

Year 6 Study Guide  
Term 2 2025 - 2026

Subject	Topics included	Refer to
Science	<u>Topic1: Our Bodies</u>	PowerPoint Presentation saved in <b>General-Files-Assessments Topics- Science.</b> <b>Textbook Reference:</b> Our Bodies Topic Book pgs. 19, 20 - 23 Our Bodies Work book pgs. 18, 21, 24 <b>PowerPoint Reference:</b>
	<u>Topic 2: Light &amp; Sight</u>	PowerPoint Presentation saved in <b>General-Files-Assessments Topics- Science.</b> <b>Textbook Reference:</b> Light & Sight Topic Book pgs. 1 – 3, 7, 9, 10, 18, 20, 23 Workbook pgs.: 2, 3, 9, 13, 18, 22 <b>PowerPoint Reference:</b> – Light Sources – Light Paths & The Eye – Making Shadows
	<u>Topic 3: Changing Circuits</u>	PowerPoint Presentation saved in <b>General-Files-Assessments Topics- Science</b> <b>Textbook Reference:</b> Changing Circuits Topic Book pgs. 2,3,5,7,8,9,14,16,18, 23 Workbook: 1,3,7,8,9,14,15,16,17,23 <b>PowerPoint Reference:</b> – Changing Circuits – Circuit Symbols – Bulb Models

**Year 6: Practice Worksheets – Term 2: 2025/2026**  
**LO: I can answer correctly**

Name:	Year 6
Subject: Science	Practice Worksheet

Instructions: Read the information and answer the questions below

**Question 1**

The boxes on the left shows some words related to healthy living.

The boxes on the right show the meaning of the words.

Draw one straight to match the boxes on the left to the ones on the right

Obese	drugs used to treat sickness
Lack of sleep	Substance found in coffee and cola
Medicine	Being overweight that can damage the health
Hydrated	Essential substance found in food
Caffeine	Drinking enough water
Nutrients	Can make someone feel grumpy

**Question 1b**

Eating balanced diet is essential for good living and healthy lifestyle.

Which of the following eating habits suggest balanced diet?

Tick ( ✓ ) the correct answer

- eating only fruits and vegetables
- eating foods from different food groups in the right amounts
- eating whatever you like
- skipping meals to stay thin

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**1 C** During physical activity it is important to keep the heart rate within a target range for effective exercise. This range is dependent on age.

Fig. 1.2 is a chart showing the target range of heart rate for healthy adults of different ages.

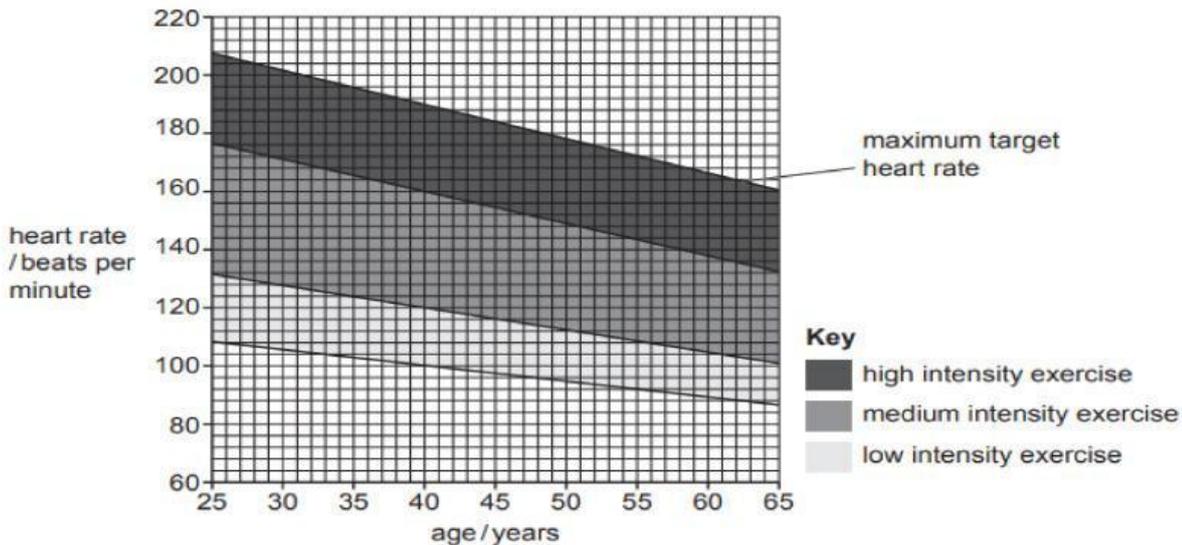


Fig. 1.2

(i) Use Fig. 1.2 to identify the target range of heart rate for a person aged **40** during **medium** intensity exercise.

