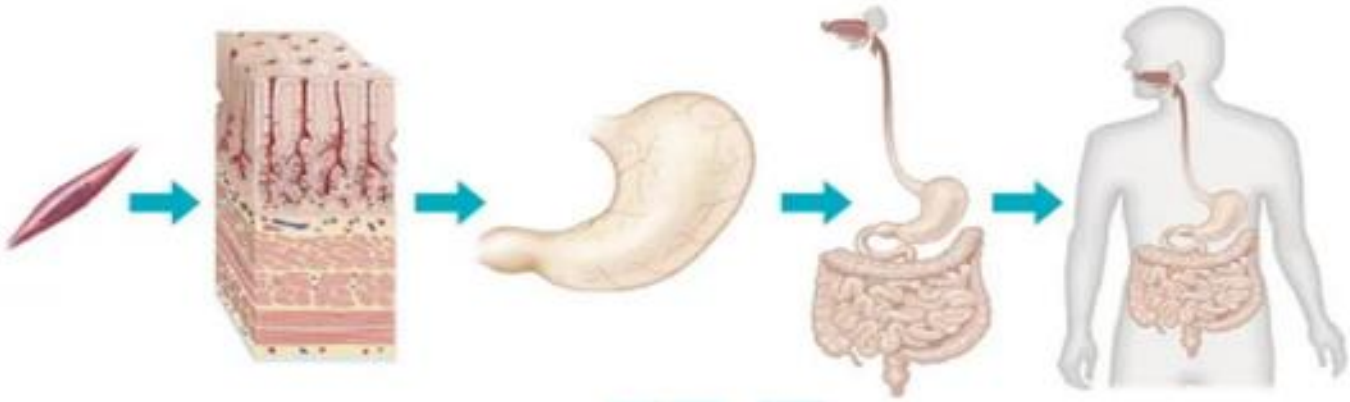
Name: …….

Class: …….

1-Try to mention the main function of:

1- skeletal system	• Breaks down food so that it can be used by the body. 3
2- muscular system	**it is made up from bones** •Protects delicate organs. •Supports the body & gives it shape. •Helps the body to move. 1
3- digestive system	• Removes excess water and minerals from the body 5
4- nervous system	**Works with the bones to help the body to move.** 2
5- Urinary System	**Controls all body functions.** 4
6-Circulatory System	**Allows exchange of gases in the lung.** 7
7-Respiratory System	**Transports blood around the body.** 6

2-Label the following:



3-Complete the following sentences:

1- A BODY SYSTEM IS CONSIST OF .....Organs.....
2- A tissue consists of .....cells.....
3- An organ consists of .....tissues.....

4-Label the following diagram using the words bellow:

