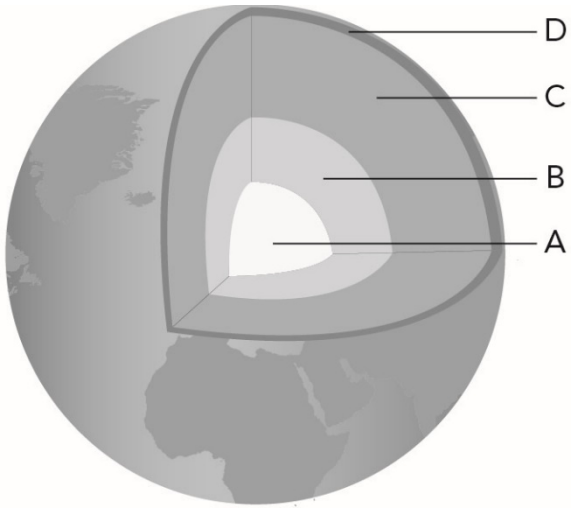
Name _____ **Date** _____

End-of-unit 4 test

The End-of-unit tests have been written by the authors.
These may not fully reflect the approach of Cambridge Assessment International Education.

20 marks

1 Here is a diagram of the internal structure of the Earth.

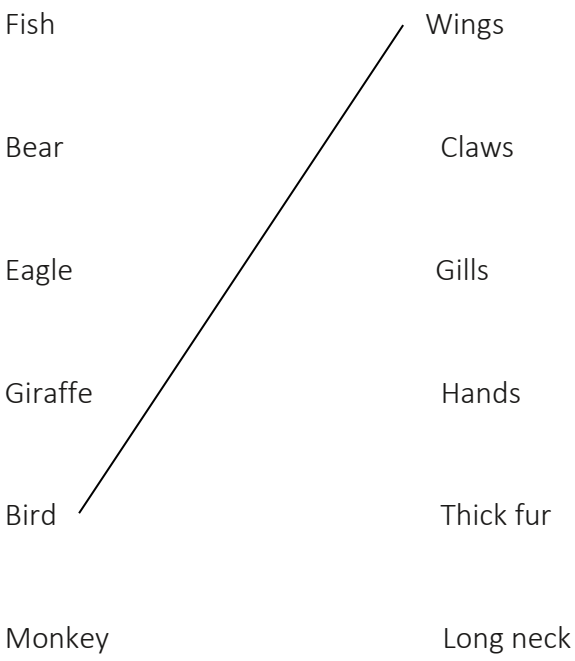


Circle the correct letters for the layers that answer the questions.

a	Which layer is the crust?	A	B	C	D
b	Which layers are liquid?	A	B	C	D
c	Which layers consist of metals?	A	B	C	D
d	Which layers are solid?	A	B	C	D

2 Draw lines to link each animal with a characteristic that suits its habitat.

One is done for you as an example.



3 Complete the sentences about earthquakes. Choose the words from this list.

energy	**noise**	**damage**	**waves**	**crust**	**core**

a Earthquakes happen because of sudden movements of rocks in the Earth's _____.

b When huge pieces of rock move they create a lot of _____.

c The energy transfers into _____.

4 Circle the correct answer.

a Around which ocean do we find most of the world's earthquakes and volcanoes?

Indian Atlantic Pacific

b Which of these countries is most likely to have volcanoes?

Japan England Australia

5 Chimpanzees are suited to a warm habitat where there are trees for them to live in. They eat leaves and fruits from the trees.

Chimpanzees are also kept in zoos all over the world. A zoo is not their natural habitat. List **two** ways that a zookeeper can make sure that the chimpanzees survive in the zoo.

The zookeeper can make sure the chimpanzees have:

_____

_____

Name _____ **Date** _____

Worksheet 4.1

Plan and make your own model

Work with a friend to plan and make your own model of the structure of the Earth.

1 What materials did you use?

_____

_____

2 How did you show the different layers?

_____

_____

3 How did you make the inner core heavy and solid?

_____

_____

4 How does your model help to explain the internal structure of the Earth?

_____

_____

5 Draw a picture of your model in the space below.

6 If possible, make your model and bring it to class.

Name _____ **Date** _____

Worksheet 4.4

Case study: Orangutans

Read this information about how orangutans are suited to their habitat.