Tick (✓) the correct answer.

100 – 120 beats per minute	<input type="checkbox"/>
100 – 190 beats per minute	<input type="checkbox"/>
120 – 160 beats per minute	<input type="checkbox"/>
160 – 190 beats per minute	<input type="checkbox"/>

**Question 1d**

There are harmful substances that destroys the body system. Below are lists of substances.

Tick ( ✓ ) the correct answer

- a. Fruits, vegetables and proteins
- b. Carbohydrates, fats and oil and fibre
- c. Caffeine, smoking and junk food
- d. Exercising, drinking enough water and sleeping well

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## Light and Shadow

Light sources produce light and other objects reflect light. Shiny objects reflect light more than dull objects. Shadows are caused when certain materials block light. Opaque, translucent and transparent objects block light in different ways. The further away the light source is, the smaller the shadow and vice-versa.

### How do we see?

We see through our eyes, which are organs that take in light and images and turn them into impulses that our brain can understand. We can see things because light either comes from an object, a light source or is reflected by an object in straight lines. Reflection is when light bounces off a surface changing its direction of travel. Light rays reflect (bounce) off objects and into our eyes, allowing us to see.

### Question 2

Draw two arrows to show how the boy can read the book using the light source.  
**Remember** that light travels in a straight line.

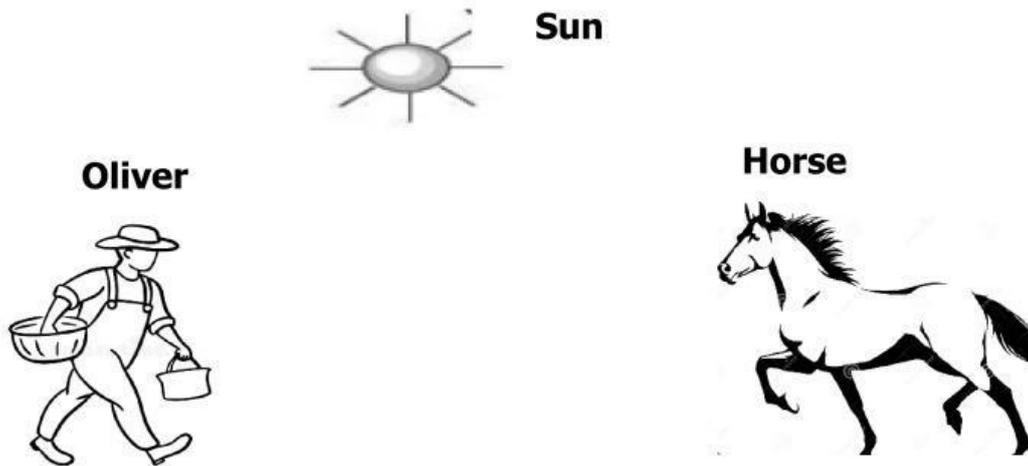


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**LO: I can answer correctly**

b) Each day Oliver feeds his horse. His horse sees him when he arrives.

Here is a diagram of Oliver and his horse.



Draw arrows to show how his horse sees him when he arrives.

**Natural and Artificial Light**

Natural light is produced by nature (Sun, stars, fire, fireflies). Artificial light is man-made, usually powered by electricity or combustion (light bulbs, flashlights, candles, phone screens). Natural light changes with time, while artificial light is constant.

**Question 3**

Which of the following is a natural source of light?

- a. Fire      b. Headlamp      c. Streetlamp      d. Traffic light

**Question 4**

Which of the following is an artificial source of light?