Circulatory system

Muscular system

Skeletal system

Digestive system

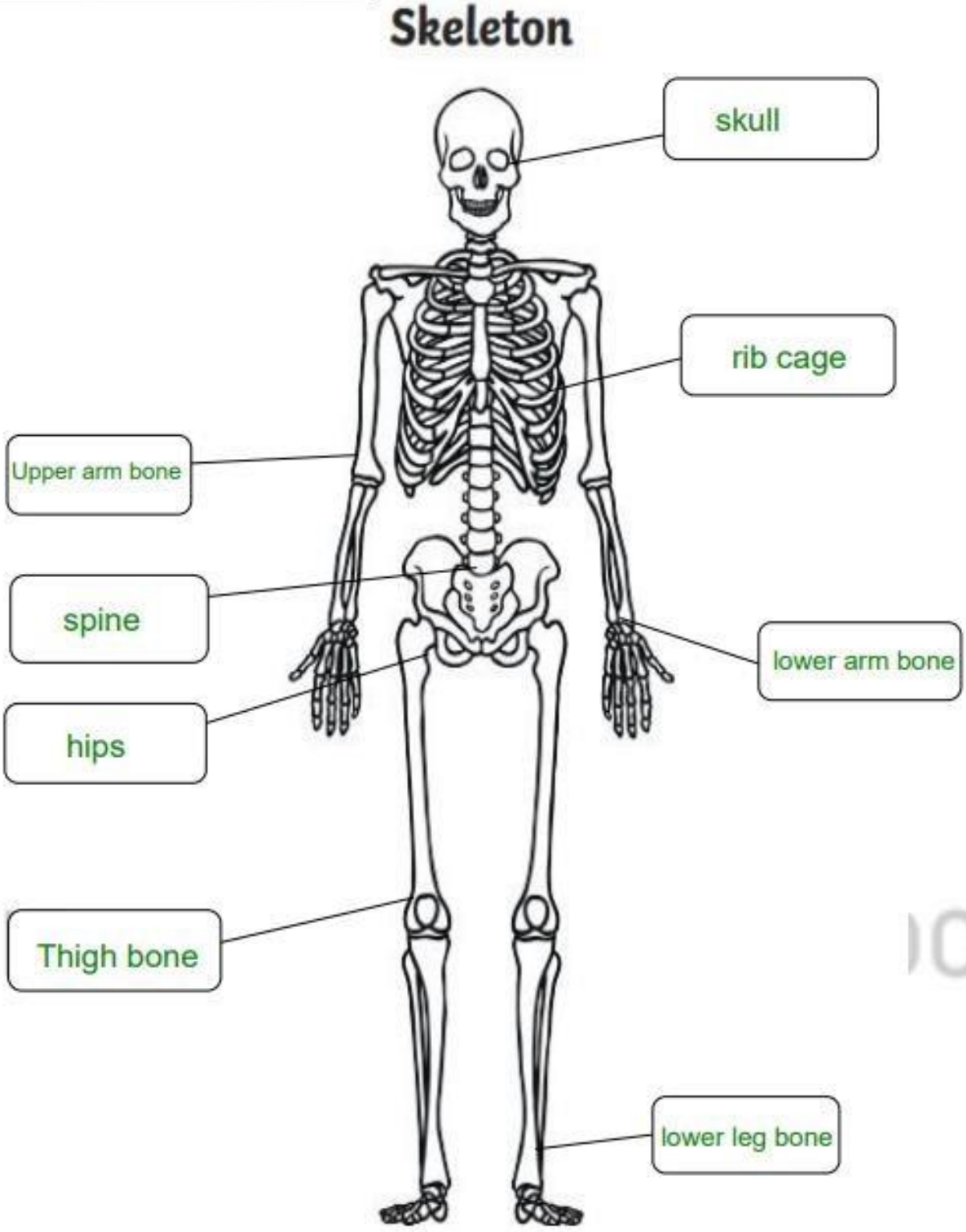
Nervous system

Urinary system

Respiratory system

- **Circulatory system**
- **Digestive system**
- **Nervous system**
- **Urinary system**
- **Muscular system**
- **Respiratory system**
- **Skeletal system**

5- **1-Label the following diagram:**



6- **2- Draw a line to match each word with its meaning.**

The first one has been done for you.

Word	Meaning
Skeleton	the bones in your chest
Bones	the bones in your back
Skull	the bone that joins your leg to the upper part of your body
Rib cage	the hard, strong frame that supports our body
Spine	the bone that moves when we eat or talk
Hip	hard parts that form the skeleton
Jaw	the bones of the head

7- **3-Answer the following questions:**

1 What are skeletons made of?

Bones

2 Why must skeletons be hard and strong?

To protect our organs and holdup our body and give it the shape.

3 Why do you think the bones of your skeleton are different sizes and shapes?

because they have different jobs

4 Bones are not very heavy. How do you think this helps animals?

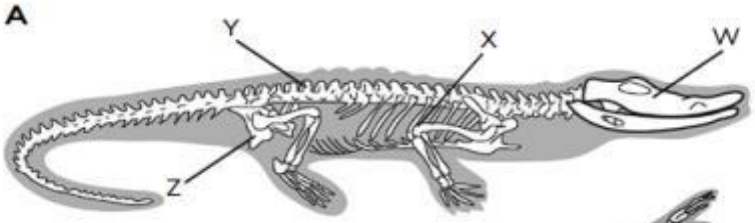
they help the animals to move faster and easily.

8- **4-Match the skeletons with the animals they come from.**

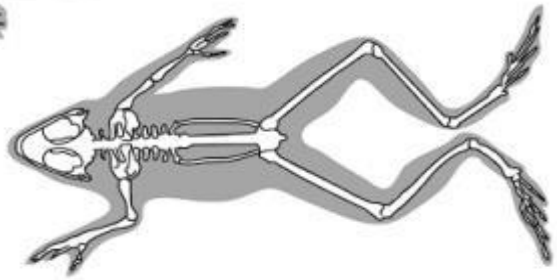
Write the letter of each skeleton next to the name of the animal it comes from.