Orangutans live in **tropical forests** in Asia. For most of the time orangutans live in the tops of the trees.

Orangutans are suited to their habitat in many ways. For example, they have strong, very long arms to allow them to **swing** from one tree to the next. These arms can be over two metres long, which is longer than their bodies! They also have strong, short legs to help them to **climb** trees.

Orangutans have five fingers just like humans, so they can **grip** branches very well. They use their fingers to **grab** and open the fruit that they eat.

The orangutans' fingers and hands are very **sensitive**. This allows them to control the movement of each finger and do **delicate tasks**. For example, they can hold a thin stick and use the stick to get **termites**, large ant-like insects, from holes in trees.

Name _____ **Date** _____

Worksheet 4.4A

Glossary

tropical forest – a forest in a hot, wet part of the world.
The trees there are very tall with big green leaves

swing – move forwards and backwards when you are holding on to something with your hands

climb – the action of using your hands and feet to get to the top

grip – hold on tightly

grab – snatch

sensitive – lots of feeling

delicate task – a task or action that needs very careful finger work

termites – large ant-like insects that animals like the orangutan like to eat

Questions

Use the words above to complete the sentences below.

1 The habitat that orangutans live in is a _____ forest.

2 Orangutans are suited to life in the tops of the trees.

They _____ from one tree to the next tree with their long arms.

3 They _____ to the tops of the trees with their strong legs.

4 They _____ the branches with their strong fingers.

They use their fingers to _____ fruit.

5 They can do _____ tasks with their hands.

For example, they can use a thin stick to get _____ from holes in trees.

Name _____ Date _____

Worksheet 4.4B

Choose the correct alternatives in these sentences:

1 The habitat that orangutans live in is tropical grassland / tropical forest.

2 Orangutans live in the tops of the trees / on the forest floor.

3 Orangutans swing / jump from tree to tree.

They can do this because they have very short / long arms.

4 Orangutans have three / five fingers so they can grip / slide down branches.

5 Orangutans can hold small objects like a thin / thick stick with their fingers.

6 They have strong long / short legs to help them to climb trees.

7 Orangutans use their fingers to grab leaves / fruit to eat.

Name _____ **Date** _____

Worksheet 4.4C

1 Describe the habitat the orangutan lives in.

_____

2 In which part of this habitat do orangutans live?

_____

3 What do orangutans eat?

_____

4 Describe **two** ways orangutans are able to swing from one tree to another.

_____

_____

5 How does an orangutan get termites from a hole in a tree?

_____

6 You can see orangutans in zoos in countries with cold climates.
What must the zookeeper provide for the orangutans to help them to survive?

_____

_____

Name _____ **Date** _____

Language worksheet 1

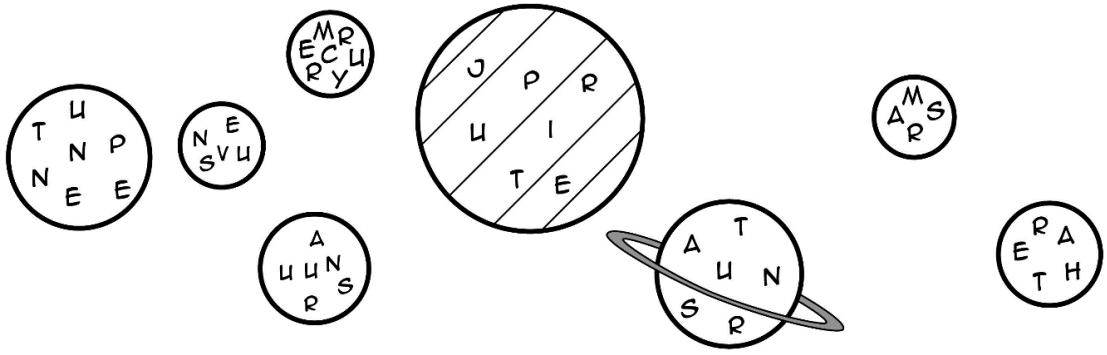
Vocabulary building

1 Draw lines to link each word with its meaning.

The first one has been done as an example.

