Morning Challenge 23/6/26

1) 67.9 x 100=
2) 60 x 80 =
3) 456 divided by 4 =
4) 6, 283 divided by 11 =
5) 567 x 8 =
6) 2, 311 x 22 =
7) 5/6 x 6 =
8) 2/3 x ½ =
9) 12/14 - ¾ =
10) 5/6 + 3/8 =

Tuesday 23rd June
Close reading

Section 4 – The Arrival

- **What clues show that the man is still struggling to adapt to the new city?**
- **What evidence is there that the man is beginning to feel hopeful?**

The city was beginning to feel a little less strange to him now. As he stepped out into the morning light, the sky **shimmered** with the shapes of unfamiliar creatures drifting overhead—soft, balloon-like animals that moved as gently as clouds. He paused to watch them, wondering if he would ever stop being surprised by this place.

He walked on, **clutching** the small map he had drawn the night before. The symbols still made little sense, but he was determined to learn. Every street hummed with life: machines whirred, tiny mechanical birds zipped between rooftops and people hurried past carrying objects he had never seen before.

Tuesday 23rd June
Close reading

- **How does the writer show the factory is intimidating?**
- **Why is the moment with the kind worker important?**

At the factory gates, he **hesitated**. The building towered above him, its pipes twisting like metal vines. Inside, the noise was **overwhelming**. Workers moved in perfect rhythm, each one controlling a strange device that puffed steam and clicked sharply. He tried to copy them, but his hands shook. The machine jerked, spluttered, and then stopped completely. Heat rushed to his face. He felt useless.

A kind worker approached, smiling warmly. She showed him how to hold the controls, guiding his hands until the machine began to move smoothly again. **Relief** washed over him. For the first time since arriving in this **bewildering** land, he felt a flicker of hope.

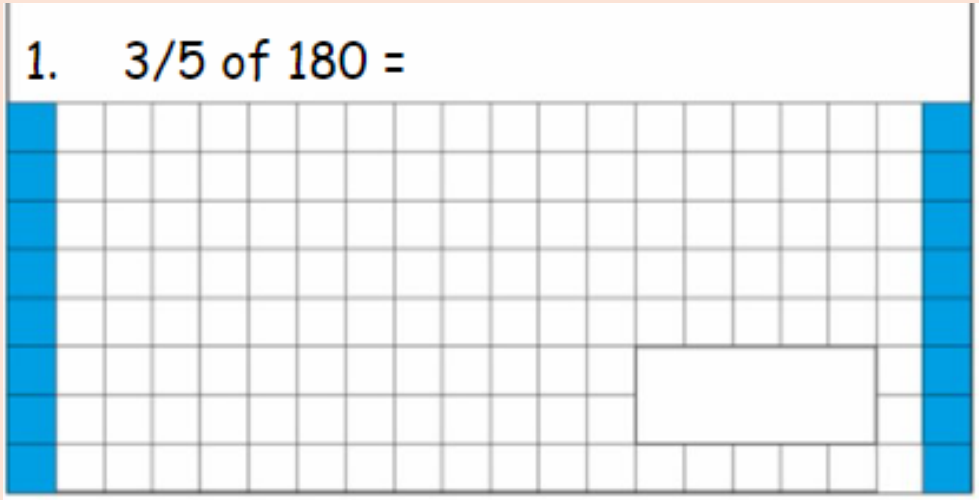
Later, as he walked home, the city glowed with evening light. Lanterns floated above the streets, casting soft patterns on the walls. He realised that although everything here was unfamiliar, he was no longer completely alone. Step by step, he was learning how to belong.

23.06.26

TBAT: calculate the perimeter of rectangular and compound shapes.

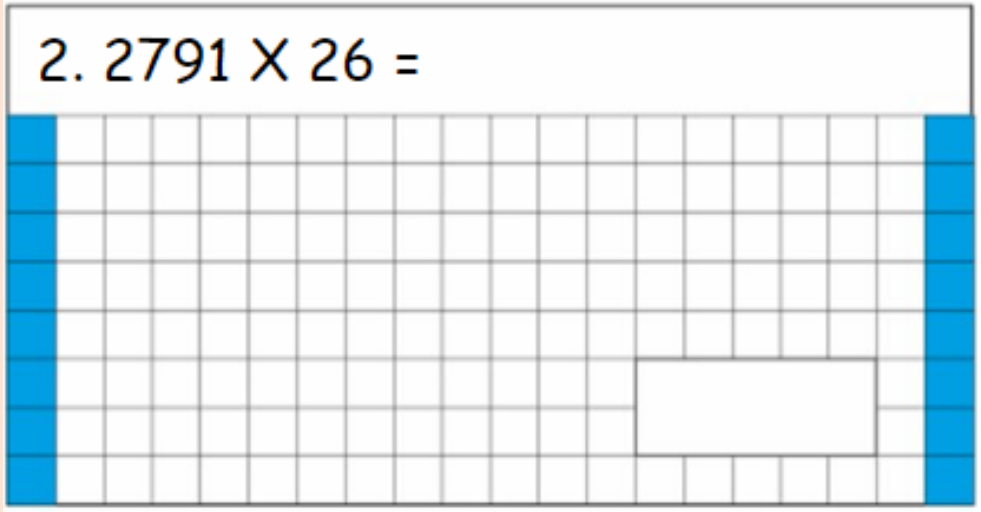
3 in 3

1. 3/5 of 180 =



1 mark

2. 2791 X 26 =



1 mark

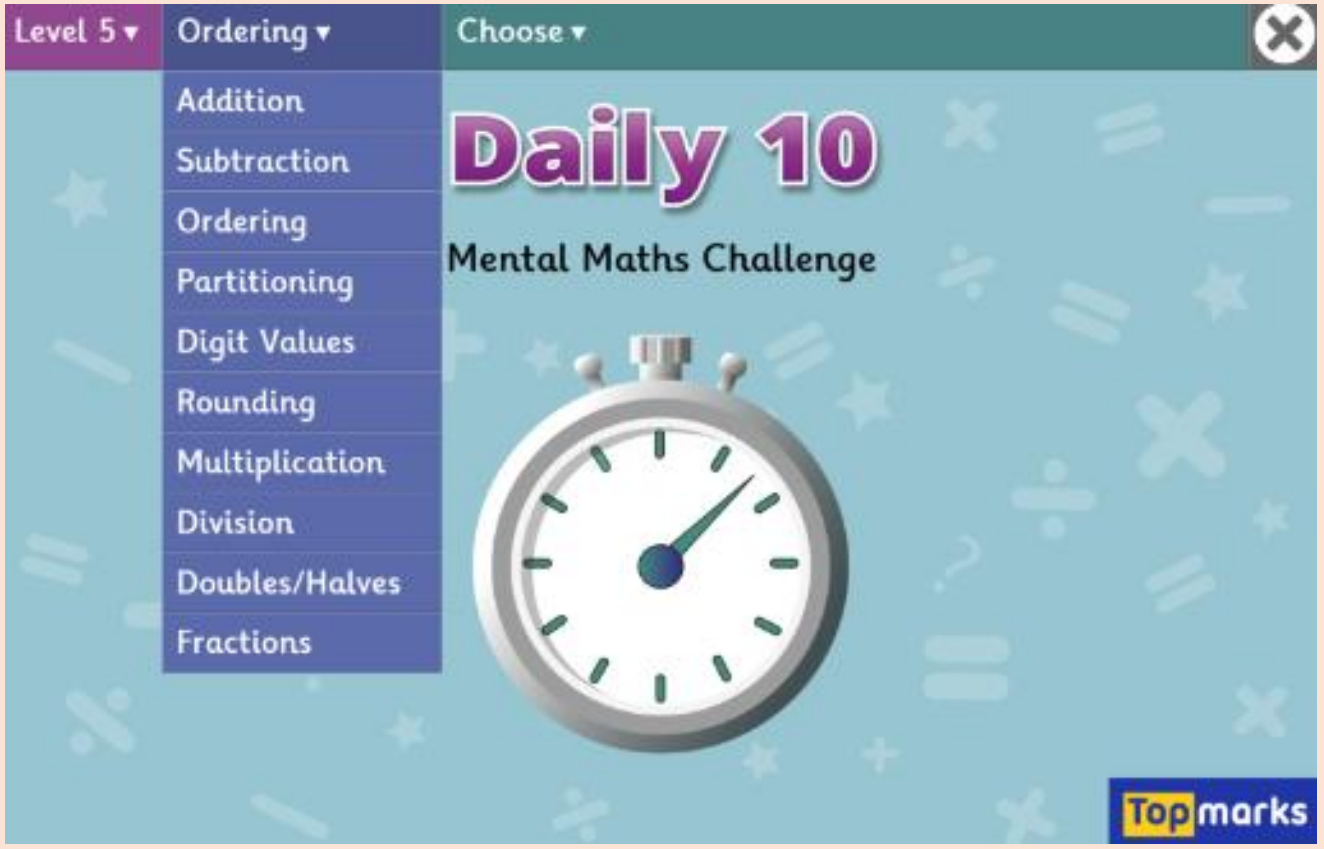
Here is part of a train timetable.

Newcastle	–	09:35	–	–	13:35	–
Leeds	09:15	11:00	11:15	13:15	15:00	15:15
Sheffield	10:57	–	12:57	14:57	–	16:57
Coventry	13:34	15:19	15:34	17:34	19:19	19:34

a) How long is the train journey from Newcastle to Leeds?

Challenge:

Zoe is at Leeds station at 11:05. She wants to travel to Coventry. She catches the next train. At what time will she arrive in Coventry?



[Daily 10 - Mental Maths Challenge - Topmarks]

Blue

10 + 10 + 3.5 + 3.5=

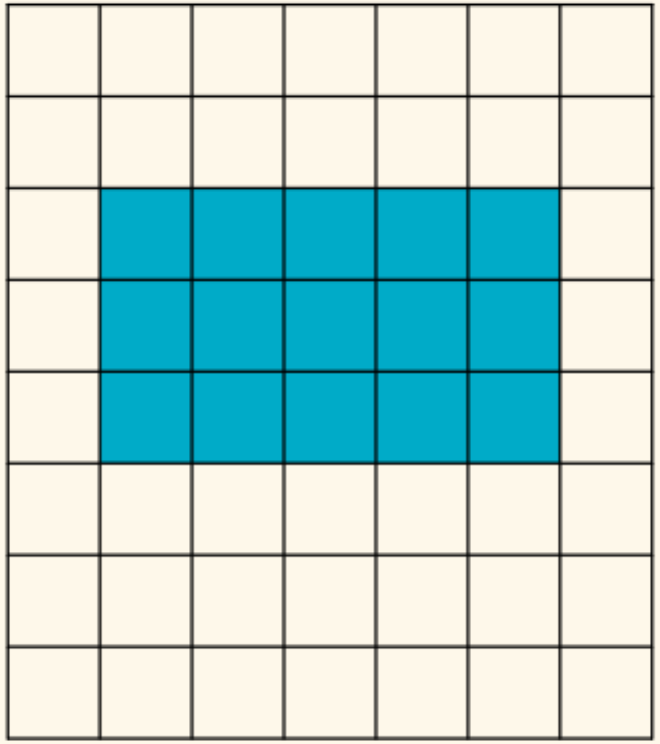
Green

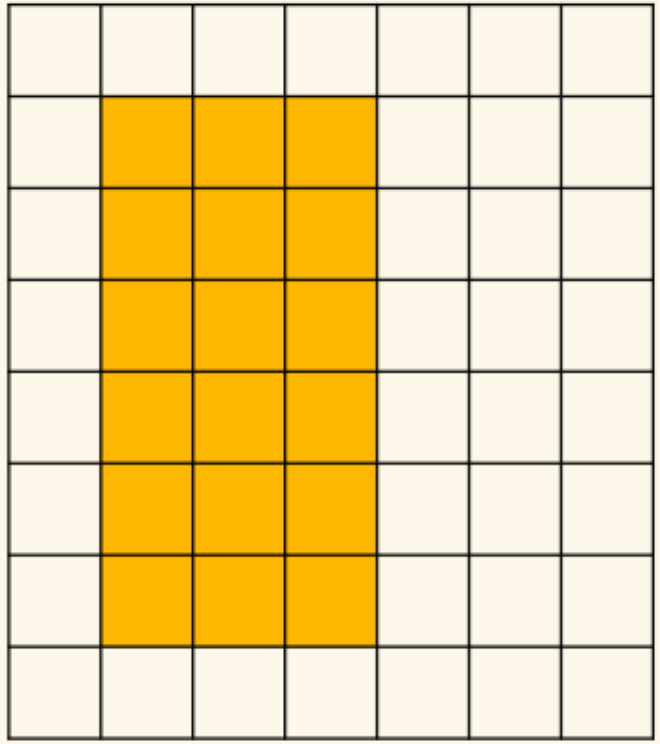
5.5+ 5.5 + 5.5 + 5.5 =

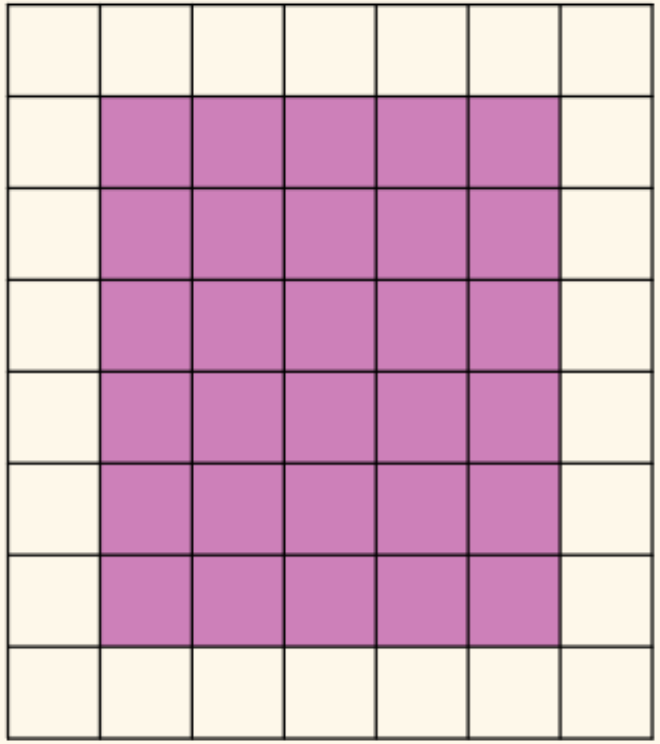
Challenge: What could the shape be for the measurements above?

Whiteboard work:

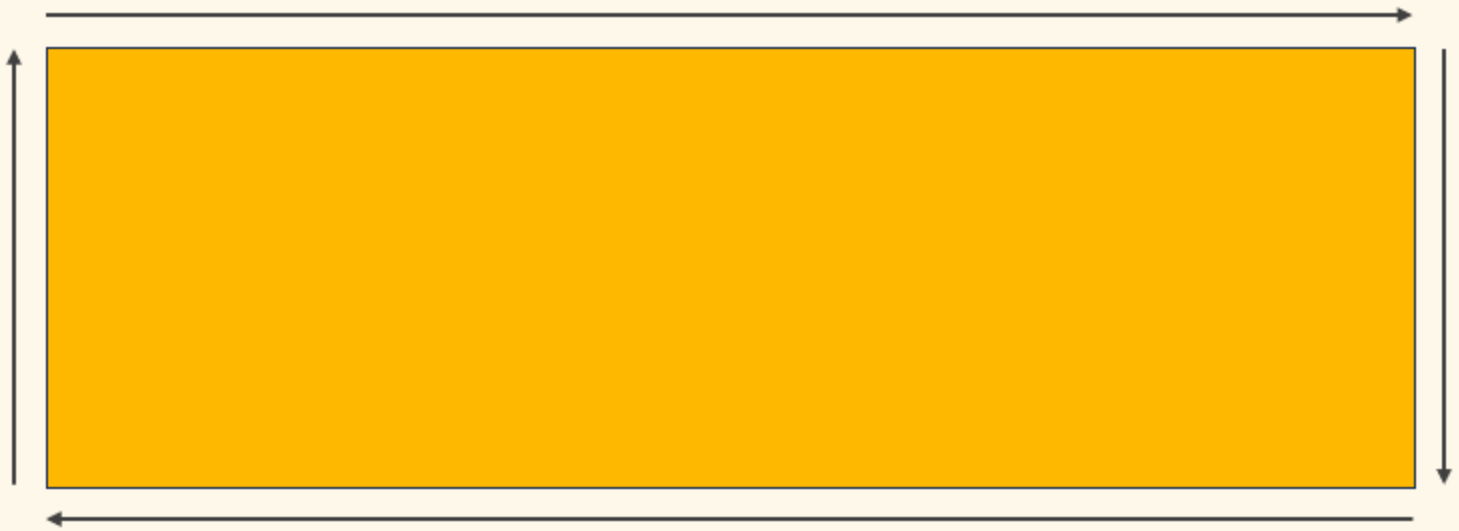
Find the perimeter of the shapes below and complete the statement using <, > or =. Each square measures 1 cm.