Animal	Skeleton
Bird	C
Rabbit	D
Frog	B
Crocodile	A

A

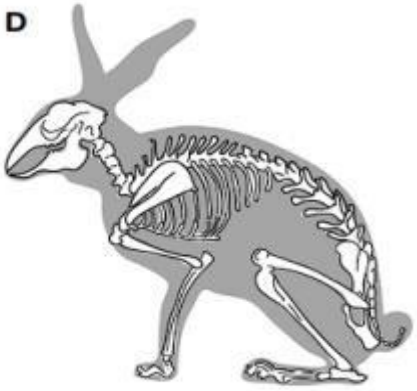


B



C

D



4 Name the parts on Skeleton A.

W is the skull

X is the rib cage

Y is the spine

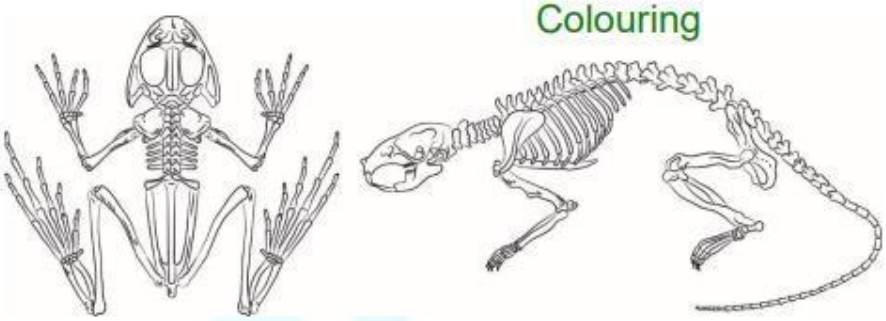
Z is the hips

9- 5-Look at the drawings of different skeletons.

Follow the instructions to identify the different bones.

2Identify and colour in the following bones in each skeleton. Use these colours:

1 red – jaw
2 yellow – skull
3 blue – rib cage
4 green – spine
5 orange – hip
6 brown – leg bones
7 purple – arm bones

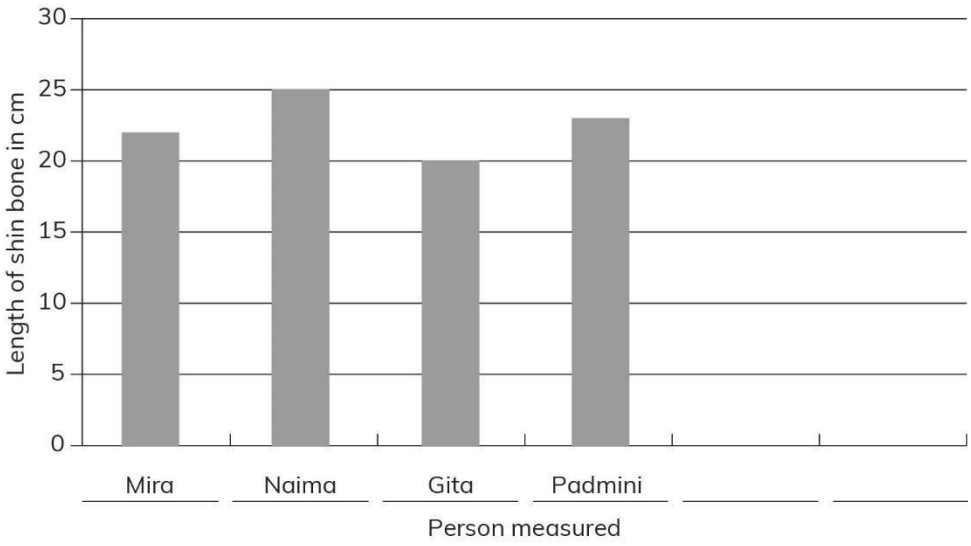


10-Draw a graph of bone length

Mira's group measured the lengths of their lower leg bones. These are their results.

Name	Length of bone in cm
Mira	22
Naima	25
Gita	20
Padmini	23

Draw a bar chart of their results. We have drawn one of the bars for you.