Word	Meaning
Proof	A line that light travels in.
Asteroid	Movement of a body in space around a larger body.
Reflect	A rocky mass that orbits the sun.
Absorb	Scientific evidence that something is true.
Ray	The action of light bouncing off a surface.
Orbit	To take in a substance.

2 Here is a picture of the eight planets in the solar system.



Unscramble the names of the planets. Write them in order from the planet closest to the Sun to the planet furthest from the Sun.

_____

_____

_____

Language worksheet 2

Skills development

1 Fill in 'better than' or 'worse than' to complete these sentences.

a A mirror reflects light _____ any other surface.

b A sheet of brown paper reflects light _____ a sheet of aluminium foil.

2 Complete the following sentences. Choose from the following words:

lengthen	disappear	appears	towards	shorten	spins	away from	likes

a The Sun _____ to move across the sky every day.

b Shadows _____ from early morning to midday.

c Shadows _____ towards evening.

d The Earth _____ on its axis.

e The side of the Earth facing _____ the Sun has day.

f The side of the Earth facing _____ the Sun has night.

3 Describe where most of the asteroids are in the solar system.

_____

_____

4 Describe a comet.

_____

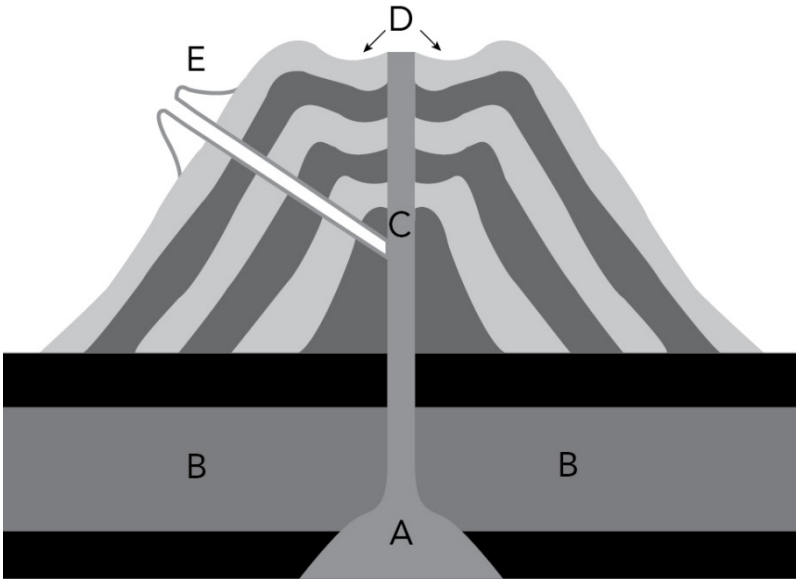
_____

_____

Name _____ **Date** _____

Language worksheet 1

Vocabulary building



1 Name the parts of the volcano labelled A–E.

A _____

B _____

C _____

D _____

E _____

2 Fill in the words to complete these sentences. Use these words:

composite	earthquakes	Ring	ejects	tsunami	ash	lava	Fire	breaks	Pacific

a The volcano _____ material from the crater.

The volcano in the diagram is a _____ volcano because it has repeating layers of _____ and _____.

b Volcanoes form where there are _____ in the Earth's crust.

c When an earthquake starts under the sea it causes a giant wave called a _____.

d Volcanoes and _____ are common around the _____ Ocean.

This area is called the Pacific _____of _____.

Language worksheet 2

Skills development

1 Complete the following sentences by adding ‘thicker than’ or ‘thinner than’.

a The mantle is _____ the crust.

b The mantle is _____ the core.

2 Complete the following sentences by adding ‘hotter than’ or ‘cooler than’.

a The crust is _____ the mantle.

b The core is _____ the mantle.

3 Describe the difference between:

a the external structure of the Earth and the internal structure of the Earth

_____

_____

b magma and lava

_____

_____

c an earthquake and a tsunami.

_____

_____

4 Read the following information about elephants.

Elephants live in hot, wet regions where there is grass and trees. They spend 12 to 18 hours a day eating! They can eat hundreds of kilograms of grass, leaves and twigs every day. Elephants can also drink up to 200 litres of water a day. They use their long trunks to suck up water and grip grass, twigs and leaves.

a Describe the habitat of an elephant.