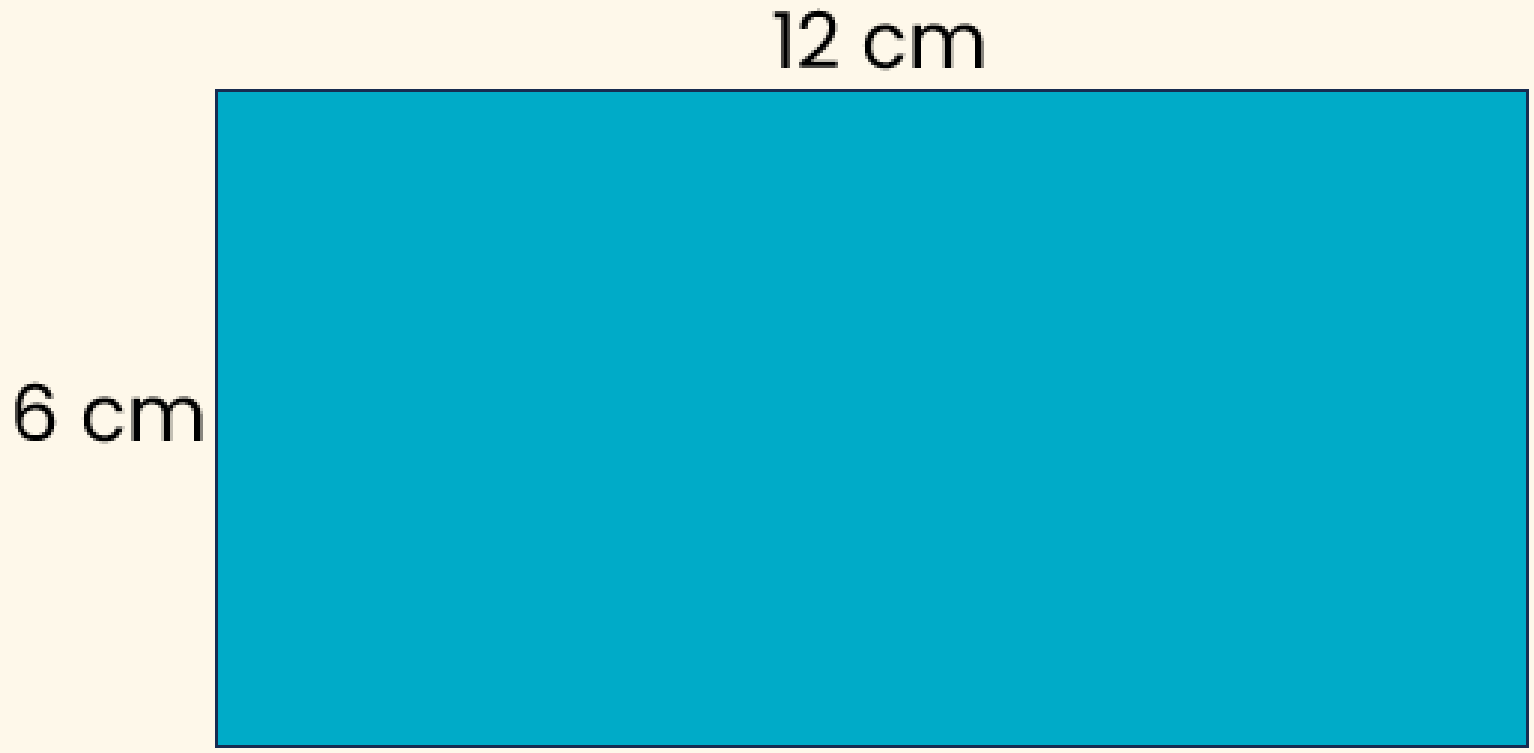


Perimeter is the distance around the outside of a 2D shape and can be measured in mm, cm, m or km.



Sometimes we may need to measure the perimeter and other times we are given the measurements to calculate.

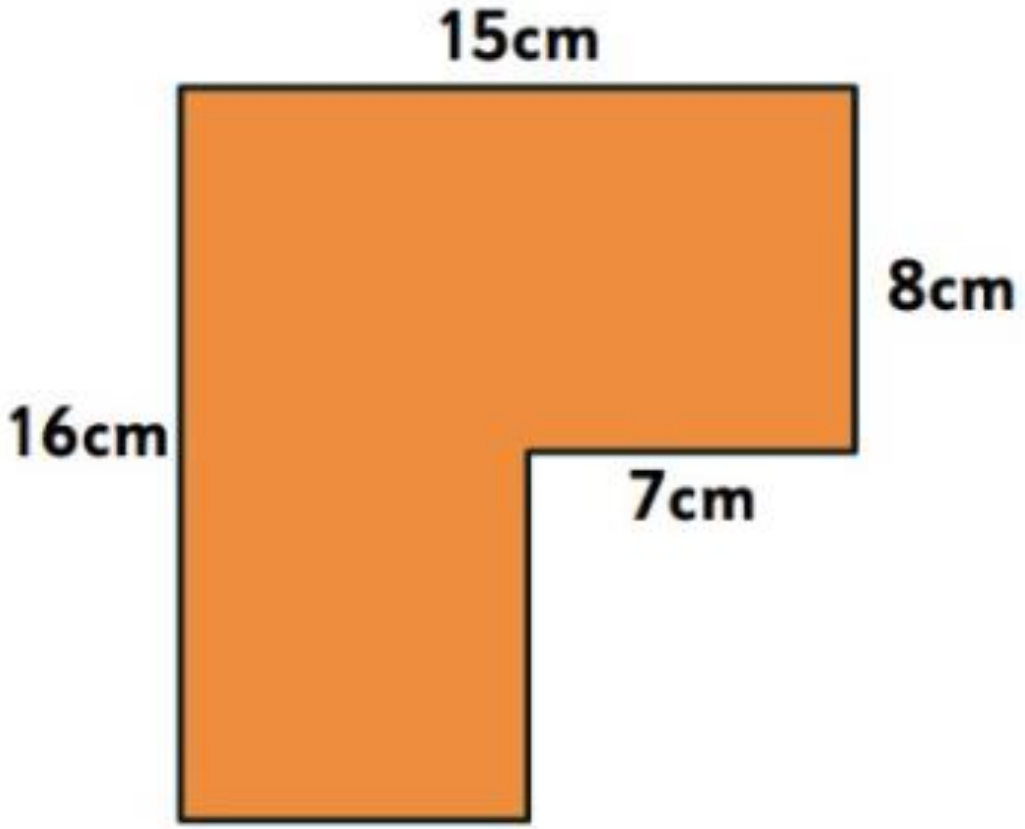
Now we know the width and length, how can we calculate the perimeter?



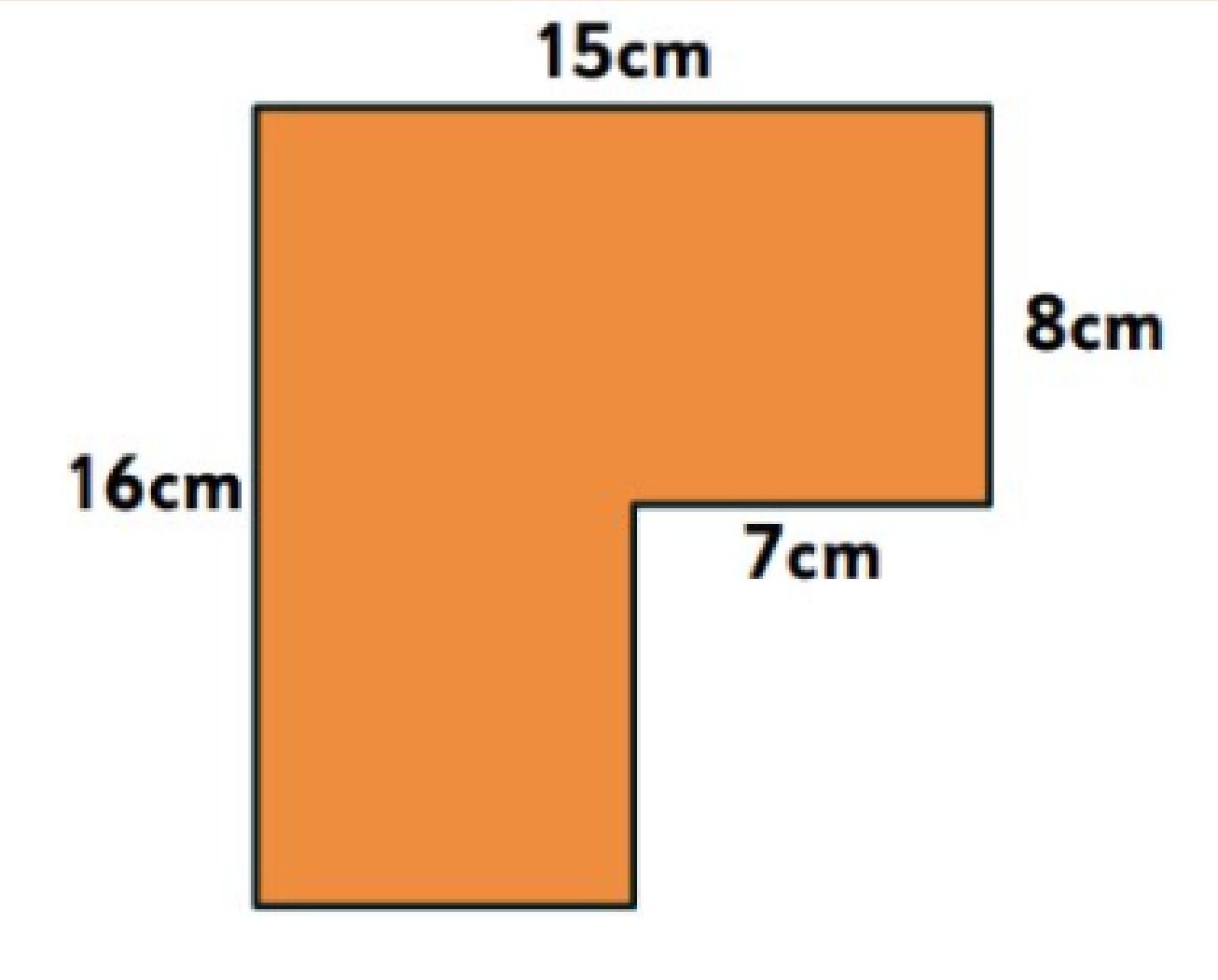
Class Work:

Calculate the perimeter of this shape.

We need to find the missing sides first.

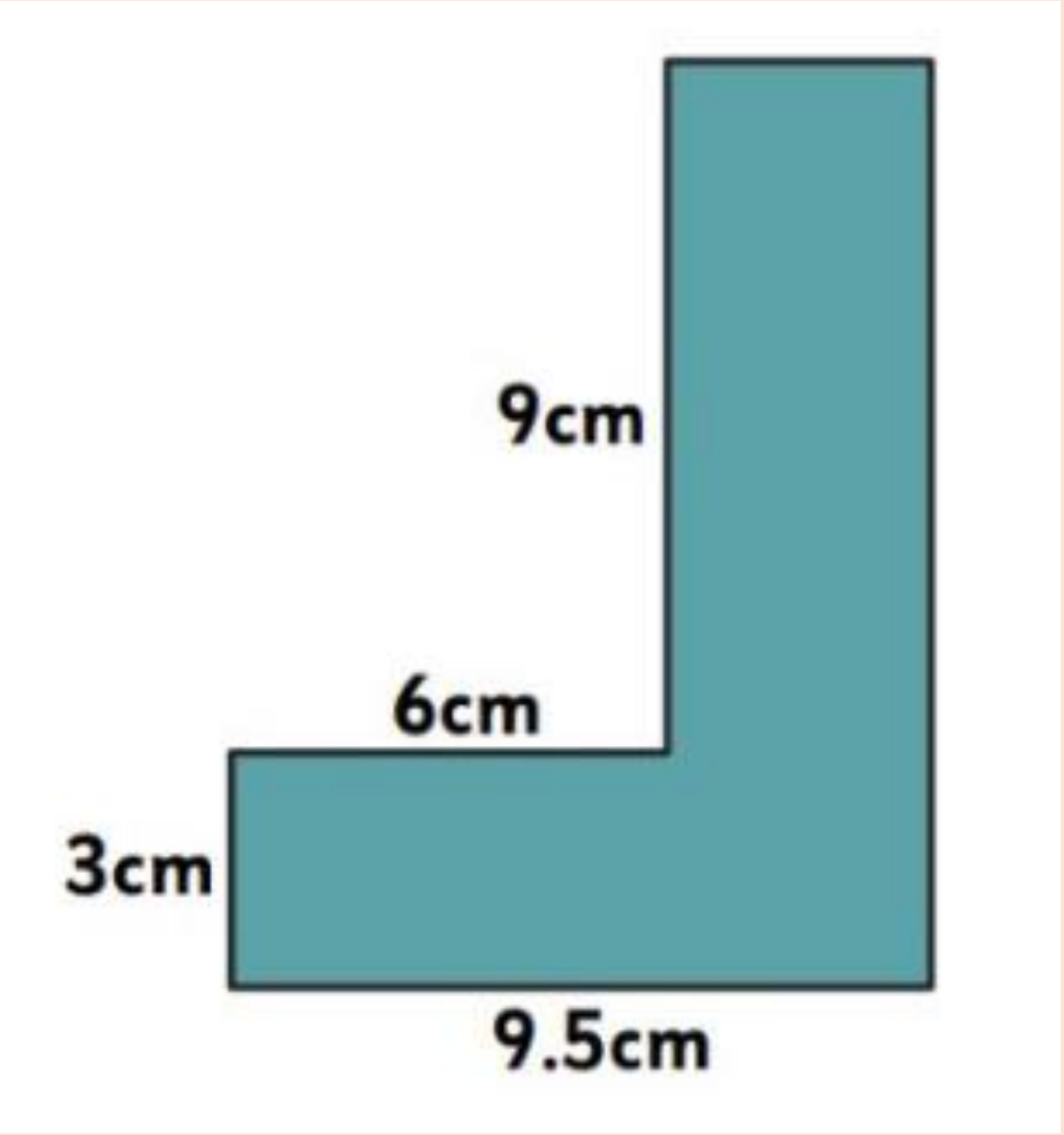


Class Work:

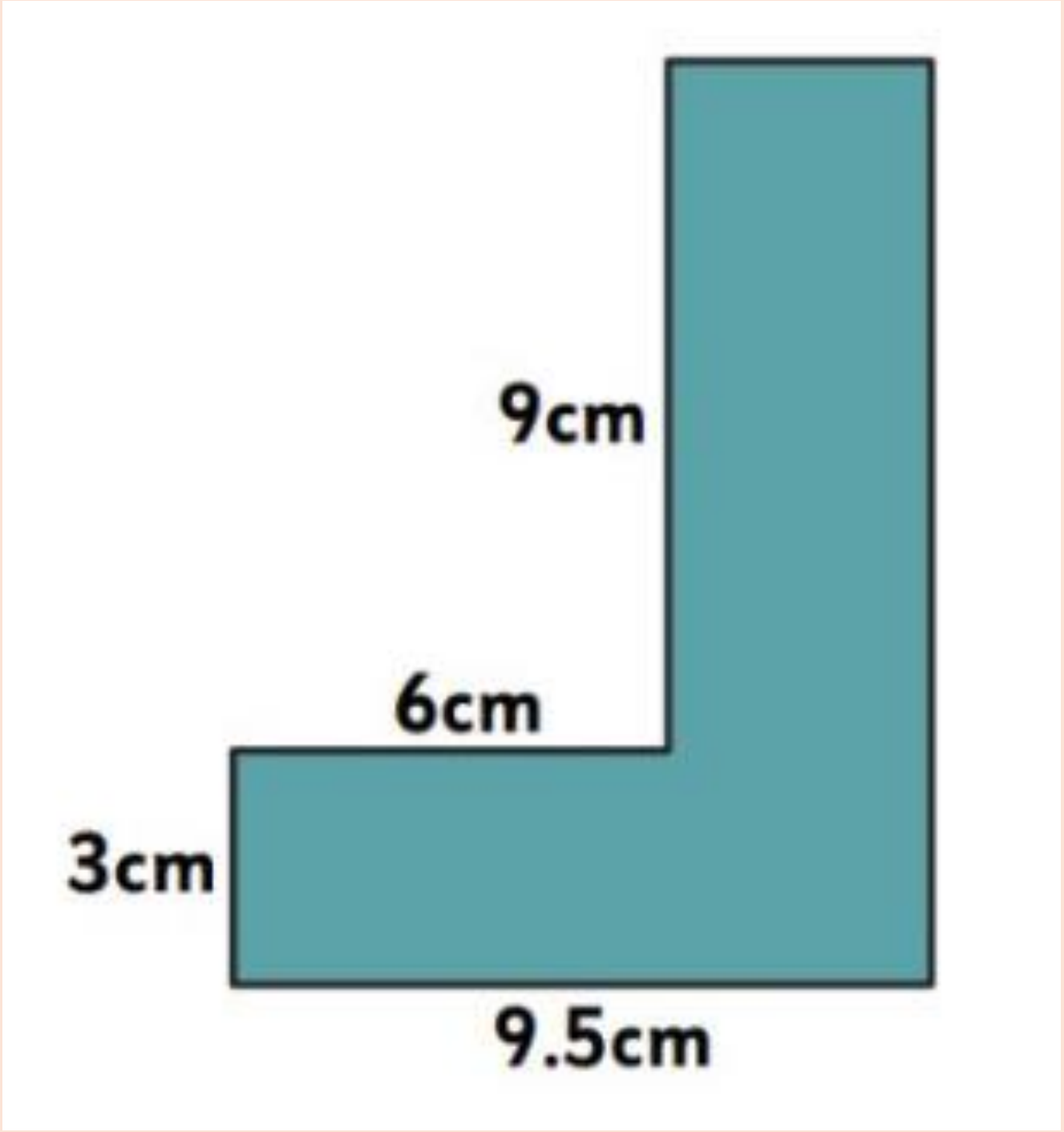


Now we have calculated the missing measurements, what next?

Talk partners: How would we calculate the perimeter of this compound shape?

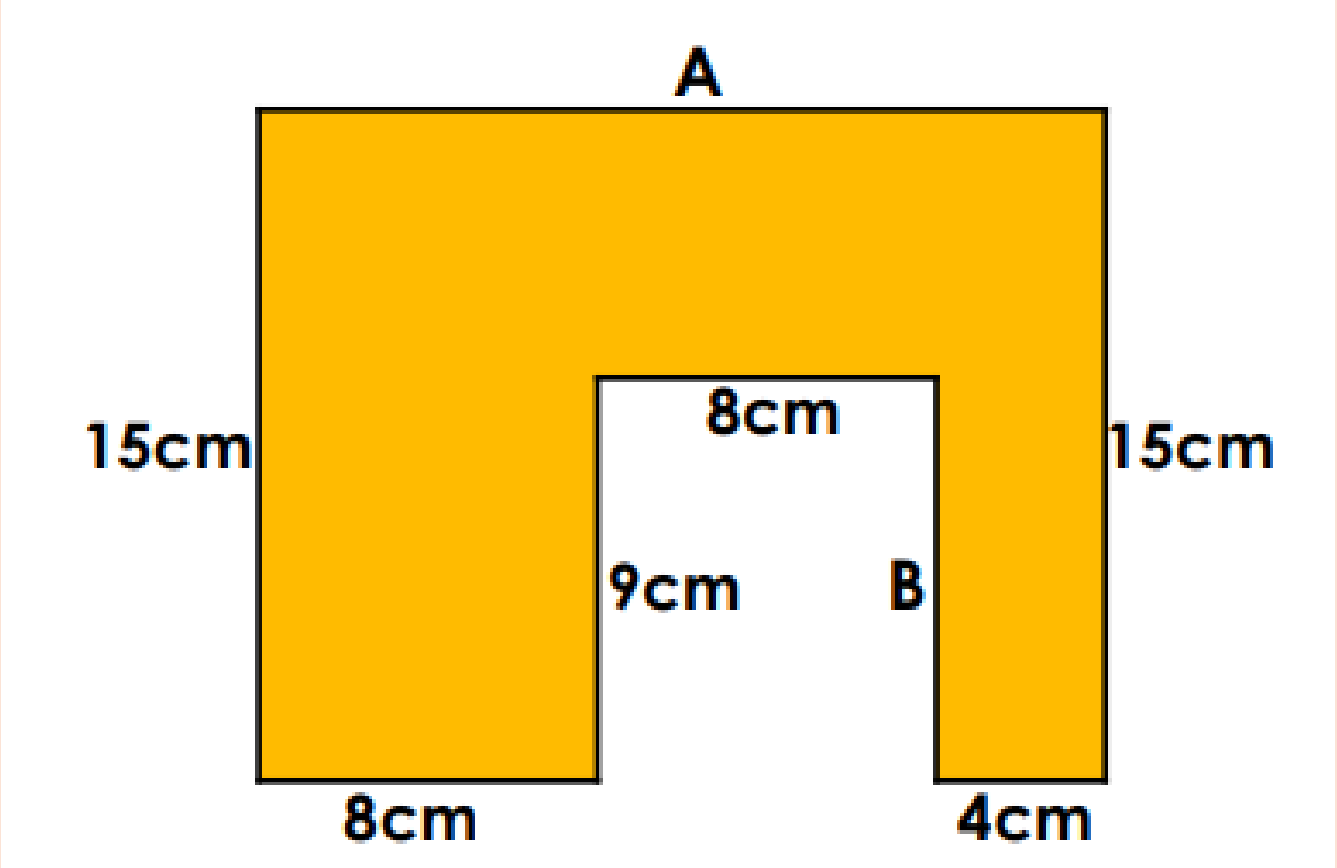


Whiteboard work:
Calculate the perimeter.



Blue: A =

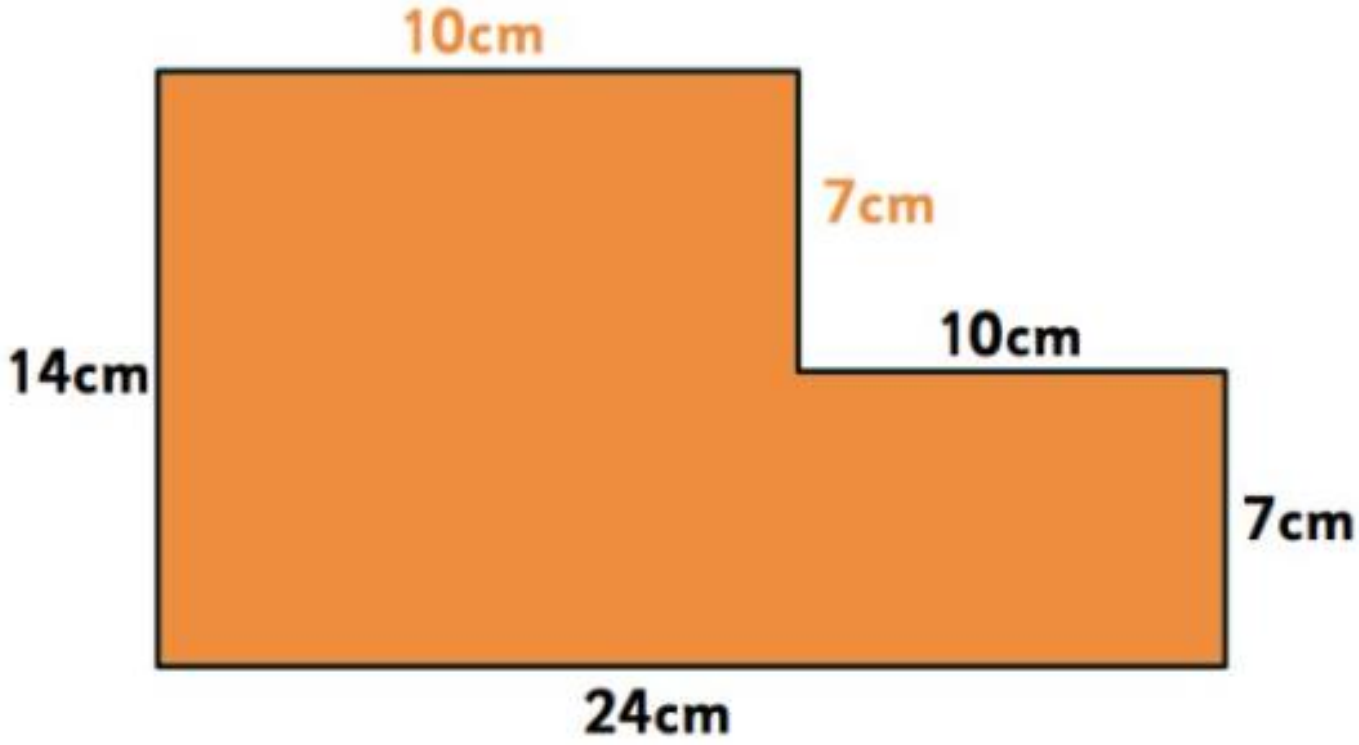
Green: B=



Challenge: Explain how you calculated the missing measurement.

Talk partners: Do you agree with Ella? Why?

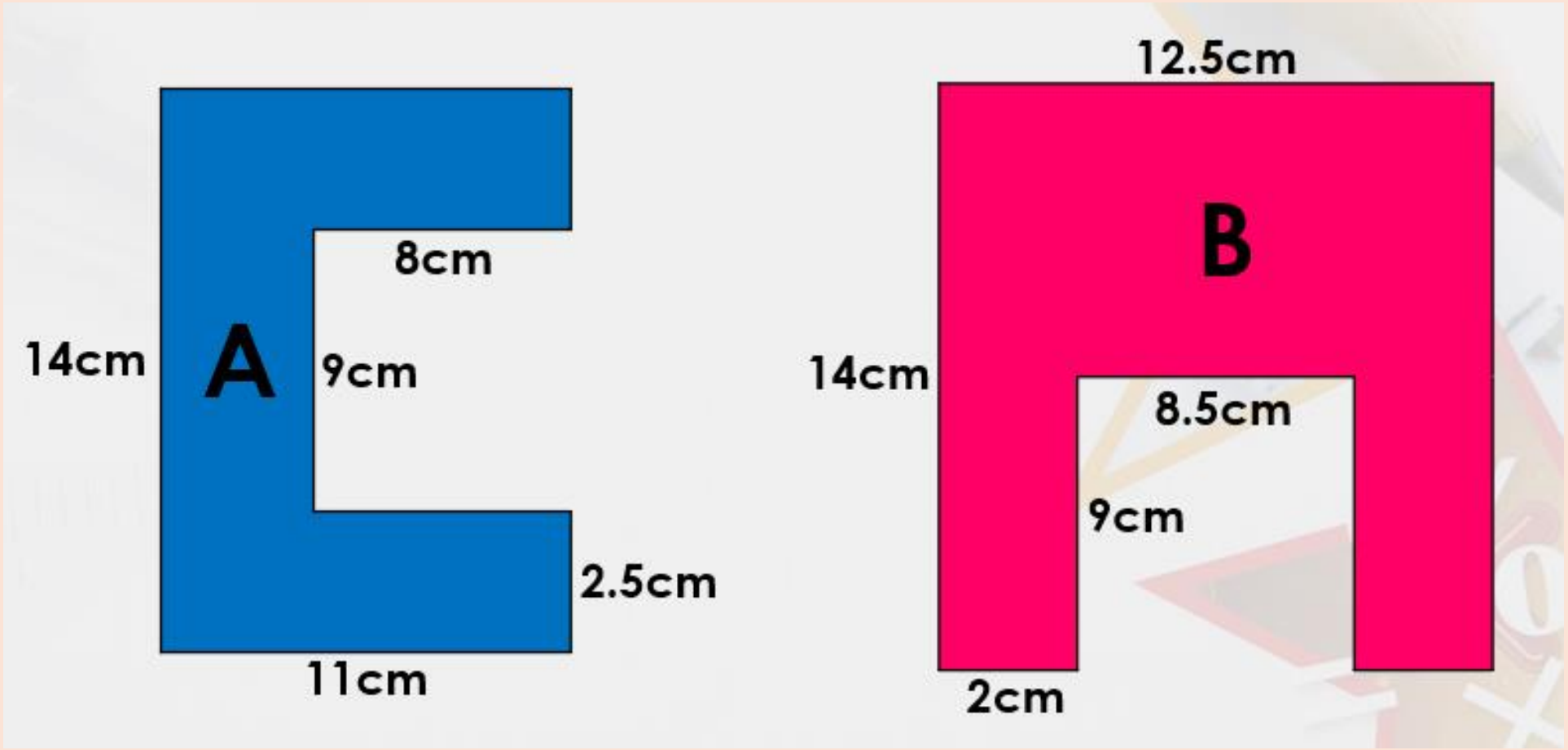
Ella is working out the perimeter of this shape. Explain to your partner where she has made a mistake.