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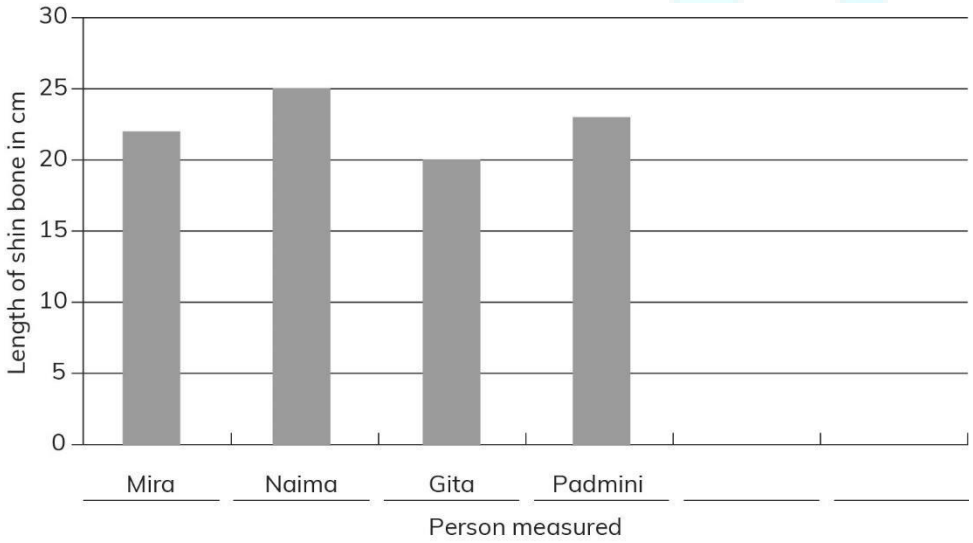


1 Draw a bar chart of their results.

a Whose leg bone was longest? Naima

b Whose leg bone was shortest? Gita

12-

1. Name three reasons why a skeleton is important.

Our skeleton supports our body. It makes a strong frame inside the body. It gives our body shape and makes it firm. Our skeleton also protects organs inside the body. We grow and get bigger because our skeleton grows. We begin to grow at birth. Our bones get longer and thicker each year. When are about 18 to 20 years old, our bones stop growing. Sometimes we fall or have accidents and break our bones. A broken bone is called a fracture. Doctors take special photos called X-rays to see if a bone is broken or not. The broken ends of the bone slowly grow back together again.

Questions:

1- Name three reasons why a skeleton is important.
A skeleton is important because it makes a frame that supports the body; it allows us to move; it protects organs inside the body and holds them in place.

2- Explain what would happen to a baby if its skeleton did not grow.
The baby would stay small and not grow into a child.