_____

b Describe one way that an elephant is suited to its habitat.

_____

c Do you think elephants can survive in a dry habitat? Why?

_____

_____

Name _____ **Date** _____

End-of-unit 5 test

The End-of-unit tests have been written by the authors.
These may not fully reflect the approach of Cambridge Assessment International Education.

[20 marks]

1 Arun is reading a book before bedtime.

Complete these sentences.

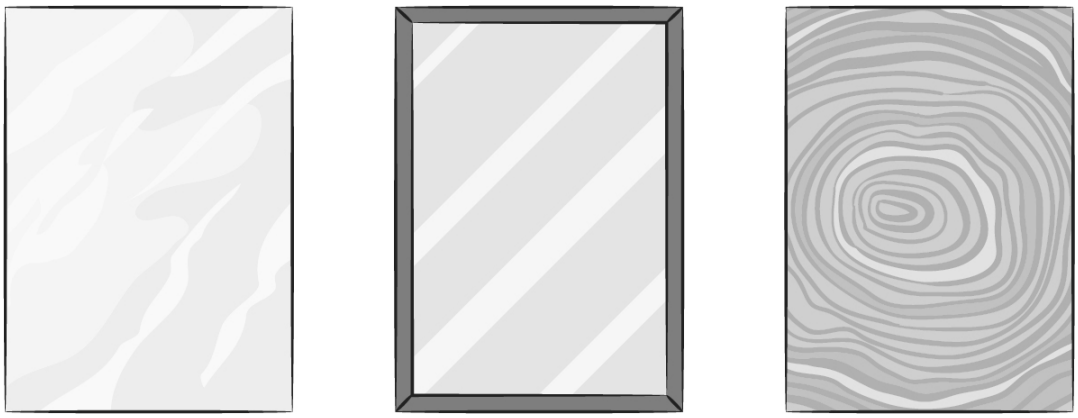
a Light travels in straight lines called _____.

b Light travels from the lamp to the _____.

c Arun sees the book because light travels into his _____.

d On the picture, draw lines with arrows to show how Arun sees the book.

2 Here are three different surfaces: aluminium foil, a mirror and wood.



a Which of the three surfaces do you think reflects light best?

_____

b Give a reason why this surface reflects light well.

_____

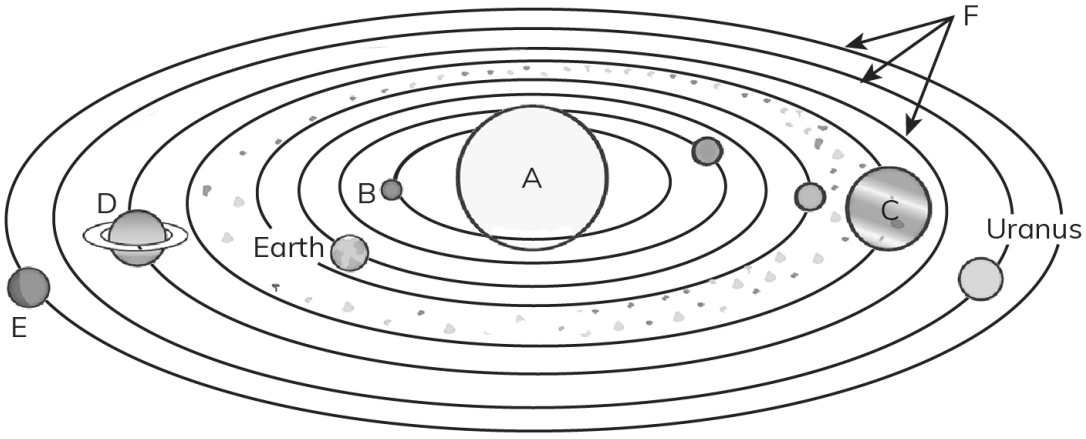
c Which of the three surfaces do you think absorbs light?

_____

d Give a reason why this surface absorbs light.

_____

3 Here is a drawing of the solar system.



a Name the bodies lettered A–E.

A: _____ D: _____

B: _____ E: _____

C: _____

b Name the lines marked F: _____

c What do the dots on the diagram represent?