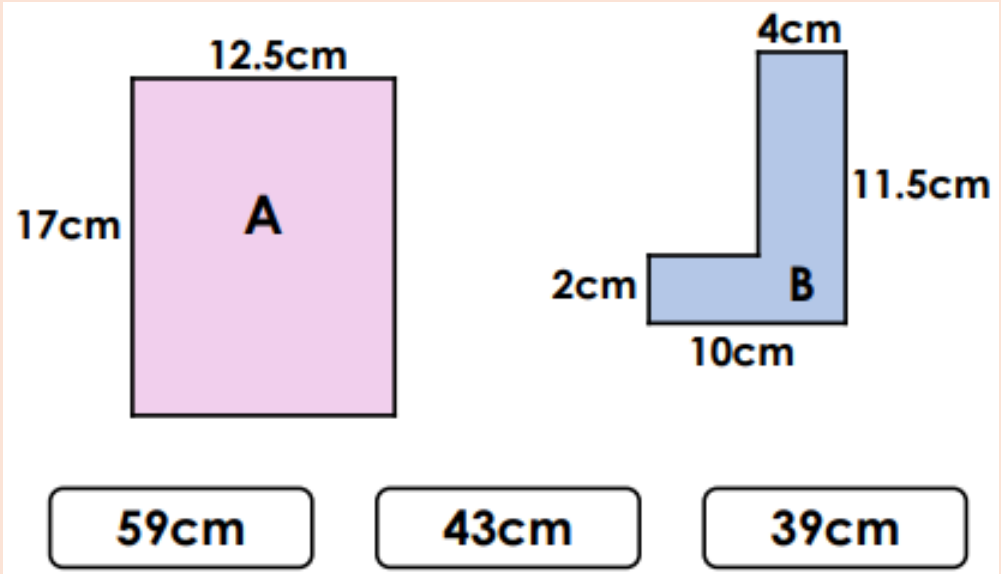
10 + 7 + 10 + 7 + 24 + 14 = 72cm

Blue

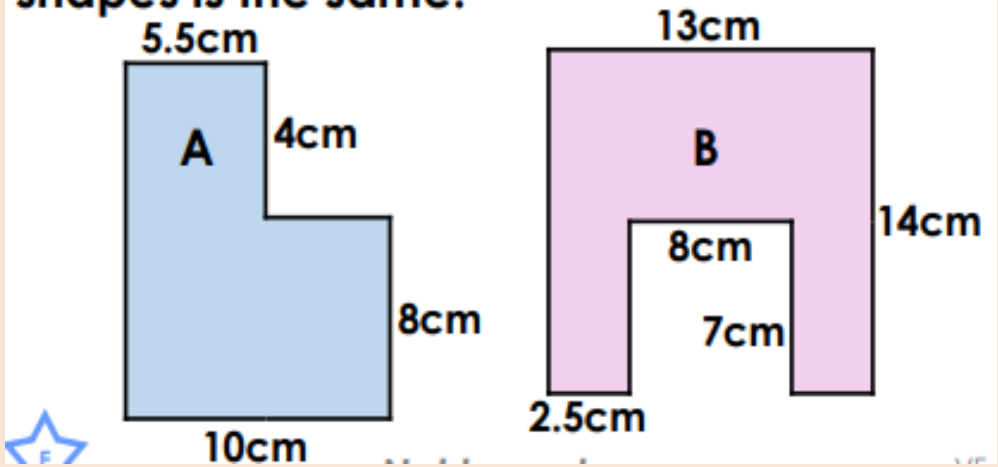
Green



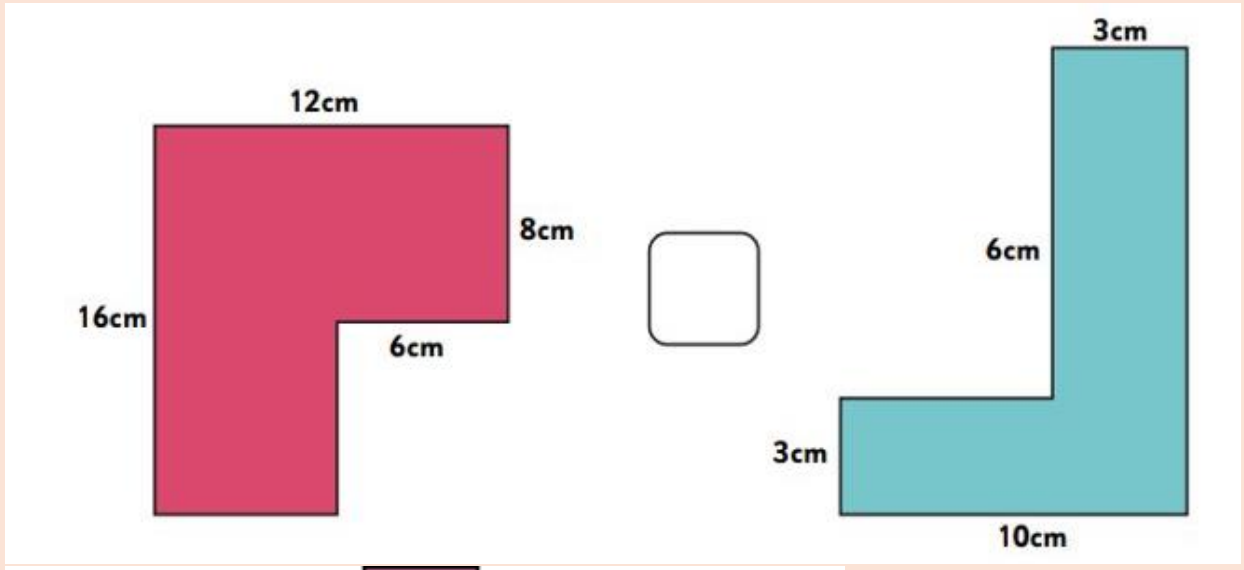
Independent:

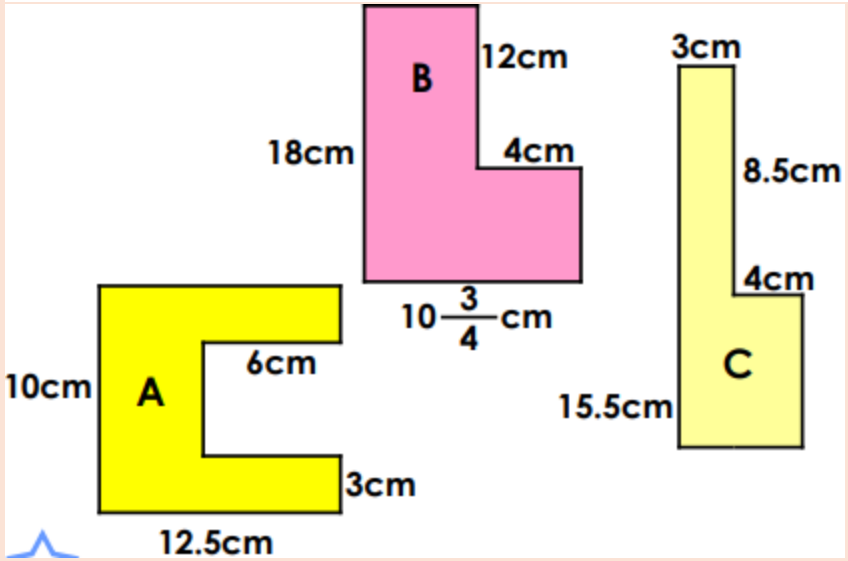


7a. True or false? The perimeter of these shapes is the same.

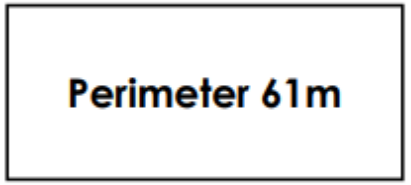


Which of these shapes have a perimeter of 45cm?



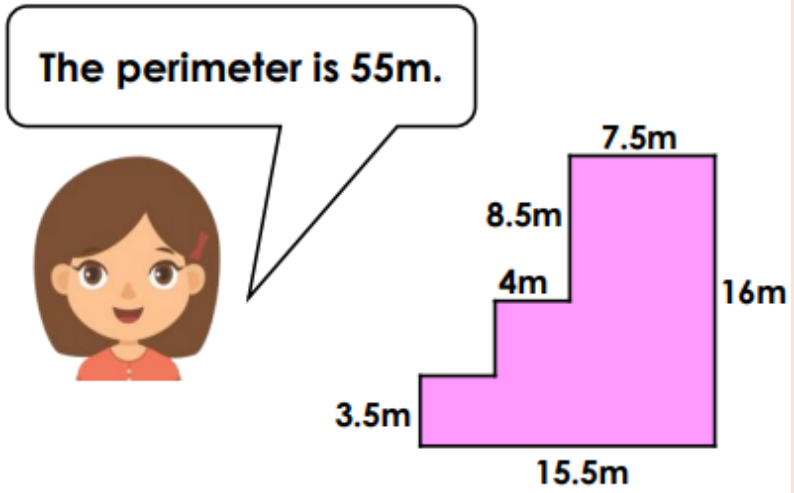


5a. A supermarket is building a new trolley bay. It needs to be the following shape and size:



What could the length of each side be?

6a. Lucy says,

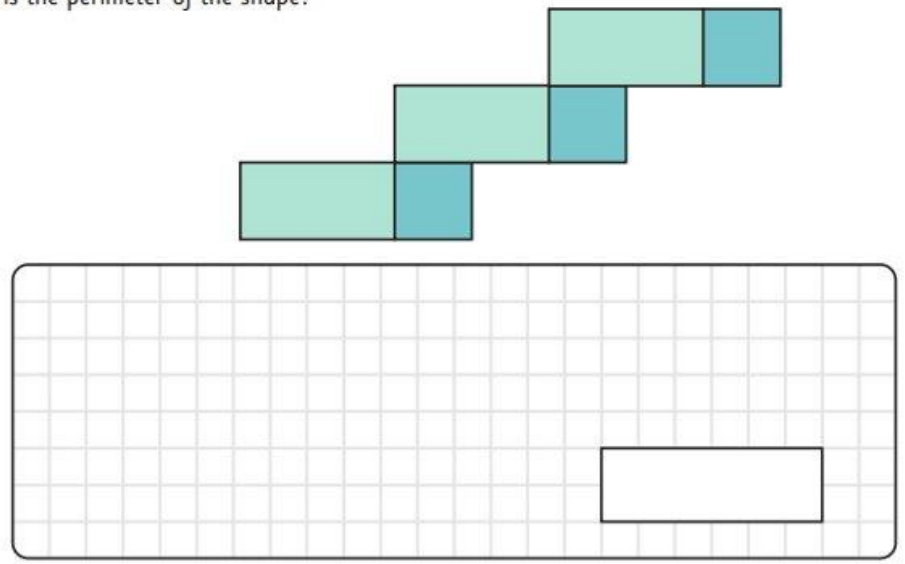


Is Lucy correct? Explain your answer.

Challenge:

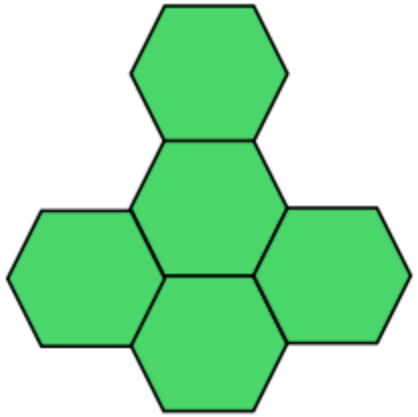
This shape has been made using a set of identical rectangles and identical squares. Each square has a perimeter of 16cm and each rectangle has a perimeter of 24cm.

What is the perimeter of the shape?



Mastery:

7a. This shape has been made using identical regular hexagons. One hexagon has a perimeter of 21cm. What is the perimeter of the whole shape in metres?



Tuesday 23rd June
TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

3 in 3

1. Add the missing punctuation to this sentence, including commas for clarity and correct speech punctuation:

The owl shaped building loomed over the city "it looks alive" whispered Tom

2. Rewrite the sentence so it uses a correctly punctuated relative clause:

The boats rested on the water. They looked tiny beneath the giant city.
(Combine the ideas using who, which, or that.)

3. Identify the expanded noun phrase in the sentence below and explain how you know it is expanded:

The towering, weather-beaten buildings clung to the cliff like frightened animals.

TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

Partner talk

- What is the first thing you notice?
- How does this place make you feel?
- What sounds might you hear if you were standing in this city?
- Would you want to visit this place? Why or why not?

TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

Vocabulary spotlight:

Look at this image.

Think about the following headings: (think about what we have already used)

Buildings

Atmosphere

Features

TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

Vocabulary spotlight:

Buildings
towering
stacked
unusual
clustered
winding
carved
ancient
rocky
magnificent
sprawling

Atmosphere
mysterious
magical
curious
peaceful
distant
dreamlike
enchanting
unfamiliar
strange
wonder-filled

Features
giant statue
winding pathways
rocky cliffs
distant towers
circling birds
hidden doorways
stone buildings
steep staircases

TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

Quick recap:

Personification

Giving human qualities to something non-human.

- The **owl-shaped building watched over the city**, guarding it like a silent protector.
- The **twisting towers leaned towards each other**, whispering ancient secrets.
- The **lantern boats waited patiently** at the water's edge.
- The **cliffside houses clung tightly** to the rocks as if afraid to fall.

Write your own personification example based on the new city.

TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

Quick recap:

Alliteration

Words beginning with the same sound.

- The **towering, twisted towers** trembled in the wind.
- **Silent stone streets** stretched along the cliff.
- **Boats bobbed below** the giant owl structure.
- **Birds beat their wings** above the rooftops.

Write your own personification example based on the new city.

TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

Quick recap:

Similes

Comparing using *like* or *as*.

- The owl-shaped building stood **as still as a statue**.
- The clustered rooftops were **packed together like puzzle pieces**.
- Birds drifted above the city **like floating scraps of paper**.
- The narrow pathways twisted **like tangled string**.

Write your own personification example based on the new city.

TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

Quick recap:

Metaphors

Saying something *is* something else.

- The city was **a stone labyrinth rising from the sea**.
- The owl structure was **a giant guardian carved into the cliff**.
- The rooftops were **a patchwork blanket** covering the rock.
- The boats were **tiny candles** resting on the water.

Write your own personification example based on the new city.

TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

1. **Pick a noun from the image:**
city, buildings, owl-mountain, boats, birds

2. **Pick two adjectives to describe it:**
tall, rocky, mysterious, quiet, old

3. **Pick a prepositional phrase:**
on the cliffs by the water under the owl-shaped rock above the boats

4. Put them together to make an expanded noun
The tall, rocky city on the cliffs.
The old, mysterious buildings under the owl-shaped

TBAT: Gather and explore descriptive vocabulary in expanded noun phrases.

Independent:

Write **4–6 descriptive sentences** about the new city
✓ Expanded noun phrases
✓ At least one noun phrase with commas in a list
✓ Ambitious vocabulary from the word bank

Sentence starters:

- Towering above the water is…
- The city is filled with…
- Perched on the cliff, the enormous…
- High in the sky, flocks of…
- At the base of the strange buildings, small…
- The owl-shaped structure, with its… , stands…

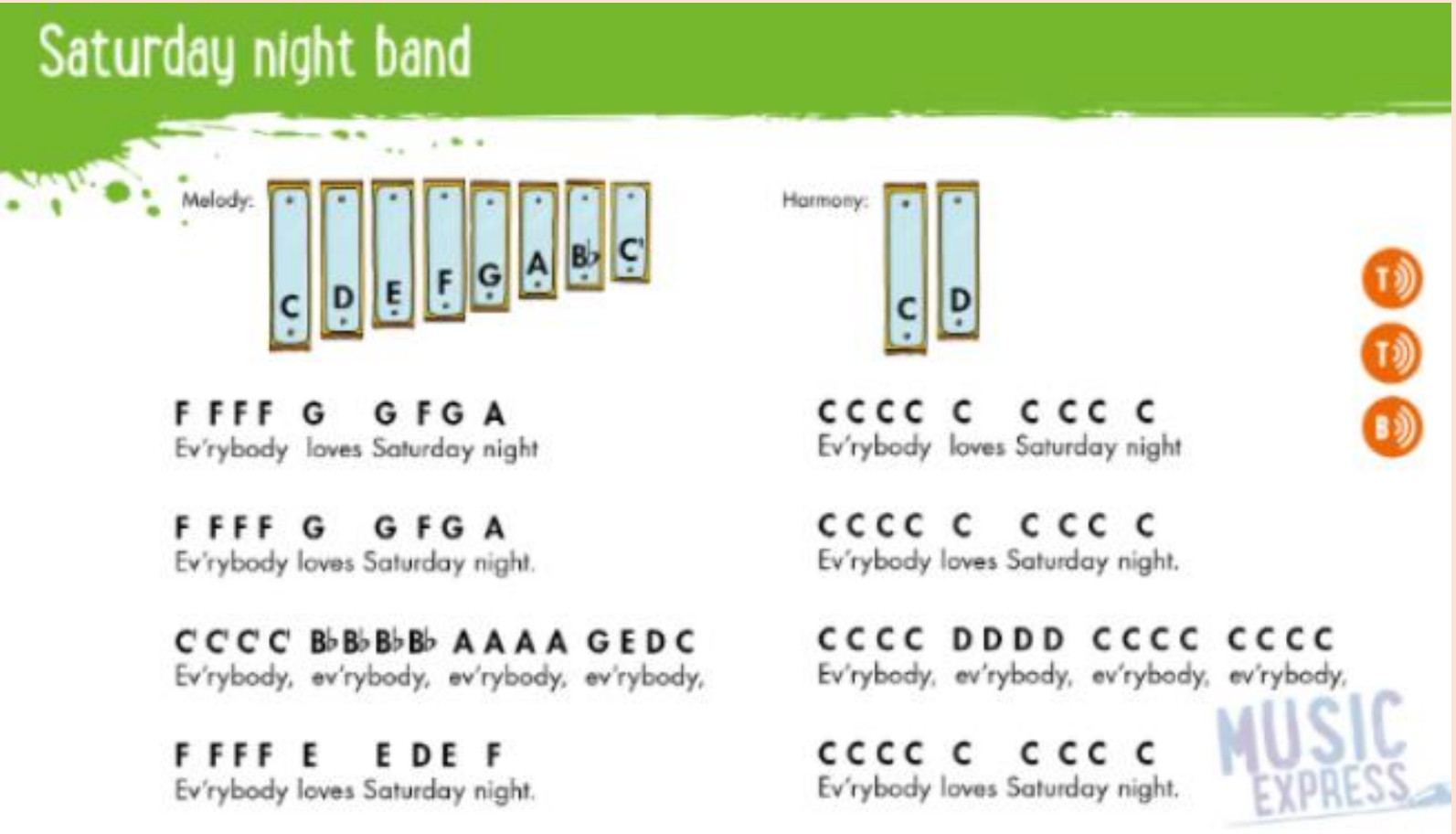
Model:

The city rises sharply from the rocky coastline, a **towering, intricate maze of stacked buildings** that seem to cling to the cliffs. At its centre stands a **colossal owl-shaped structure**, with **wide, circular eyes, a curved beak, and carved stone feathers** watching silently over the people below. **Winding pathways and clustered rooftops** twist together like a puzzle, creating a place that feels both mysterious and alive. High above the rooftops, **flocks of drifting birds** glide through the sepia-toned sky, adding movement to the stillness of the stone. At the water's edge, **small lantern boats** rest gently, as though waiting for someone brave enough to explore the strange, shadowy city.