- a. Stars      b. The Sun      c. Lightening      d. Traffic light

**Question 5**

Which of the following objects does not allow you to see in the dark room?

- a. A torch      b. A lamp      c. A glow stick      d. A pair of glasses

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**Question 6**

A light bulb is a/an \_\_\_\_\_ source of light

- a. dim      b. bright      c. natural      d. artificial

**Question 7**

Light is needed to help us use our sense of \_\_\_\_\_

- a. smell      b. sight      c. feels      d. taste

**Question 8**

**Identify the correct answer in the brackets**

- A firefly makes its own light. Firefly is an artificial light source. (True / False)
- A mirror is a source of light. (True / False)
- A traffic light is an artificial source of light. (True / False)
- The Sun is our biggest artificial light source (True / False)
- The moon is a reflector and not a light source (True / False)
- Translucent objects produce scattered light (True / False)
- Light does not pass-through transparent objects (True / False)

**Shadows**

A shadow is a dark area or shape formed when an object blocks light from a source. It occurs when light cannot pass through an opaque object, creating an area behind the object where light is unable to reach. Shadows are biggest when the light source is closer to the object and they are smaller when the light source is farther away from the object.

Shadows are formed at the opposite side of the light source.

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**Question 9**

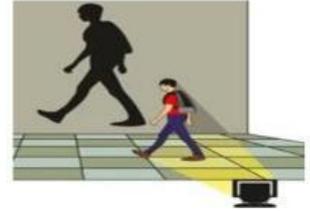
Ryan is in a dark room. He puts his puppet between a light source and a screen.

Light travels from the light source

Light is blocked by the puppet

A dark area appears on the screen

What is the name of the dark area? \_\_\_\_\_



**Question 10**

Ryan moves the puppet. He does not move the light source. He does not move the screen.

Draw lines from the image to the correct distance of the puppet from the Light source

**Size of image**

**distance of puppet from screen**



at the mid-point



furthest from the light source



closest to the light source

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**Question 11**

Carlos uses different objects to investigate the size of shadows. Circle the correct property of the object that he used.



- a. Transparent object    b. Translucent object    c. Opaque object

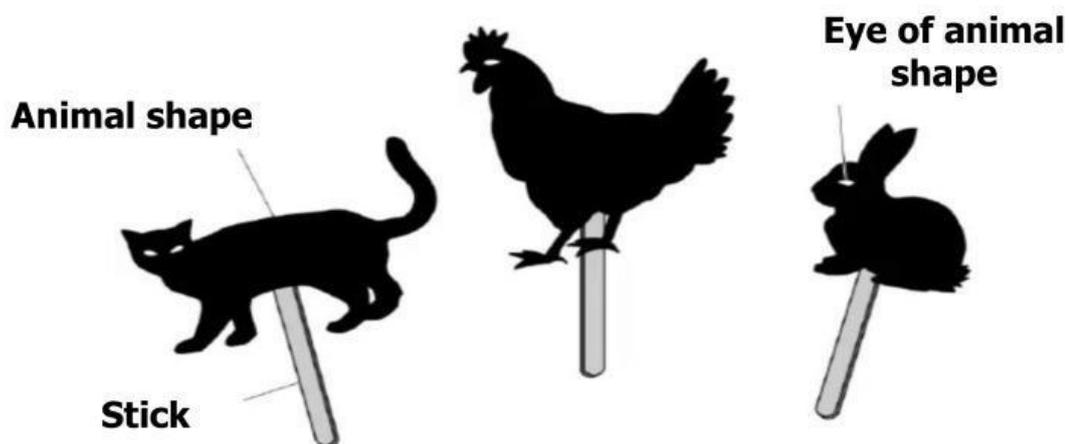
**Question 12.**

Carlos moved closer to the source of light. Circle what happened to the size of the shadow

- a. It increases    b. it decreases    c. it stays the same

**Question 13**

Carlos investigates shadows. He makes different animal shapes and puts them on the stick.