_____

d What Earth movement causes day and night?

_____

_____

e How long does this movement take?

_____

4 How do shadows change in length between the times below?

a Early morning and midday shadows become _____ .

b Midday and evening shadows become _____ .

Name _____ **Date** _____

Worksheet 5.2

Light travels in straight lines

Sergio and Carlos are camping in the mountains with their father.
It is evening and they have lit a fire to cook their supper.

1 Carlos has gone to collect wood for the fire. Identify the light source.

_____

2 On the picture draw rays to show how Carlos sees the wood.
Show the direction of the rays with arrows. Label the arriving ray and the reflected ray.

3 Sergio and his father are sitting facing each other.
Identify the light source that allows the father to see Sergio.

_____

4 On the picture draw rays to show how the father sees Sergio.
Show the direction of the rays with arrows. Label the arriving ray and the reflected ray.

Help sheet

Points to remember when you draw a ray diagram:

- Identify the light source.
- Identify the object.
- Identify the person who sees the object.
- Draw the arriving ray from the light source to the object.
  The arrow must point to the object.
- Draw the reflected ray from the object to the person's eyes.
  The arrow must point to the person's eyes.

For question 2: On the picture draw rays to show how Carlos sees the wood.
Show the direction of the rays with arrows. Label the arriving ray and the reflected ray.

- The Moon is providing light because it is reflecting light from the Sun.
- The object is the wood.
- The person is Carlos.
- Draw the arriving ray from the Moon to the wood on the ground near Carlos.
  Make the arrow point towards the wood.
- Draw the reflected ray from the wood to the Carlos's eyes.
  Make the arrow point towards Carlos's eyes.

Now answer question 4 in the same way.

Stretch sheet

It is a sunny day at the market. Madame Poirot is selling cooked chickens.
Ben has bought a chicken.

5 In the picture the Sun is shining from the top left corner.
Draw rays to show how Ben sees Madame Poirot's head.
Label the arriving ray and the reflected ray.

6 On the picture, draw rays to show how Madame Poirot sees Ben's camera.
Label the arriving ray and the reflected ray.

Name _____ **Date** _____

Worksheet 5.4A

Case study: Jupiter

Read the case study about Jupiter.

Jupiter is the largest planet in the solar system.
Jupiter orbits the Sun once every 12 Earth years.

Jupiter has four large moons, and at least 24 small moons which orbit it.
The largest moon is called Ganymede.
This is the largest moon in the whole solar system.

Jupiter consists mainly of two gases: hydrogen and helium, with smaller amounts of other gases in the surface layers.

Space projects have sent robotic probes to Jupiter.
A robotic probe is an unmanned spacecraft that lands on a body in space and collects data and takes photographs.
Probes have sent photographs of Jupiter back to scientists on Earth.
The photographs show colourful bands of clouds surrounding Jupiter.
No water has been found on Jupiter.

The Juno probe was launched from the USA in 2011.
It arrived in orbit around Jupiter in 2016.
Scientists hope it will stay in orbit around Jupiter until 2021.
It is powered by solar panels.
Already it has sent back amazing photographs of Jupiter.

Answer these questions.

1 What is a planet?

_____

2 Which is the largest planet in the solar system?

_____

3 What is a moon?

_____

4 How many moons does Jupiter have?

_____

5 What material does Jupiter consist of?

_____

6 What is Juno?

_____

Name _____ **Date** _____

Worksheet 5.4B

Case study: Jupiter

Read the case study about Jupiter.

Jupiter is the largest planet in the solar system.
Jupiter orbits the Sun once every 12 Earth years.

Jupiter has four large moons, and at least 24 small moons which orbit it.
The largest moon is called Ganymede.
This is the largest moon in the whole solar system.

Jupiter consists mainly of two gases: hydrogen and helium, with smaller amounts of other gases in the surface layers.

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It arrived in orbit around Jupiter in 2016.
Scientists hope it will stay in orbit around Jupiter until 2021.
It is powered by solar panels.
Already it has sent back amazing photographs of Jupiter.