Tuesday 23rd June
TBAT: Perform a piece of music.

The Collins Hub Educator > Library

online glockenspiel - Search



Tuesday 23rd June

Q: What are economic minerals and where can they be found?

1 Approximately what percentage of the Earth's energy comes from renewable resources? Tick **1** correct answer

- ☐ 20%
- ☐ 40%
- ☐ 90%

2 Which are these examples of renewable energy? Tick **3** correct answers




☐	☐	☐	☐
wind turbine	geothermal energy	coal	tidal power

3 Which of these products are grown, not reared? Tick **2** correct answers

- ☐ tomatoes
- ☐ cows
- ☐ wheat
- ☐ chickens

1 Approximately what percentage of the Earth's energy comes from renewable resources? Tick **1** correct answer

- [x] 20%
- [ ] 40%
- [ ] 90%

2 Which are these examples of renewable energy? Tick **3** correct answers




- [x] wind turbine
- [x] geothermal energy
- [ ] coal
- [x] tidal power

3 Which of these products are grown, not reared? Tick **2** correct answers

- [x] tomatoes
- [ ] cows
- [x] wheat
- [ ] chickens

Keywords

extraction	**Extraction** is the process of removing something, like minerals, especially by force.
mining	**Mining** is the process of digging under the ground to remove natural resources.
quarrying	**Quarrying** is digging into the surface of the ground to remove things like rock or sand for use.

Economic minerals and their uses

Explanation

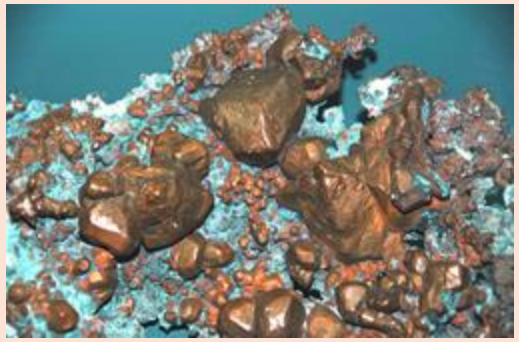
Economic minerals are useful or valuable solid substances found naturally in Earth's crust. There are thousands of different types of economic minerals in the world.

Economic minerals and their uses

Explanation

Can you think of any economic minerals?

gold



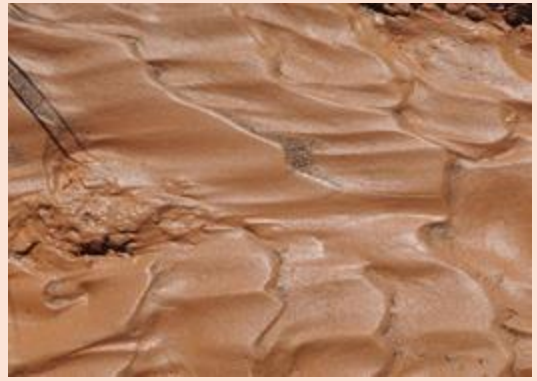
copper

quartz

sand

iron

Metallic minerals



clay

Non-metallic minerals

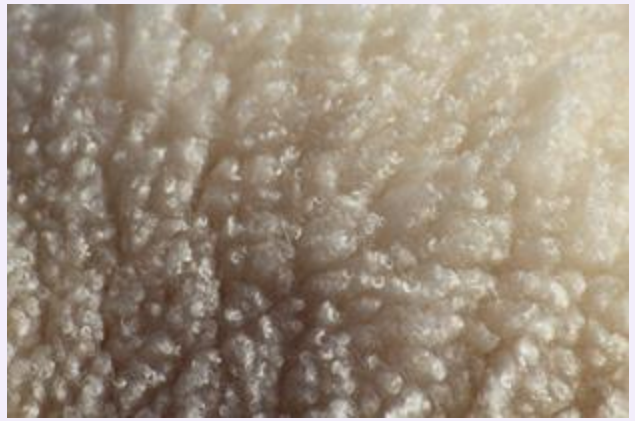
Economic minerals and their uses

Check

Find the minerals from the images below.

water

quartz



wool

gold

fire

clay

Economic minerals and their uses

Explanation

Metallic minerals have a range of uses.

jewellery

construction

transport vehicles

cutlery

tools

coins

Economic minerals and their uses

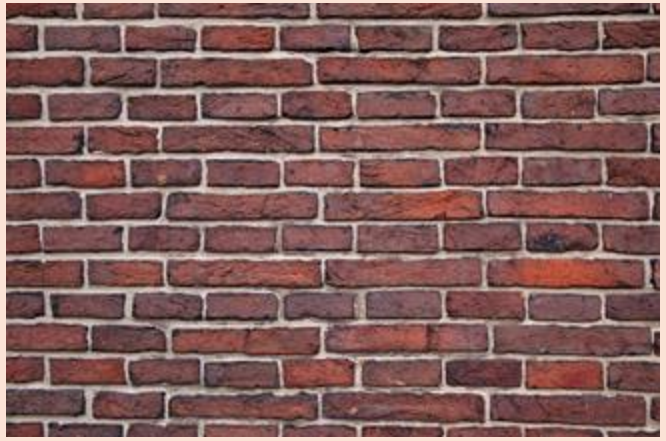
Explanation

Non-metallic minerals have a range of uses too.

computer chips (quartz)

windows (sand)

toothpaste (fluoride)



bricks (clay)

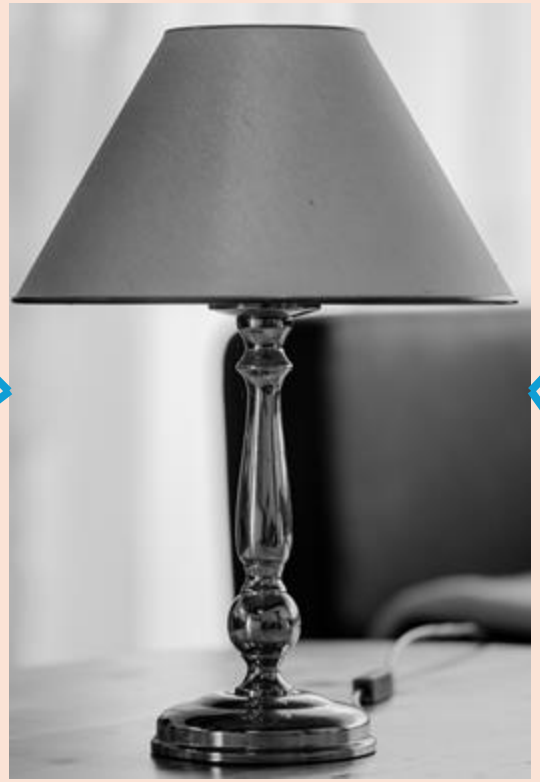
ceramics (clay)

electronics (quartz and feldspar)

Look around your classroom, what can you see that is made from minerals?

copper used in the wiring

quartz used in the bulb



lamp

sand (silica) used in glass bulb

metal or clay used in the bass

Check

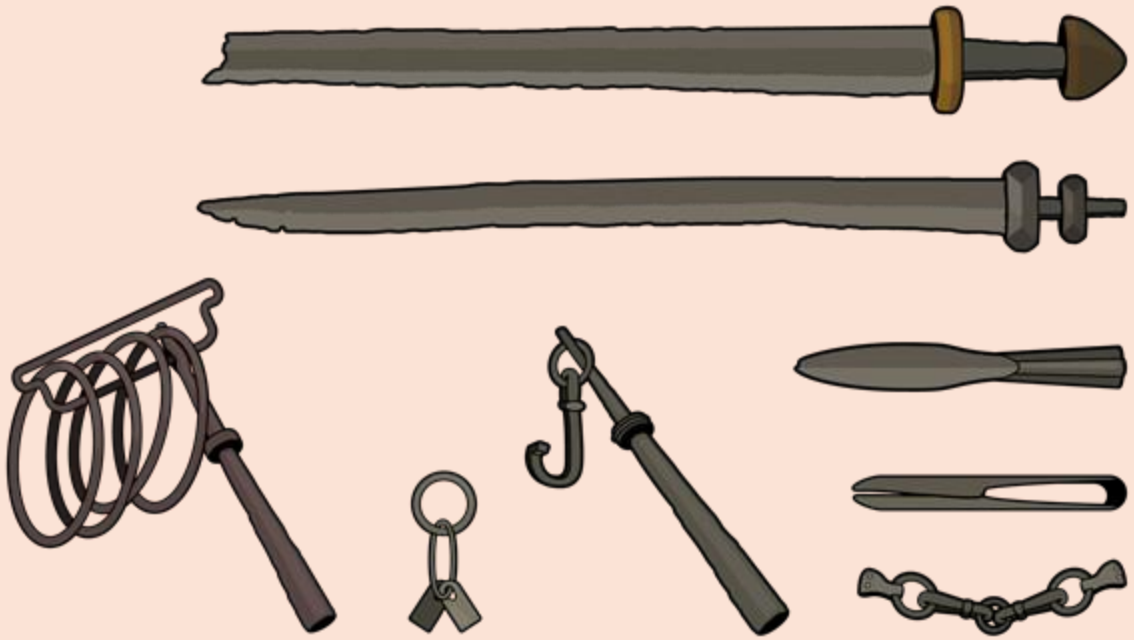
Match the minerals to their uses.

copper clay quartz iron sand

Iron

Iron is the second most common metal found in Earth's crust and has been an important metal since ancient times.

The Iron Age period in history was when people began making tools and weapons out of iron and steel. Steel is a mixture of iron and carbon and is stronger than iron.



Iron Age weapons and tools

What uses of iron and steel can you think of?

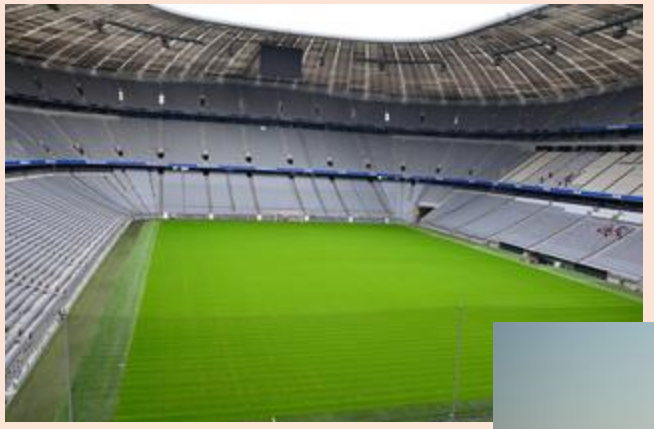
Apart from tools and weapons, iron and steel can also be used for building roads, railways and bridges.

Andeep

Explanation

Iron and steel

water pipes



stadiums and skyscrapers

stainless steel - cutlery and hospital equipment

Check

True or false?

Iron and steel can only be used for building railway tracks.

T True

F False ✓

Justify your answer

a Iron and steel have multiple uses, including making tools, building stadiums and bridges and for hospital equipment. ✓

b Iron and steel are not used for building railway tracks.

1) Fill in the blanks.

Minerals are useful or _____ solid substances found _____ in Earth's _____. Minerals can be split into two categories: _____ minerals and _____ minerals.

List the names of 2 metallic and 2 non-metallic minerals.

2)

Metallic minerals	Non-metallic minerals
1. 2.	1. 2.

3) Choose one of your metallic minerals and one of your non-metallic minerals and state how they are used in everyday objects.

4) Explain why iron has been an important metal since ancient times.

1) Fill in the blanks.

Minerals are useful or valuable solid substances found naturally in Earth's crust. Minerals can be split into two categories: metallic minerals and non-metallic minerals.

2) List the names of 2 metallic and 2 non-metallic minerals. You may have chosen some of the below minerals.

Metallic minerals	Non-metallic minerals
1. iron 2. copper 3. gold	1. quartz 2. sand 3. clay

3) Choose one of your metallic minerals and one of your non-metallic minerals and state how they are used in everyday objects. You may have included some of these points in your answer.

Copper - can be used in wiring and piping.

Clay - can be used to make tiles and ceramics such as pots and vases.

4) Explain why iron has been an important metal since ancient times. You may have included some of these points in your answer.

Iron was important originally as it was used to make weapons and tools such as hammers and scythes. Nowadays it is very important when it is made into steel and used to build railways, stadiums, pipes and for medical equipment.

Extraction of economic minerals

Explanation

Economic minerals are **extracted** from Earth all around the world. Typically, minerals are removed from under the ground using force such as explosions, digging and hammering.