3- What is a fracture?
A broken bone

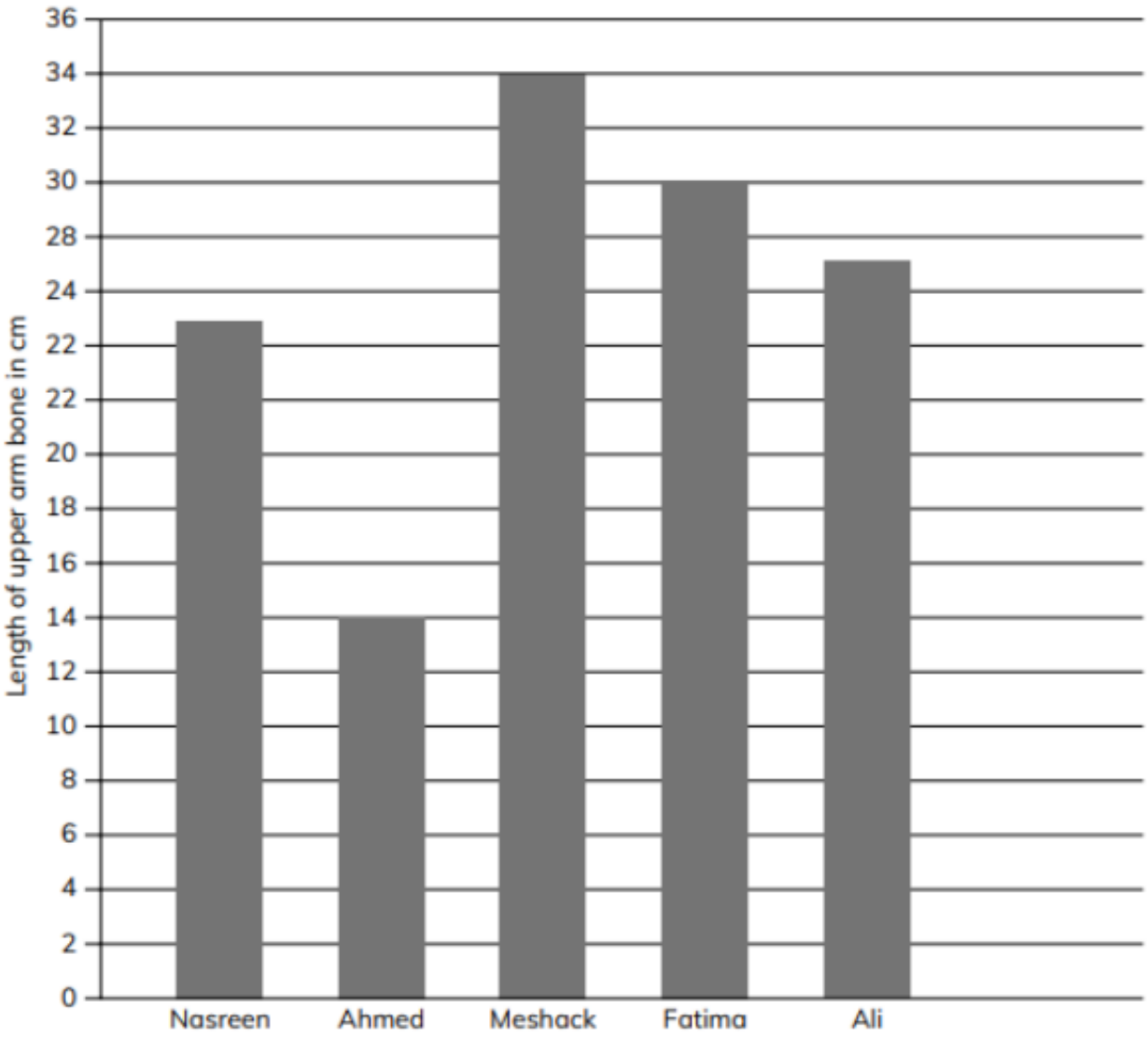
4- How can doctors find out if a bone is broken?
They can take an X-ray picture.

5- How do broken bones mend?
The ends of the bone grow back together.

6- Why do you think some animals with skeletons are very big, but animals like worms are usually small?
The skeleton can grow big to support a large animal. A worm cannot grow very big because it does not have a skeleton to support it.

13- In this exercise you will find information from a bar chart.

Nasreen measured the length of the upper arm bone of some people in her family. She drew this bar chart to show her results. Use the graph to answer the questions.



Questions:

1- Who had the longest upper arm bone?
Meshack

2- How long is the shortest upper arm bone?
14 cm

3- Nasreen's two brothers are Ahmed and Ali. Which brother is the oldest? Explain your answer.
Ali is the oldest. His upper arm bone is longer than Ahmed's. Our bones get longer as we get older.

4- Put Nasreen and her brothers in age order. Explain your answer
Ali, Nasreen, Ahmed. Ali has the longest upper arm bone, Ahmed has the shortest.

5- Who are Nasreen's parents?
Fatima and Meshack

6- Explain how you know this.
They have the longest upper arm bones.