1 Complete the table below to compare the planets Earth and Jupiter.

	Earth	Jupiter
Position in solar system	3rd from Sun	
Time to complete one orbit around the Sun	1 year	
Number of moons	1	
Composition	Rocks	
Is there any water on the surface?	Yes	

2 How do we get more information about Jupiter?

_____

3 Describe what the Juno probe is doing.

_____

_____

_____

Name _____ **Date** _____

Worksheet 5.4C

Case study: Jupiter

Read the case study about Jupiter.

Jupiter is the largest planet in the solar system.
Jupiter orbits the Sun once every 12 Earth years.

Jupiter has four large moons, and at least 24 small moons which orbit it.
The largest moon is called Ganymede.
This is the largest moon in the whole solar system.

Jupiter consists mainly of two gases: hydrogen and helium, with smaller amounts of other gases in the surface layers.

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No water has been found on Jupiter.

The Juno probe was launched from the USA in 2011.
It arrived in orbit around Jupiter in 2016.
Scientists hope it will stay in orbit around Jupiter until 2021.
It is powered by solar panels.
Already it has sent back amazing photographs of Jupiter.

1 a Which star does Jupiter revolve around?

_____

b How long does Jupiter take to orbit once round this star?

_____

2 Draw a diagram in the space below to represent the orbit of Jupiter.
Show the movement with arrows. Label the bodies and the orbit.

3 Compare the surfaces of Earth and Jupiter.

_____

4 How do we continue to find out more about Jupiter and its moons?

_____

5 Do you think it would be possible for a spacecraft to land on Jupiter?
Explain why or why not.

_____

_____

Name _____ **Date** _____

Worksheet 5.6

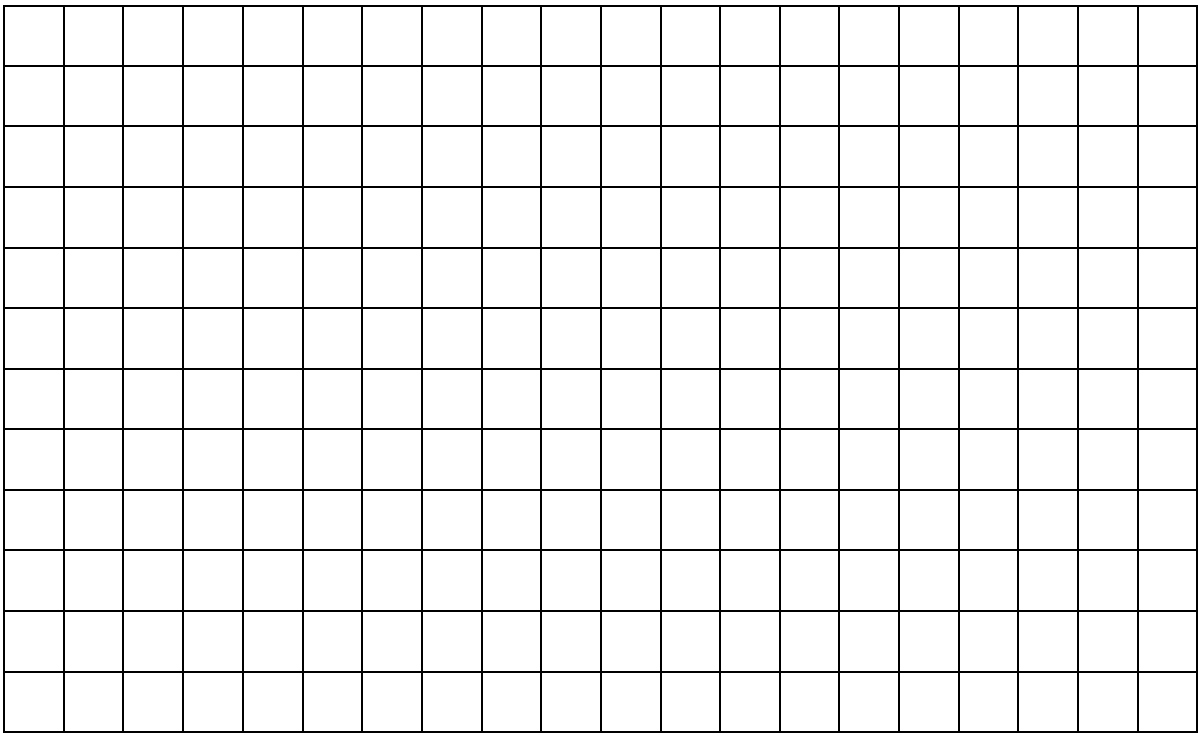
Investigating shadow lengths

Viola, Sophie and Shruti like to sit on a bench under a palm tree during school breaks.