Extraction of economic minerals

Explanation

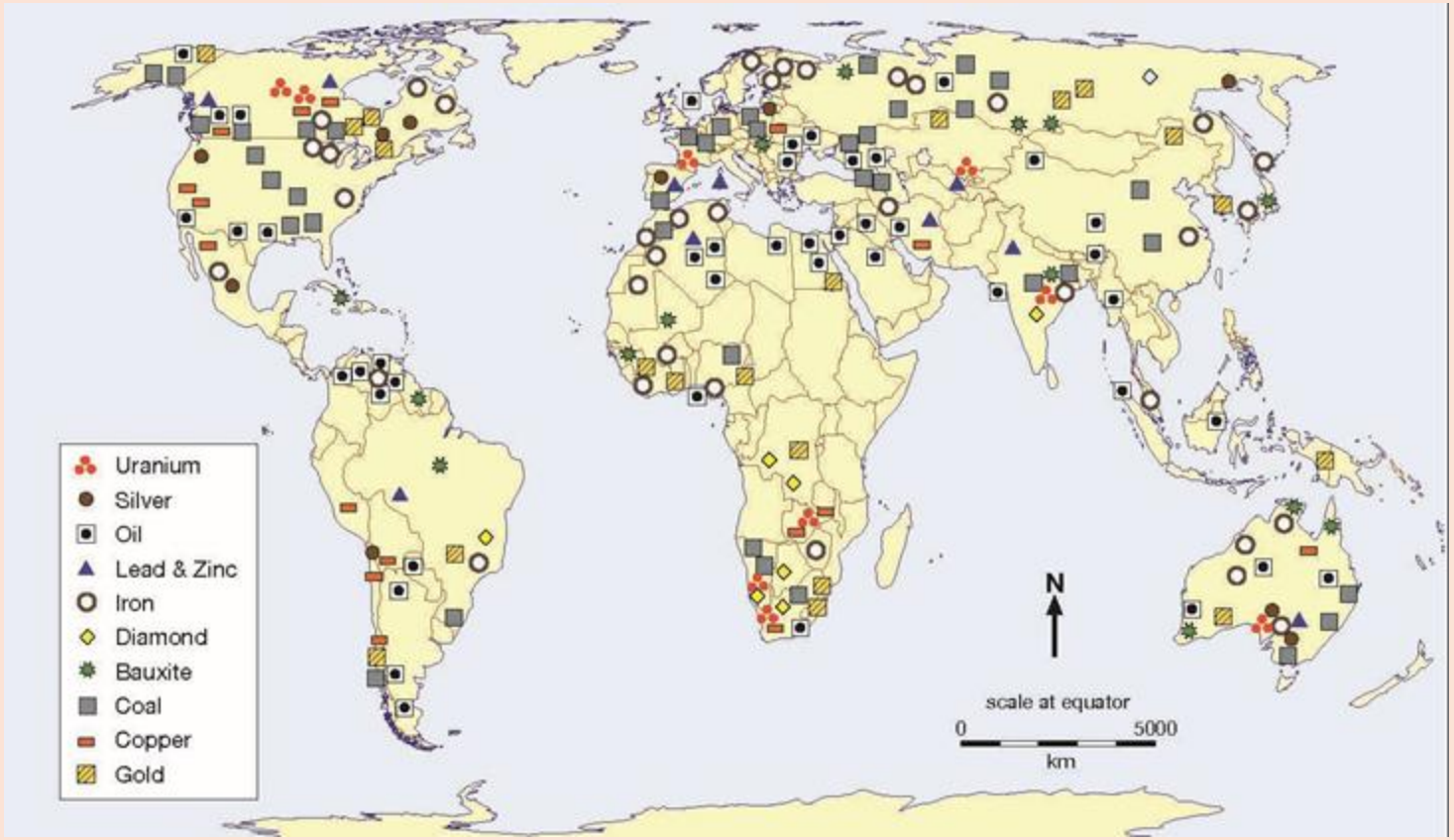
There are two main ways of **extracting** minerals from Earth's surface:

mining

quarrying

Mining

Mining is the process of digging deep under the ground to remove natural resources; it may be on the land, or in oceans and lakes.



Mining

During underground **mining**, tunnels are blasted deep into the earth and rock to reach the minerals, which are mixed with other unwanted rocks and minerals. The mix of rock and minerals is taken away from the mine to be cleaned and processed.

Quarrying

Quarrying is when a hole or pit in the surface of the ground is made to remove natural resources such as minerals. It is typically used to remove non-metallic rock and minerals (such as sand and clay) from shallow, open pits and holes.

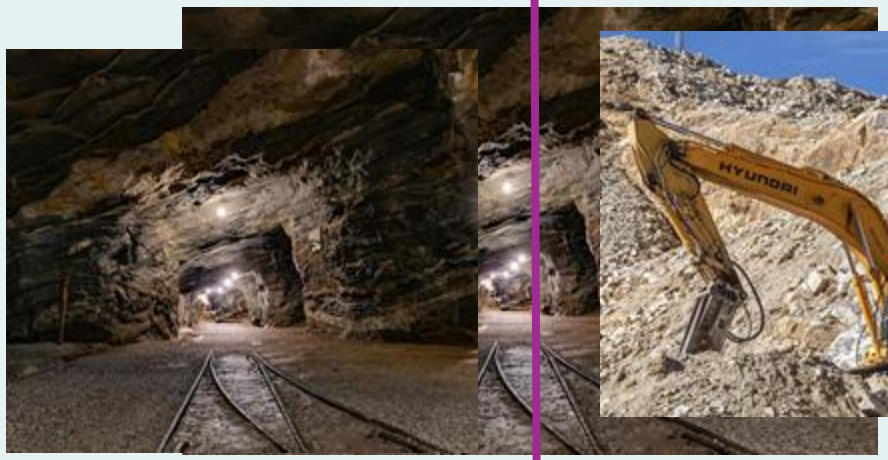
A main difference between a quarry and a mine is that a mine is usually underground, where as a quarry does not have a roof.

In the UK, there are over 2000 active, working mines and quarry sites.

Check

Look at the pictures below. Identify which are quarries and which are mines.

mines



quarries

The **extraction** of economic minerals can leave large environmental impacts on the local landscapes.

1. Mine dumps Waste left behind after valuable minerals have been **extracted** can often be radioactive, toxic or acidic. They may contain dust particles that can affect the local air quality.

2. Deforestation

The creation of mines requires a large area of land. There will often have been natural habitats such as forests on the land. When these are cleared for the the mine, the landscape can be damaged, and habitat is lost for animals and other living things.

3. Water pollution

Some mines release **mining** waste into nearby river systems. Dangerous chemicals can end up in a range of ecosystems and harm fish. Humans may also drink this contaminated water or eat the fish.

Check

Mines and quarries can bring a range of problems to a local area, such as:

a extracting valuable minerals from Earth's surface

b less jobs for locals

c mine dumps, deforestation and water pollution ✓

Mining and quarrying can also bring positive impacts to a local area.

1. Jobs

Mining and quarrying sites create jobs for the local community. There may also be construction jobs, such as building roads to the mine or quarry.

2. Improves infrastructure

Mining companies may spend money on improving local road networks, as well as phone networks and electricity and water systems. They may also spend money on building new schools and hospitals.

Check

True or false?

Quarries and mines only bring negative impacts to the local community.

T True

F False ✓

Justify your answer

a Quarries and mines can bring more jobs and improved infrastructure to a local community. ✓

b Quarries and mines don’t bring any negative impacts to the local community.

Task B

Extraction of economic minerals

Practice

Imagine a company has found valuable minerals near your school and wants to set up a new quarry or mine.

Create a poster to inform local residents of the possible positive and negative impacts to the local community.

Your poster may have included some of the following points.

Positives

Jobs
Mines and quarries will bring more jobs to our local area. This means some families in our local community will have more money.

Local Infrastructure

Our roads and local power supplies, as well as water supplies could improve.
The **mining** company may also invest in building a new school or hospital.

Negatives

Deforestation
It is likely that some of our local habitats and ecosystems will suffer as trees may get cut down to make space for the mine.

Mine Dumps
There may be some toxic and harmful waste which can affect local air quality

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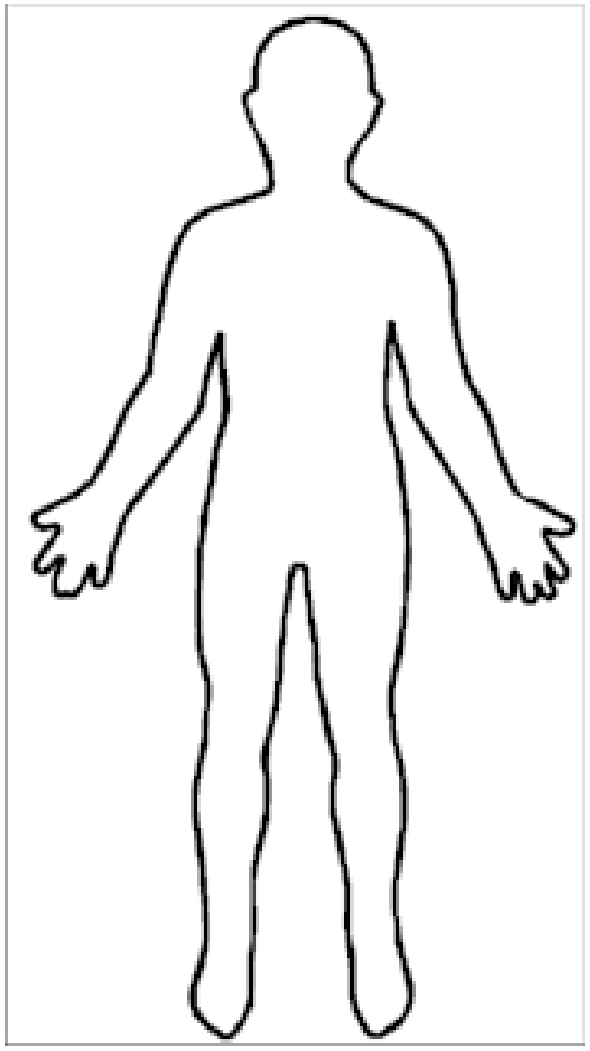
ACHIEVING MORE TOGETHER

Year 5 PSHE
Topic 3: Puberty

Lesson 2 – How do our emotions change during puberty?

This lesson uses elements of My Life lesson 5.5.2 plus additional content written by the OAT PSHE team

Physical changes in puberty



What do you recall from our lesson yesterday?

Discuss with a partner:

- What are the physical changes in both boys and girls during puberty?
- What products can be used for someone to stay clean and hygienic during puberty?

Our key question:

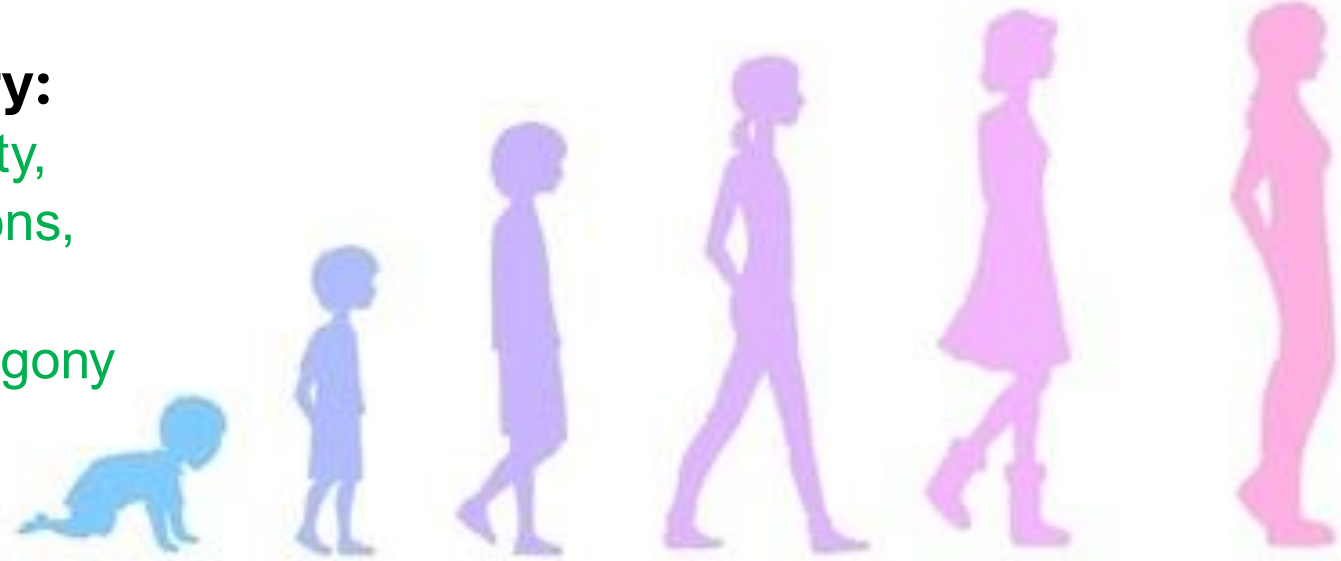
How do our emotions change during puberty?

By the end of this lesson, you will:

- Have **discussed** the changes in hormones and emotions that someone may feel during puberty
- **Know** the names of the hormones which start to be produced during puberty, which can have a strong effect on emotions
- Have **practised** giving advice and support to others

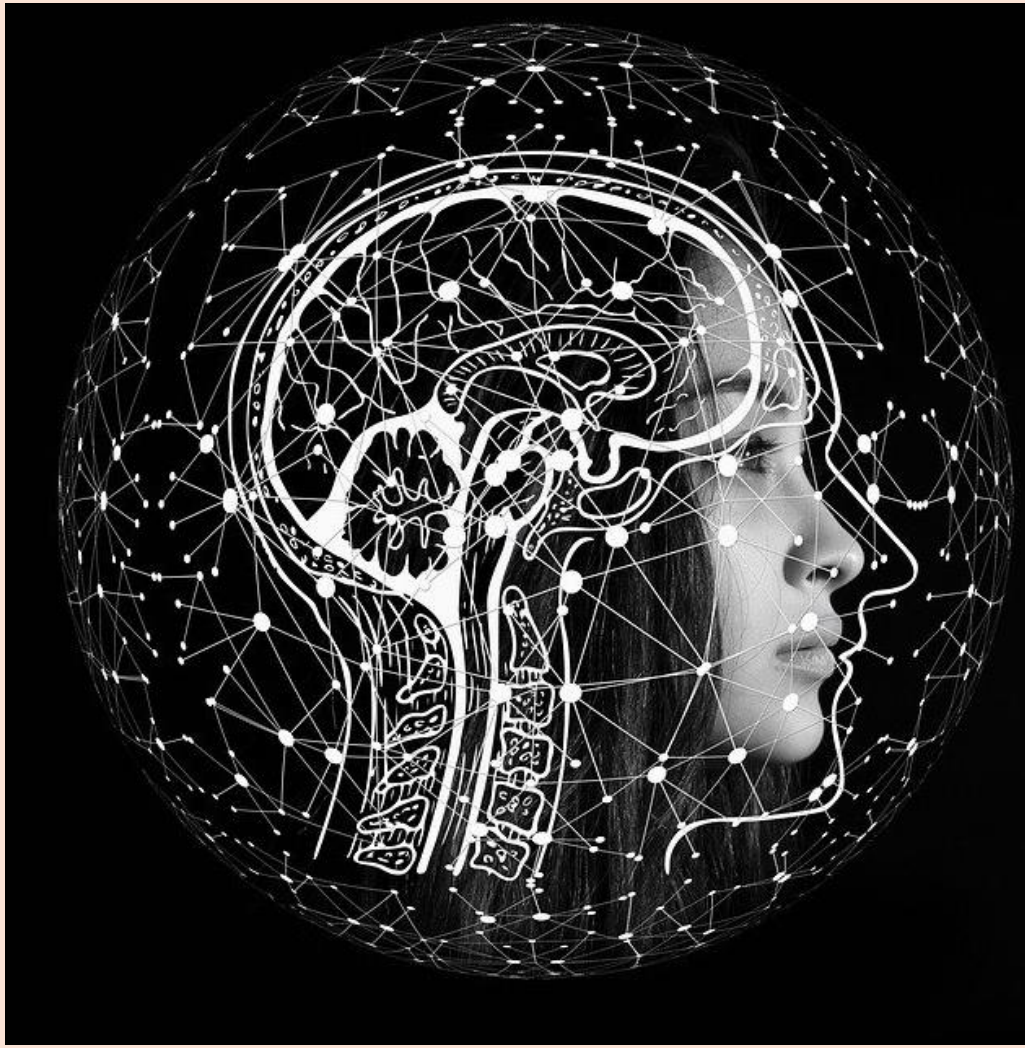
Key vocabulary:

hormones, puberty, emotions, isolations, embarrassment, anxiety, advice, agony aunt/uncle



Emotions game

Hormones



When you are about to begin puberty, your body starts to produce the hormones oestrogen and progesterone, or testosterone.

In girls, oestrogen and progesterone cause the growth of breasts and the development of the uterus, fallopian tubes and ovaries.

Testosterone in boys causes the testes to begin to produce sperm.

Both boys and girls have some levels of each of these hormones in their bodies. However, girls usually have more oestrogen and boys have more testosterone, which results in differences between girls and boys physically.

As well as physical changes, hormones have a strong effect on emotions. They may make you feel more emotional than you normally would, so you may become more easily upset, angry or tearful.

Scenario 1

Lucy and her friend Charlie are playing a game when another friend, Alex, wants to join in. Charlie says Alex can't play because Lucy is ***her*** friend.