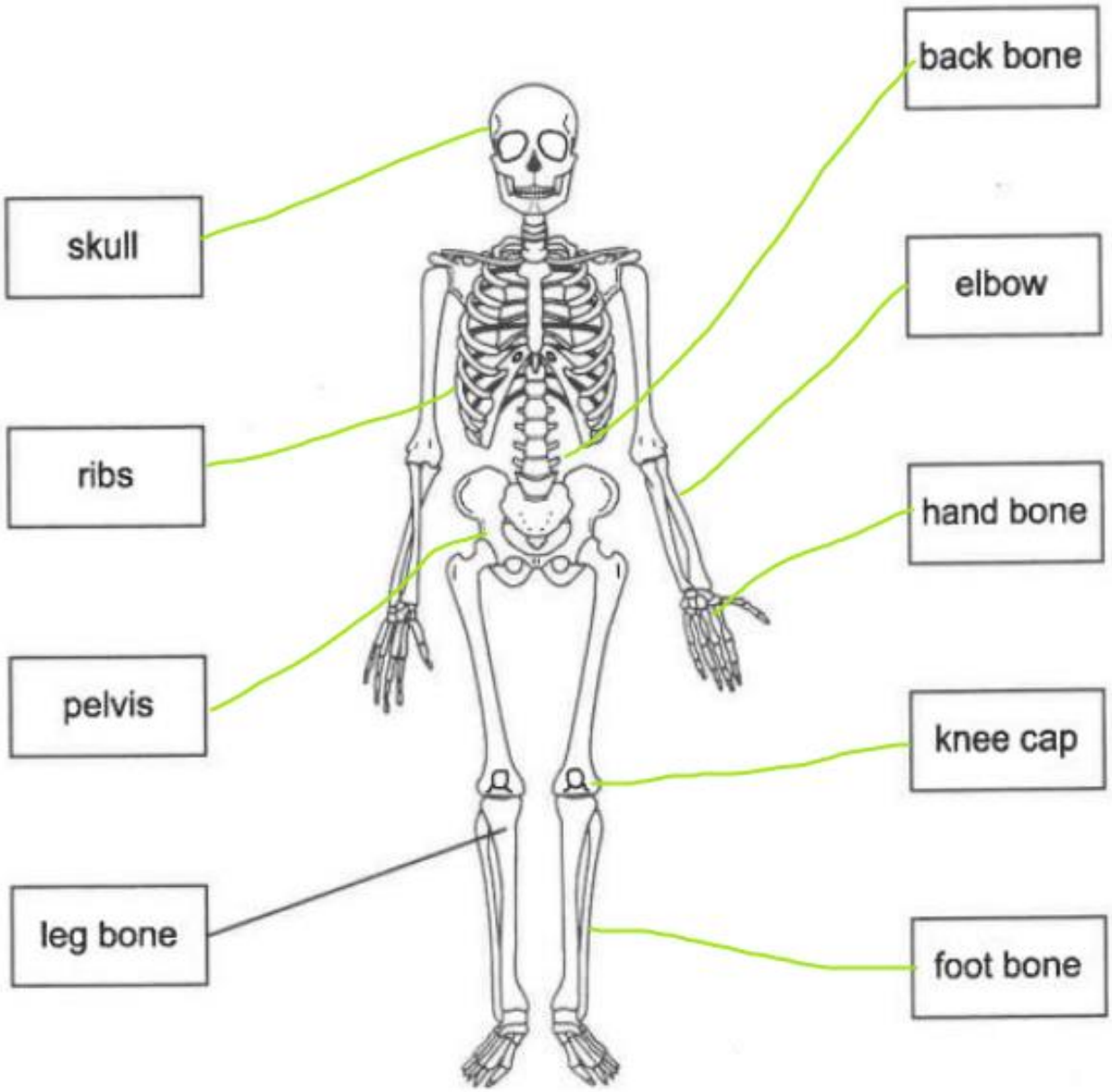
7- Which function of the skeleton does the graph show?
That skeletons grow and allow us to grow.

8- Nasreen has a baby sister, Meera. Predict the length of Meera's upper arm bone. Draw a new bar on the graph to show your prediction.
Learners should add a bar that is shorter/lower than the bar for Ahmed's arm bone length, e.g. 8 cm.

14- Humans have bony skeletons inside their bodies.

Draw a line from each label to the correct part of the body.

One has been done for you.



15-

14- Sort and group animals:

The pictures show different kinds of animals.