The girls measured the length of the shadow cast by the palm tree at different times of the day. Here are their results:

Time of day	10:00	12:00	14:00	16:00
Length of shadow in cm	100	20	110	210

1 Record the results as a dot-to-dot graph.



2 Complete these sentences to describe the pattern in the results.

In the morning the shadow became _____. After midday the shadow became _____.

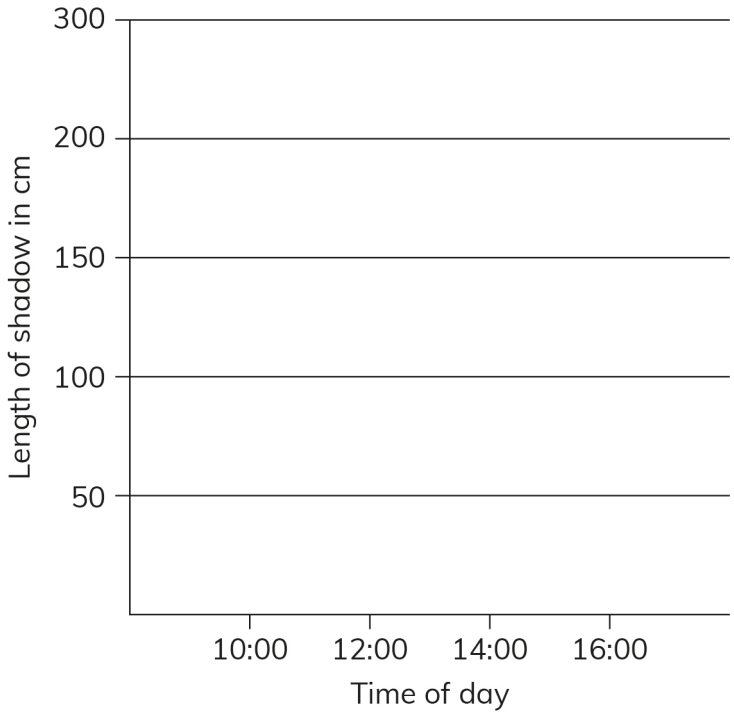
3 Rate your skills at drawing a dot-to-dot graph.

How well can I:	Very well ***	Most of the time **	Not confident yet *
decide what to put on each axis?			
label the axes correctly?			
decide on suitable scales on the axes?			
draw the dots accurately?			
join the dots neatly?			
give the graph a suitable title?			

Help sheet

Use the axes below to help you draw the graph.

Give the graph a suitable title.



Stretch sheet

4 Suggest a length of shadow for:

a 08:00 _____

b 18:00 _____

5 The girls made their measurements in summer.
In what way do you think their measurements will be different during the winter?

_____

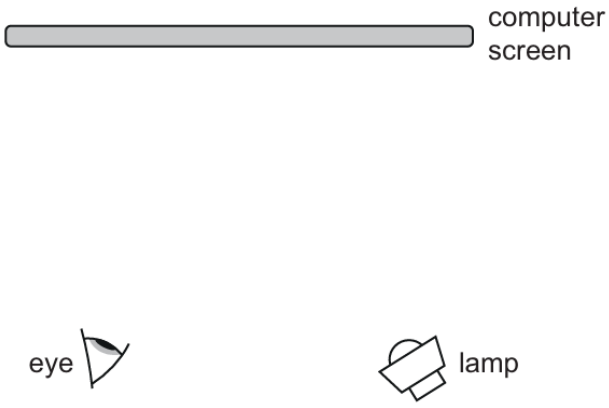
_____

Unit 5.2

Worksheet

7 Safia sees a lamp when she looks directly at the lamp.

(a) Complete the ray diagram to show how Safia sees the lamp when she looks at a **computer screen**.



[1]

(b) Explain why Safia sees the lamp when she looks at a computer screen.

.....

.....

..... [2]