Lucy doesn't want to upset Alex, but she also doesn't want to upset or fall out with Charlie. Lucy can't understand why Charlie is getting so upset, because she is usually really friendly and sociable and wants to play with everyone.

What could Lucy do?

Scenario 2

Anand wants a mobile phone, but his parents have said he is too young and that mobiles are too expensive. Anand is angry with his parents and tells them that they don’t understand how he feels. He says that all his friends have one, and the family have a big argument. Anand shouts at them and storms out of the room.

What advice would you give him?

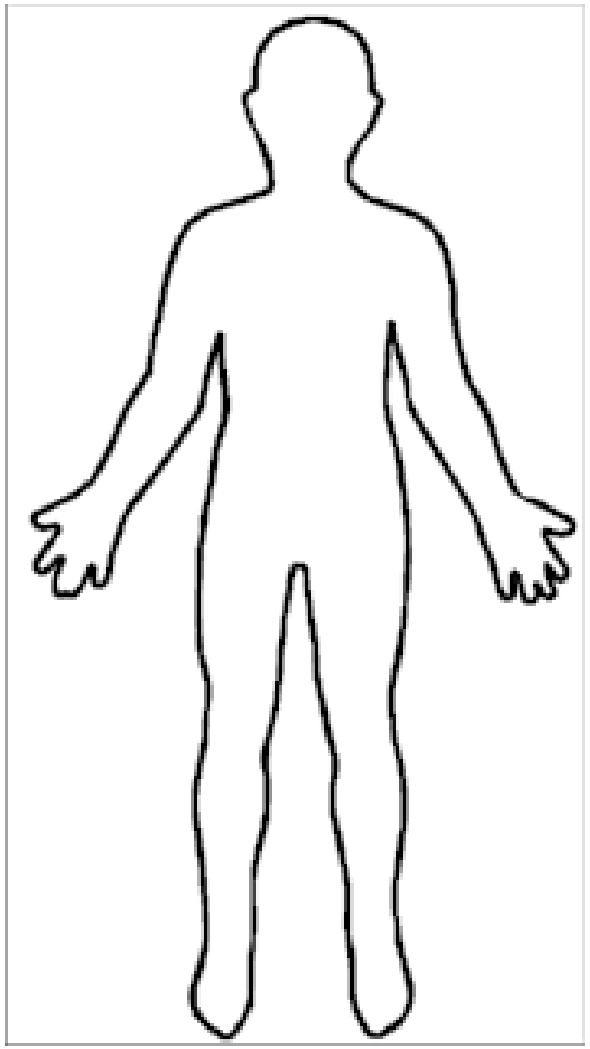
Scenario 3

Agneska is 11 and is usually very happy. She loves being part of the school choir and hockey team and she plays the drums in the school orchestra.

Recently she just feels angry all the time. She feels angry at her friends, her step mum and dad, her little brother and her teacher. She doesn’t understand why she feels so angry but it's making her miserable and she is crying all the time. Sometimes she just doesn’t want to do anything.

What could Agneska do?

Emotional changes in puberty



Go back to your body outlines.

Annotate the body with:

- Examples of the emotions that someone may experience during puberty
- Names of the hormones that cause these emotional changes

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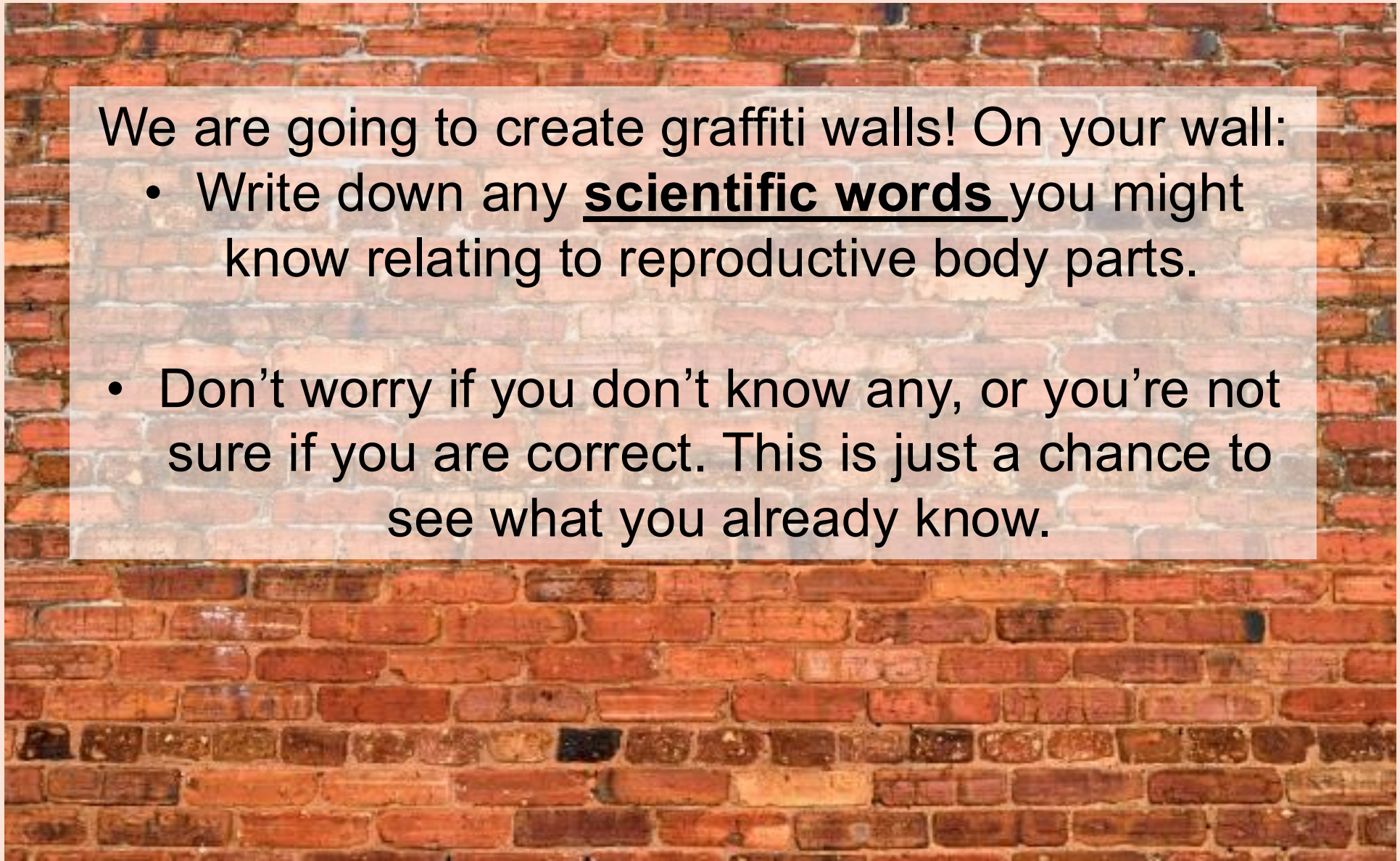
ACHIEVING MORE TOGETHER

Year 5 PSHE
Topic 3: Puberty

Lesson 3 – What are the functions of genitalia?

This lesson uses elements of My Life lesson 5.5.3 plus additional content written by the OAT PSHE team

What do you already know?



We are going to create graffiti walls! On your wall:

- Write down any **scientific words** you might know relating to reproductive body parts.

- Don’t worry if you don’t know any, or you’re not sure if you are correct. This is just a chance to see what you already know.

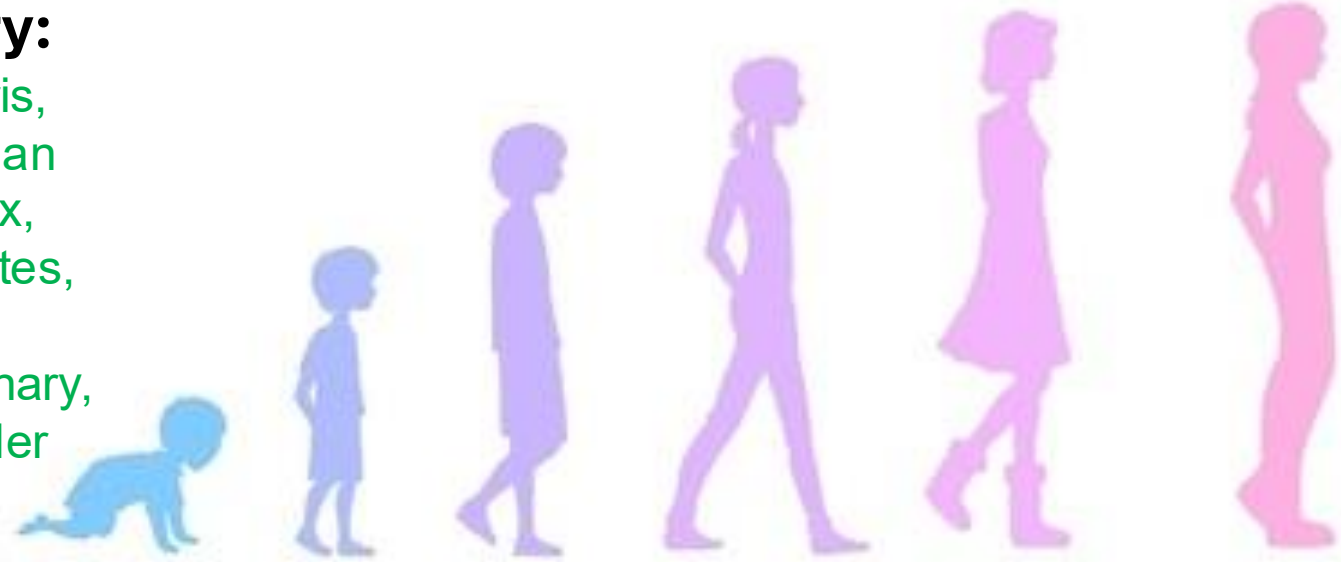
Our key question:
What are the functions of genitalia?

By the end of this lesson, you will:

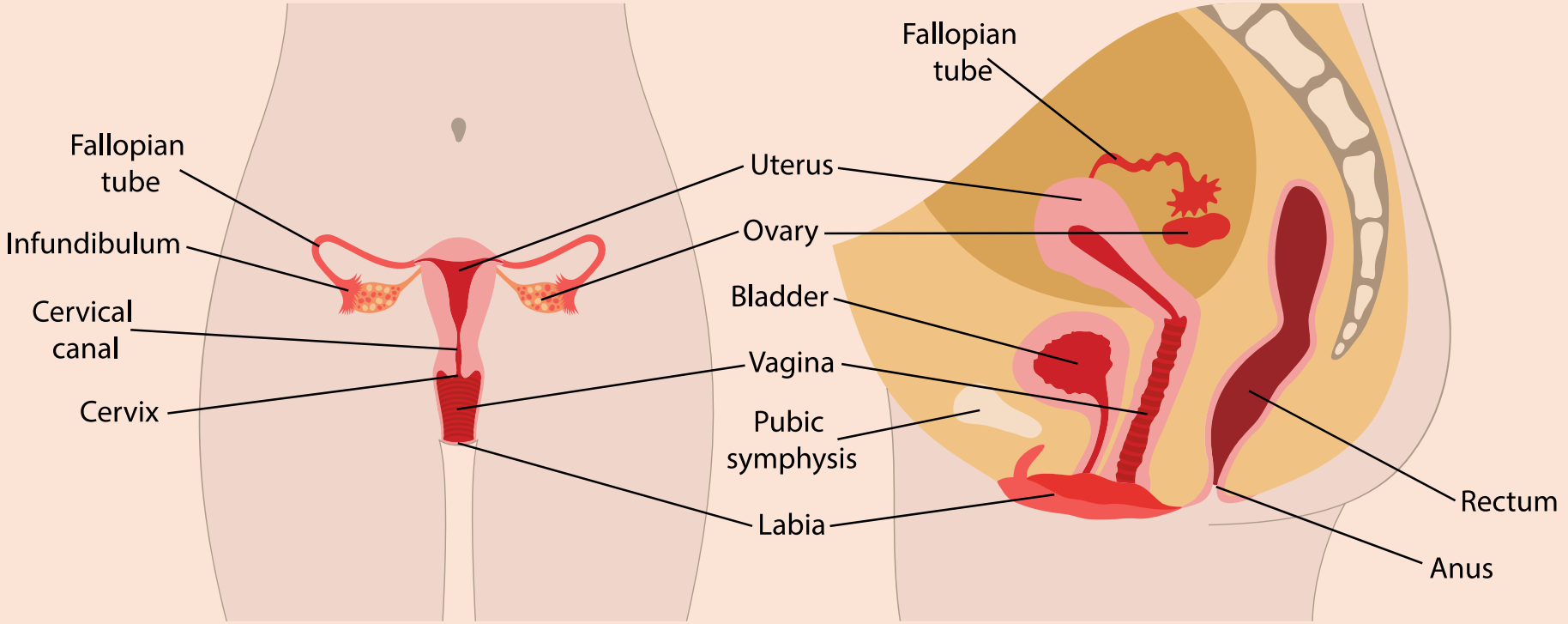
- **Know** the correct scientific names for the main reproductive organs
- Be able to **label** the main reproductive organs on a diagram
- Be able to **explain** the functions of the main reproductive organs

Key vocabulary:

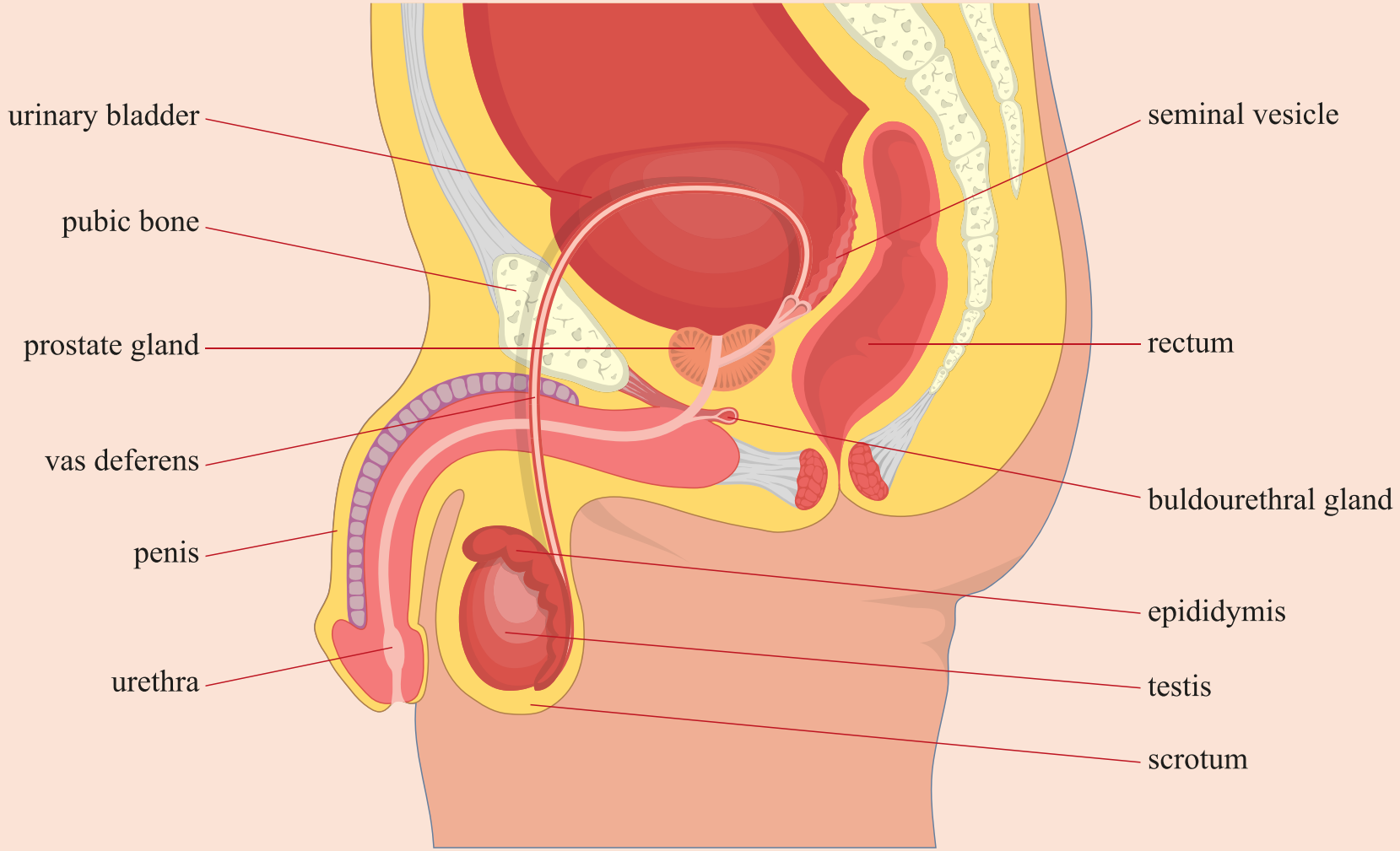
vagina, vulva, clitoris, ovaries, ova, fallopian tubes, uterus, cervix, penis, testicles, testes, urethra, foreskin, scrotum, gender binary, assigned sex, gender identity