eagle

snail

crab

fish

hen

earthworm

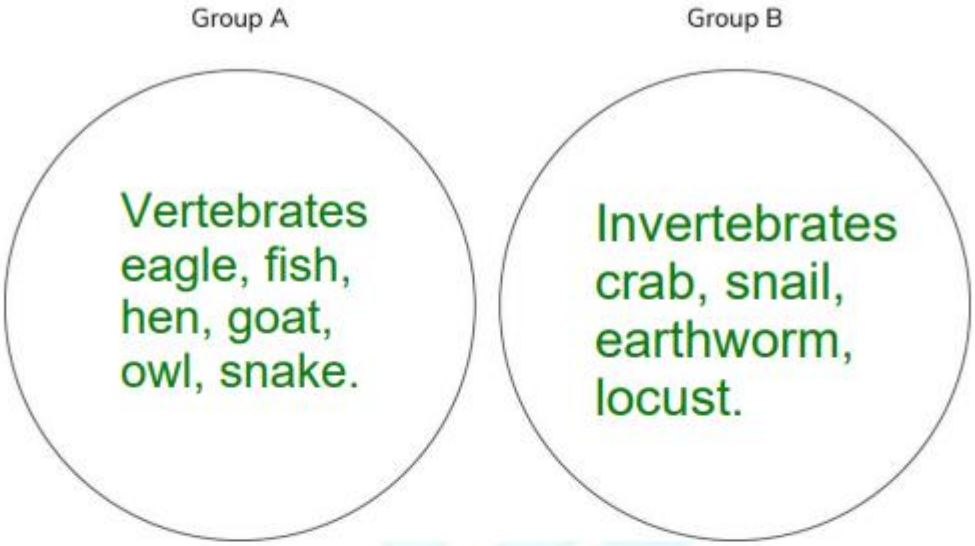
locust

goat

owl

snake

Sort the animals into two groups. Write the names of the animals in each group in the circles.



b Which features of the animals did you use to sort them into the groups?

Group A: Animals with bones/vertebrates.

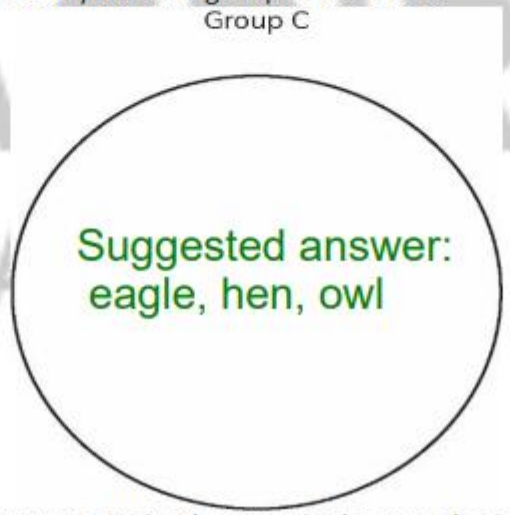
Group B: Animals with no bones/invertebrates.

c Suggest a name for each group. Write the names in the spaces above the circles.

Same answer in previous question

2 Look at the animals in your groups. What other group can you make from them?

a Write the names of the animals in your new group in the circle.



b Suggest a name for your group. Write the name in the space beside the circle.

Suggested answer: birds

16- True or false:

1. The Rib cage protects our lungs only. (False)
2. Our skeleton grows and gets bigger. (True)
3. Our skeleton is made of 306 bones. (False)
4. Bones and muscles are strong and hard. (False)
5. All the muscles in our body is attached to the bones. (False)
6. Muscles make us move. (False)
7. When muscles get shorter, they pull on the bones we say that the muscles relax. (False)
8. Muscles work in pairs one contracts and the other relaxes.(True)
9. Sitting still for a long time keep us healthy. (False)
10. Muscles and bones are attached together with tendons. (True)

17- These are some features of an exoskeleton and your skeleton.