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Complete the sentences to describe how the animal shadows are formed

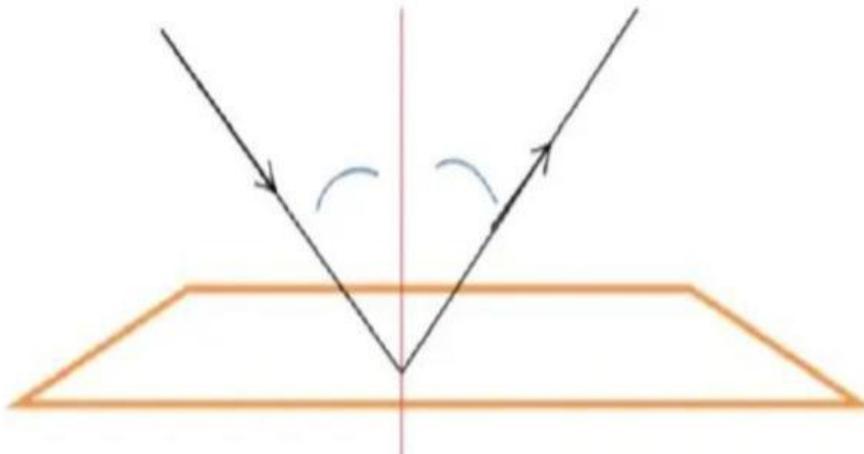
Use the following words to complete the questions:

Transparent   opaque   blocked

- Animal shadows are made when light from a light source is \_\_\_\_\_
- The animal shapes and the sticks make a shadow.  
This is because the materials they are made are \_\_\_\_\_
- We can see the light passing through the eyes of the animal  
This is because the eye of the animal shape is \_\_\_\_\_

**Question 14**

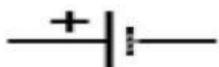
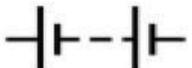
Label the diagram below using the following terms: reflected ray, angle of reflection, angle of incidence, incident ray, normal line,



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**Changing Circuits**

**Electrical Components - Definitions and Examples**

Component	Picture	Definition	Example
<b>Cell</b>		A single electrical energy source that changes chemical energy to electrical energy	AA cell in a remote control
<b>Battery</b>		Two or more cells connected together to provide electrical energy.	Battery in a torch
<b>Wires</b>		Thin, flexible strands of metal (usually copper or aluminum) covered with an insulating material like plastic.	Copper wires in a circuit
<b>Ammeter</b>		A device used to measure the amount of electric current in a circuit.	Ammeters found in car dashboards to monitor the charging system
<b>Closed Switch</b>		The switch allows current to pass through, completing the circuit.	A television system
<b>Bulb</b>		A device that produces light when electricity flows through it.	Bulb in a table lamp

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**What is a circuit?**

A **circuit** is a path that electricity can flow through.

Example: When you connect a battery, wires, and a bulb in a loop, the electricity flows around the circuit and makes the bulb light up. Sometimes, the components in electrical circuit do not work, so we say the circuit is faulty.

**Conductor** - A conductor is a material that allows electricity or heat to flow through it easily

Examples of conductors are: metal, copper, paperclips, steal, graphite, seawater, human body

**Insulator** - An insulator is a material that stops the free flow of electric current or heat

Examples: plastic, paper, rubber, wood, ceramic, glass, porcelain, oil, diamond

**Why Scientist use symbols!**

Scientists use symbols to make diagrams and information **clear, quick to read, and easy to understand**. In the case of **electrical circuits**, symbols help because:

1. **Saves time** – Drawing a small bulb symbol is faster than sketching a real bulb.
2. **Universal understanding** – Scientists around the world can understand the same symbols, even if they speak different languages.
3. **Clarity** – Symbols make diagrams neat and easy to follow.
4. **Consistency** – The same symbol always means the same component, so there's no confusion.