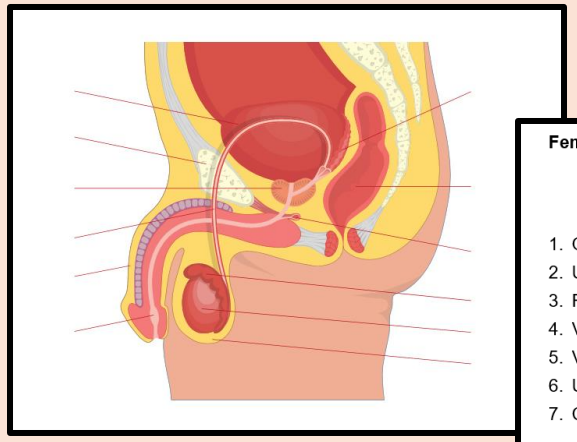
Female reproductive anatomy



Male reproductive anatomy



Matching Game



Female reproductive body parts

1. Ovary
2. Uterus
3. Fallopian tube
4. Vagina
5. Vulva
6. Urethra
7. Cervix

A. These are the tubes where the eggs travel to the uterus.

B. This is on the outside of the body and includes the clitoris and labia.

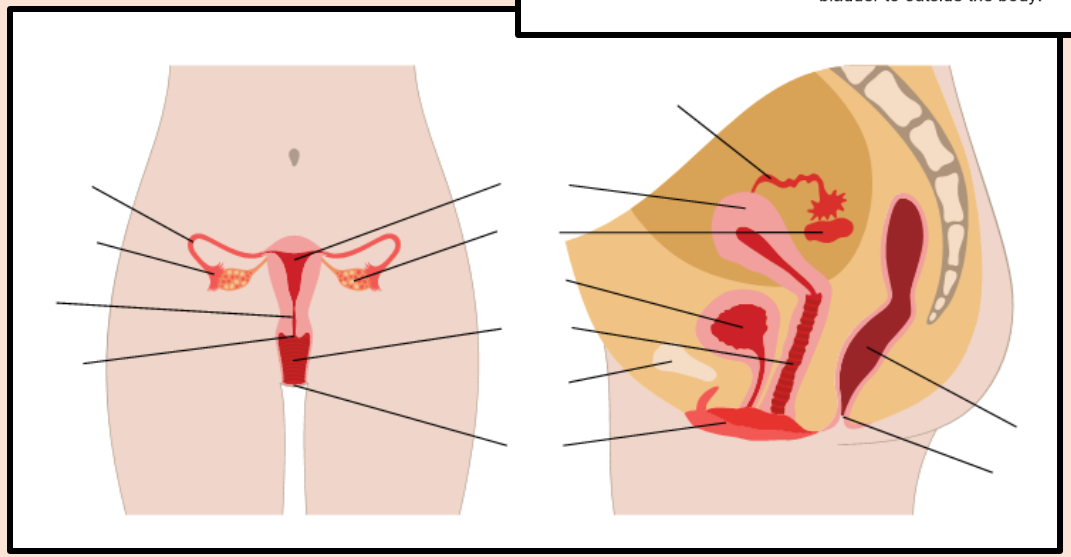
C. A stretchy tube from the cervix to the vulva outside the body.

D. This is the entrance to the uterus.

E. This is shaped like an upside-down pear and is also called the womb. It is where a baby grows during pregnancy.

F. This is where eggs are made.

G. This is the tube which carries urine from the bladder to outside the body.



Your task:

Match the body part to its function and its place on the diagram.

When you have finished, and before you stick it down, check with your partner to see if you agree.

Gender identity

When we talk about boys and girls, this is called gender binary. This is the term we use to describe the two traditionally Western gender identities (male/man/boy) and (female/woman/girl.)

When someone is born, they are given a gender based on their genitalia. This is called assigned sex.

Sometimes, a person does not feel or identify with their gender they were born with. They have a different gender identity.

This can feel confusing but there is lots of help and support available. If you are having these feelings it is important that you talk to someone rather than worrying alone; I will share some trusted people and organisations at the end of this lesson.

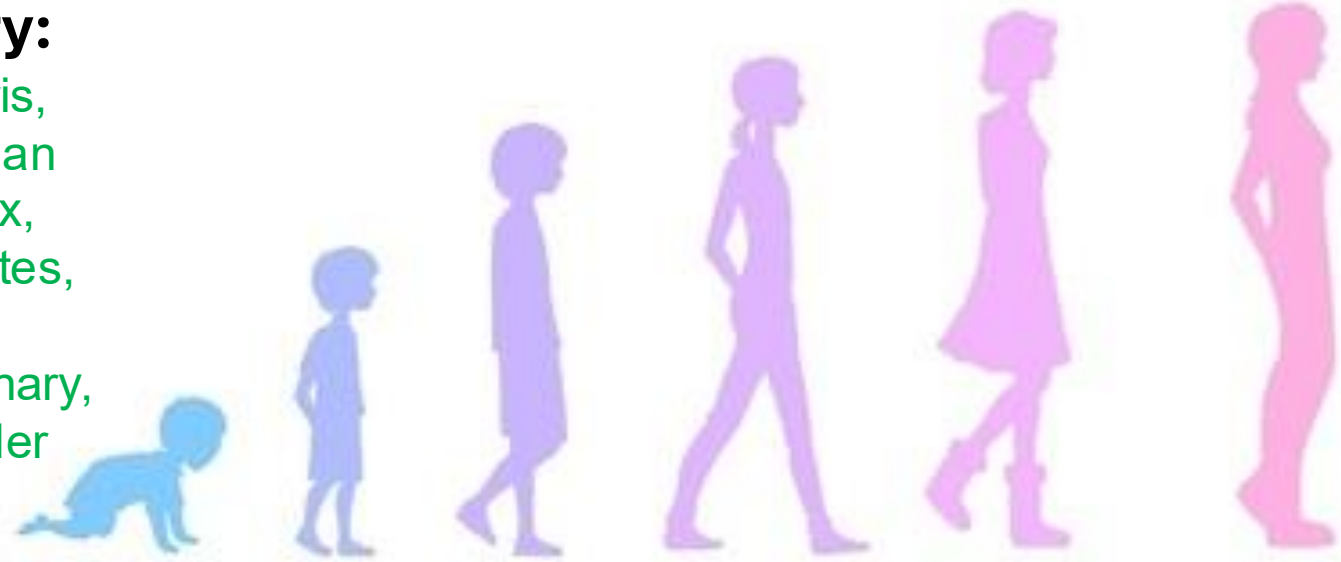
Our key question:
What are the functions of genitalia?

By the end of this lesson, you will:

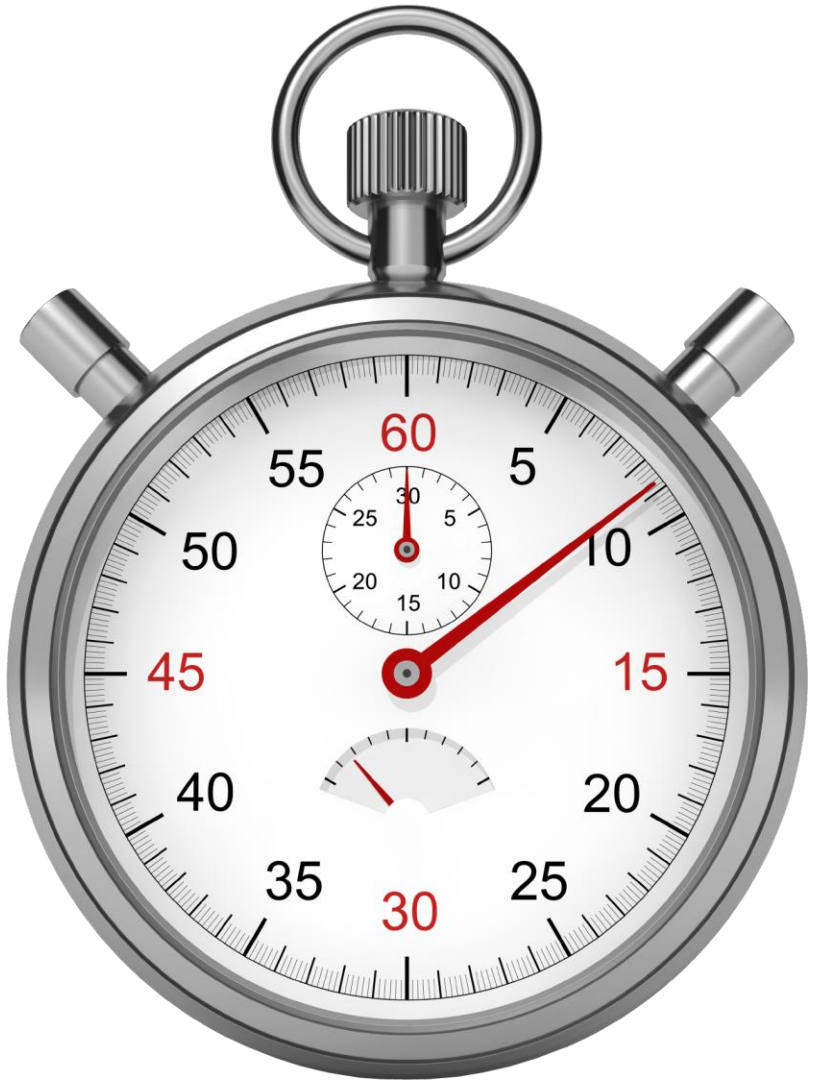
- **Know** the correct scientific names for the main reproductive organs
- Be able to **label** the main reproductive organs on a diagram
- Be able to **explain** the functions of the main reproductive organs

Key vocabulary:

vagina, vulva, clitoris, ovaries, ova, fallopian tubes, uterus, cervix, penis, testicles, testes, urethra, foreskin, scrotum, gender binary, assigned sex, gender identity



Just a minute



With a partner, you have 1 minute to explain to each other what you have learnt about during this lesson today.

I will be listening for the use of correct scientific terminology!

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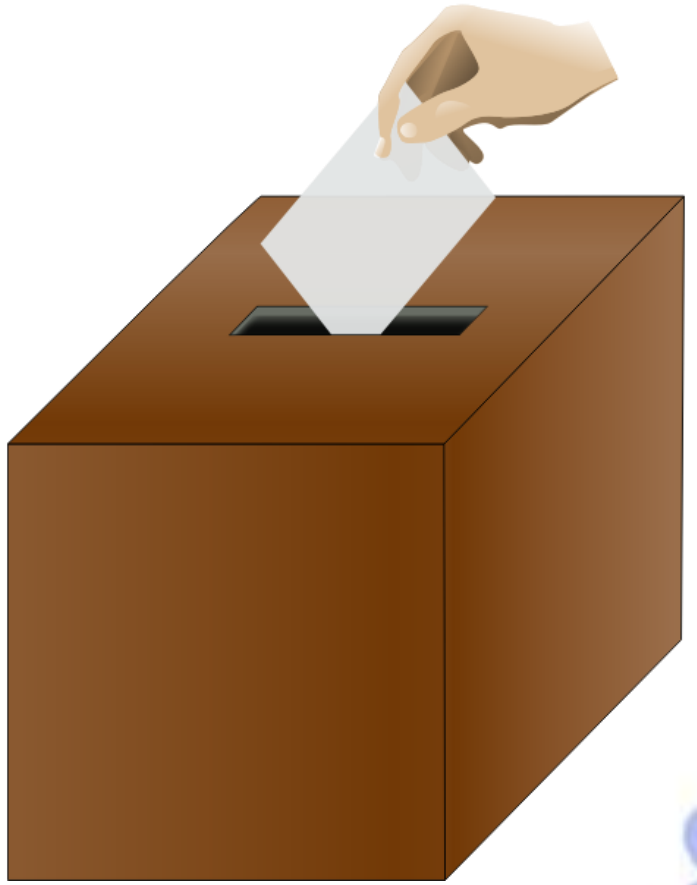
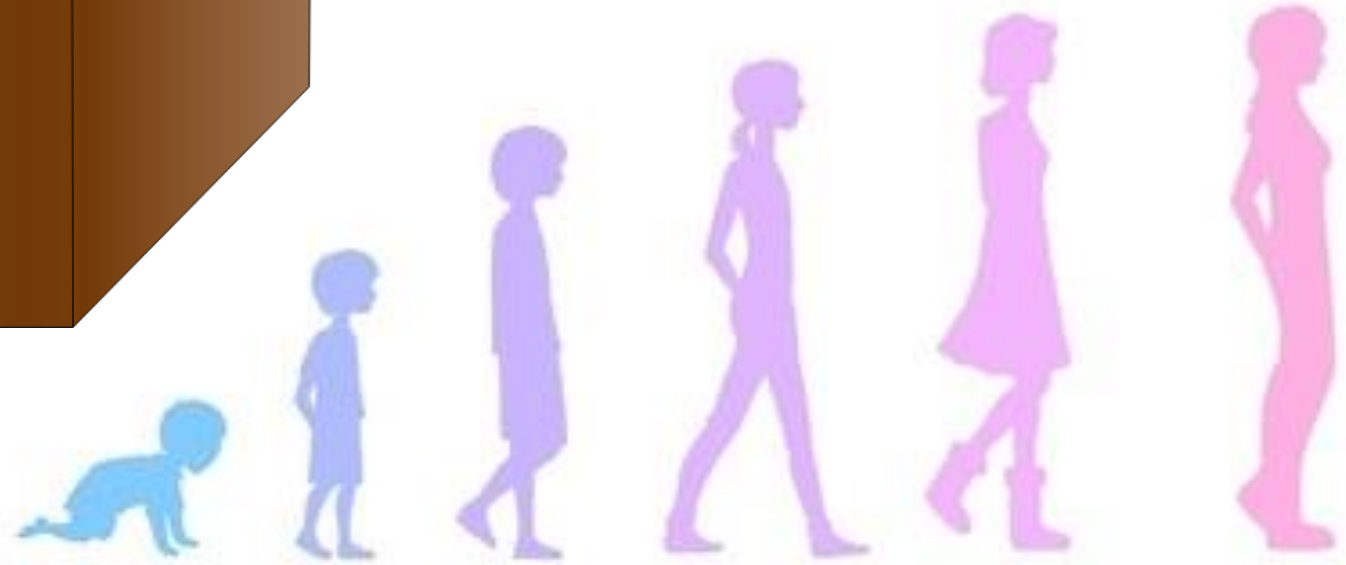
What questions do you have?



We want to make sure that you have any questions you have about puberty answered.

If you have any questions from the lesson today you would like to ask, then put them into the anonymous question box.



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Seeking support

If you have questions or concerns about today's lesson, you can always speak to:

- Your parent or carer
- Your tutor
- Your Head of Year
- A member of the school safeguarding team

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