A found inside the body

B found outside of the body

C made of a hard substance called chitin

D made of bone

E can grow

F cannot grow

G protects organs inside the body

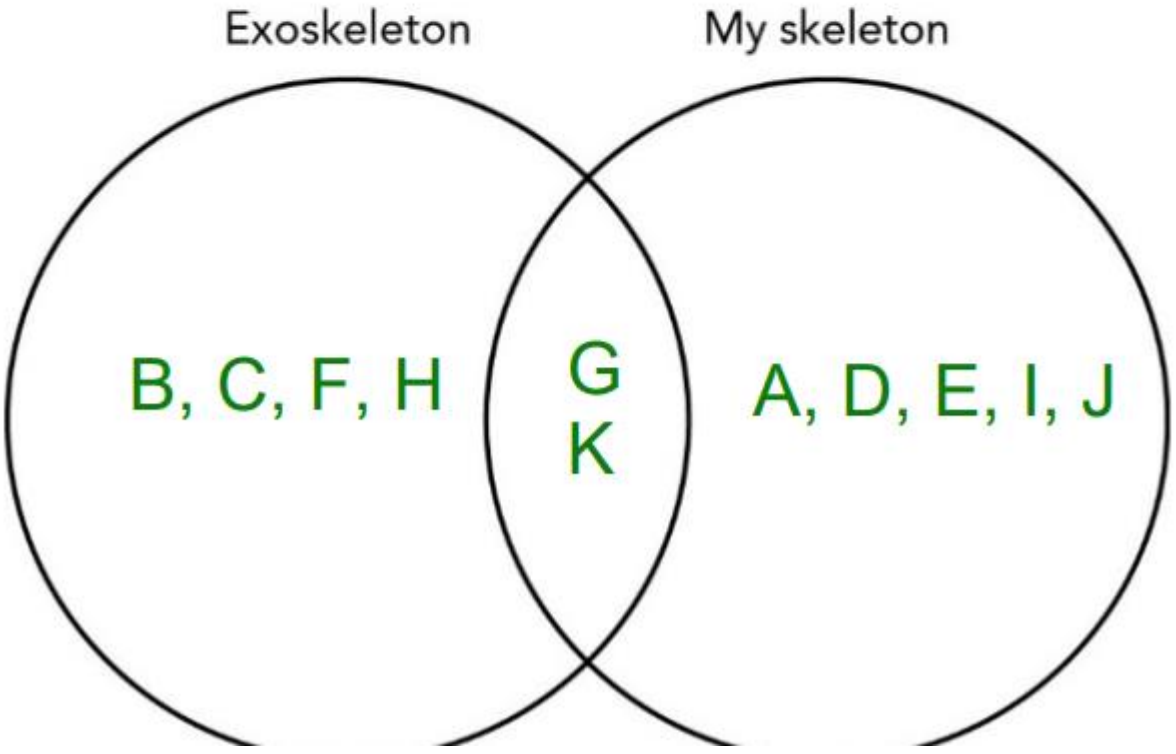
H stops the body from drying out

I forms a framework for the body

J grows as the body grows

K hard and strong

Use the information above to complete the Venn diagram/sorting circles comparing an exoskeleton and your skeleton. Write the letters A to K on to the diagram with the shared features in the overlapping part.



18-**Look at the label on the bottle of tablets that belong to Mrs Pather.**

a What time of day should Mrs Pather take her tablets?

In the morning and at night.

b What is the total number of tablets Mrs Pather must take?

10 tablets

c Should she take her tablets before she eats food? How do you know?

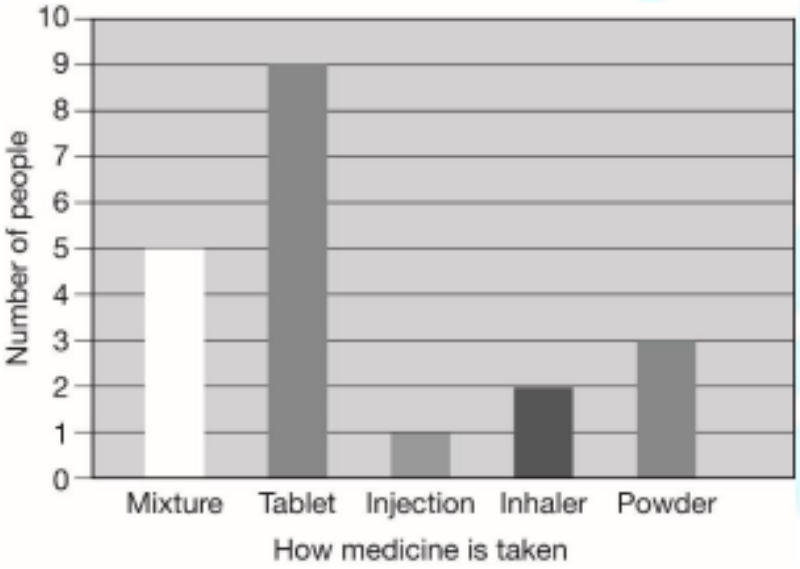
No. The instructions on the bottle say she must take the tablets 'after breakfast' and 'after supper', which means after she has eaten food.

d Write two more instructions for how to take medicine safely.

Any two suitable instructions, e.g. take all of the tablets the instructions tell you to; do not take more tablets than the instructions say; keep the tablet where children cannot reach them.

19-2-Different ways to take medicines

Way medicine is taken	Number of people		Total number of people
	Nasreen's family	Fatima's family	
Mixture	3	2	5
Tablet	5	4	9
Injection	1	0	1
Inhaler	0	2	2
Powder	2	1	3



3 Tablets. There are tablets for many different kinds of illness (or any other reasonable suggestion).

4 Injection. Not many illnesses need regular injections (or any other reasonable suggestion).

5 Mixtures. They are easier for young children to swallow than tablets and they taste better than tablets and powders (or any other reasonable suggestion).

6 Aspirin can cause a condition known as Reye's syndrome in children and teenagers. Reye's syndrome causes swelling in the liver and brain. It most often affects children and teenagers recovering from a viral infections, usually flu or chickenpox.