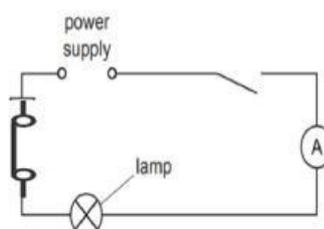
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**Question 15**

**Fig 15.1**

Fig 15.1 shows a circuit diagram. Two of the components are labelled.

a. State the name of **two** other components in the circuit

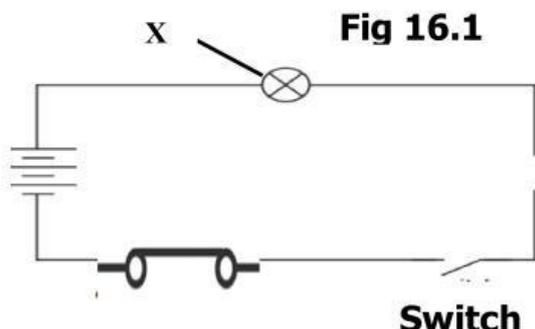


\_\_\_\_\_

\_\_\_\_\_

**Question 16**

A teacher is investigating reasons why a bulb in a circuit may not light up  
Fig 16.1 shows part of the circuit she uses. State why the bulb will not light



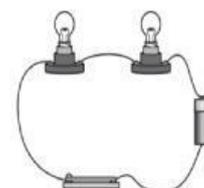
The circuit will not work  
because \_\_\_\_\_

What is the name of component X in fig 16.1?  
\_\_\_\_\_

**Question 17**

A circuit is made of two lamps, a cell and a switch as shown in fig 17.1

**Fig 17.1**



a. Draw the symbol for cell \_\_\_\_\_

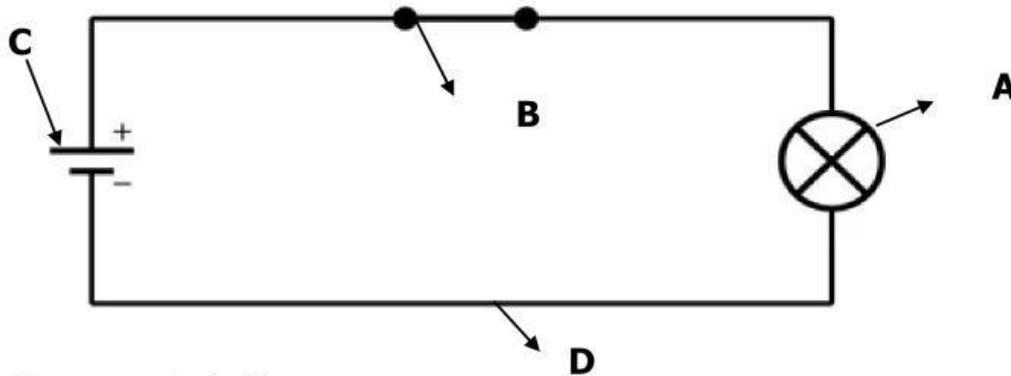
b. The lamp light up in Fig 17.1. State the reasons why the lamps lit up

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**Question 18**

Look at this circuit diagram, label the symbols and write the functions

**Electric Circuit**



Component A: Name: \_\_\_\_\_  
Function: \_\_\_\_\_

Component B: Name: \_\_\_\_\_  
Function: \_\_\_\_\_

Component C: Name: \_\_\_\_\_  
Function: \_\_\_\_\_

Part D: Name: \_\_\_\_\_  
Function: \_\_\_\_\_

**Bulb Brightness Investigation**

**Source A**

The brightness of bulbs is not always the same. In some light fittings, certain bulbs are brighter than others because they are designed differently. The brightness of a bulb can also be changed in a simple electric circuit by the number of voltage that a bulb has. The higher the voltage, the brighter the bulb and vice versa.

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**Question 19**

State 2 factors that affects the brightness of a bulb

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**Question 20**

Evaluate whether increasing the number of bulbs in a series circuit will increase the brightness of the bulb

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**Question 21**

Evaluate whether increasing the number of batteries in a series circuit will increase the brightness of the bulb

**Question 22**

Justify how increasing the voltage of a battery increases the brightness of the bulb in a series circuit

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**Think out of the box**

1. Does the thickness and length of a wire affect the brightness of bulb in a series circuit?

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2. Why are wires wrapped with plastics? What are plastics and what purpose do they serve? \_\_\_\_\_

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3. Why are conductors used in electrical circuits?

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4. Predict what will happen if the wires in a circuit is cut and a paper clip is used to bridge the gap

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Why?

Paper clip is \_\_\_\_\_.

5. Predict what will happen if the wires in a circuit is cut and rubber is used to bridge the gap

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Why? Rubber is \_\_\_\_\_.