



# **MIDDLE PRIMARY**

## **Advance Science**

### **E-Booklet**

### **Part 4**



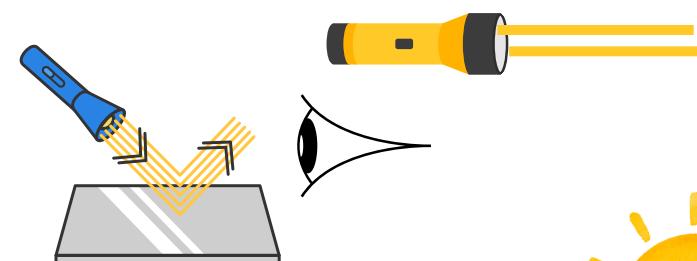
## Do you know about Light?

Middle Primary Advance Science

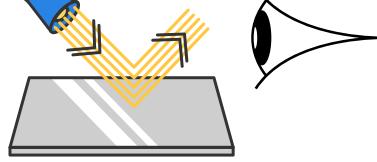
Light is a form of energy that helps us see and powers many things around us. Use the helping words box below to complete the questions. Pictures provide hints.

|                |          |            |         |         |
|----------------|----------|------------|---------|---------|
| straight lines | reflects | refraction | sundial | prism   |
| opaque         | sun      | light      | bent    | rainbow |

1. Light always moves in \_\_\_\_\_ until it hits something.



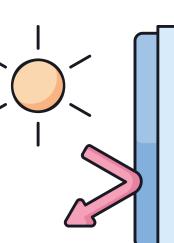
2. A mirror \_\_\_\_\_ light back to our eyes.



3. The \_\_\_\_\_ is the biggest source of light on Earth.



4. \_\_\_\_\_ objects, like wood, block light completely.



5. Shadows need a \_\_\_\_\_ source to form behind objects.



6. \_\_\_\_\_ happens when light bends in water or glass.



7. A \_\_\_\_\_ shows all the seven colours of light.



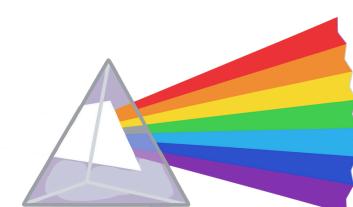
8. A straw looks \_\_\_\_\_ at the bottom in a glass of water.



9. In the olden days, people use a \_\_\_\_\_ to tell time with shadows.



10. If we shine light using a torch through a \_\_\_\_\_ to see colours split.



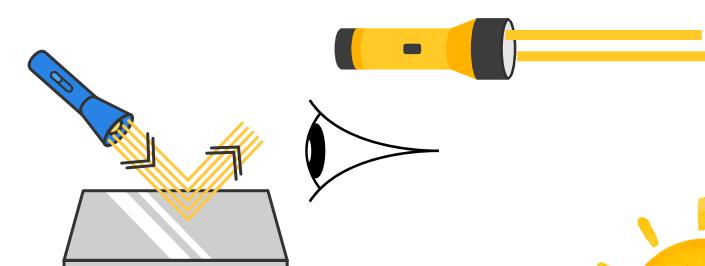
## Do you know about Light? - Solutions

### Middle Primary Advance Science

Light is a form of energy that helps us see and powers many things around us. Use the helping words box below to complete the questions. Pictures provide hints.

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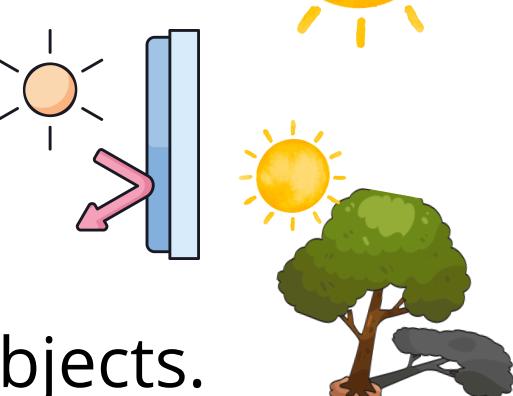
1. Light always moves in straight lines until it hits something.



2. A mirror reflects light back to our eyes.



3. The sun is the biggest source of light on Earth.



4. Opaque objects, like wood, block light completely.

5. Shadows need a light source to form behind objects.



6. Refraction happens when light bends in water or glass.

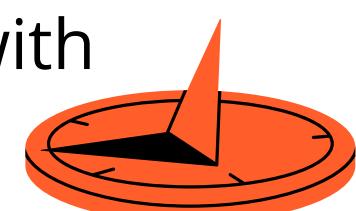


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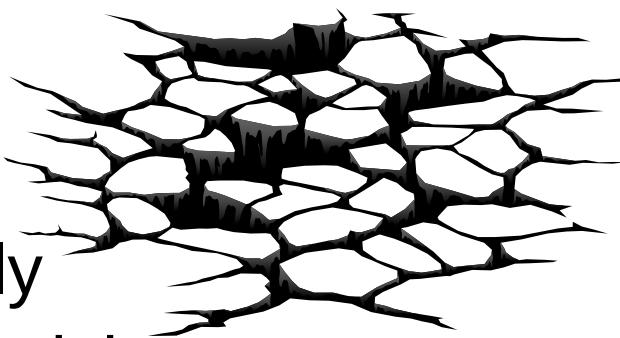


## Earthquakes

Middle Primary Advance Science

Read the passage. Answer the True and False questions.

Earth's surface breaks into huge rock pieces called **tectonic plates**. These tectonic plates float and slowly move on hot, soft rock deep inside Earth. They often stick at edges called **faults**. Pressure builds until they snap free. This sudden slip sends shaking waves through the ground causing an **earthquake**.



Earthquakes strike worldwide but mostly along tectonic plate edges over land and ocean. Countries like Japan, Indonesia, the Philippines, Mexico, Iran, and Turkey get many because of busy plate borders. Rarer **intraplate earthquakes** happen inside plates from hidden stress.

Australia rides one big tectonic plate called the Indo-Australian Plate. Intraplate earthquakes—quakes inside a plate, not at edges—cause most shakes here from old faults waking up in the stable middle, like the 1989 Newcastle quake that killed 13 people. Southwest Western Australia and offshore spots feel stronger shakes near plate edges, so homes must be built tough.

Earthquakes crack buildings, start landslides and tsunamis, cut power, cost money, hurt feelings, and sometimes kill. Getting ready saves lives.

*Adapted from: sciencetimes*

## True or False

Circle the correct response:

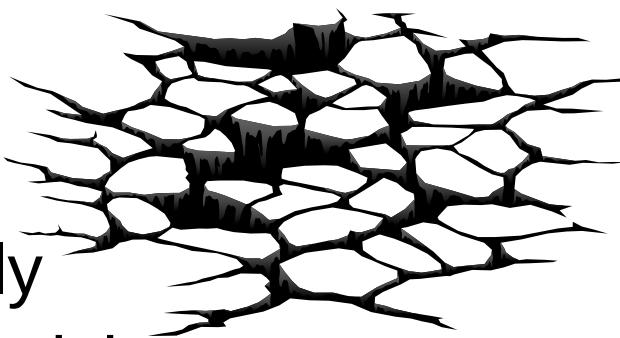
|   |  |       |
|---|--|-------|
| 1 | Tectonic plates under Australia stay still.          | T / F |
| 2 | All earthquakes happen only at plate edges.          | T / F |
| 3 | Faults in Australia are short and only on land.      | T / F |
| 4 | Sudden slips on faults make earthquake shaking.      | T / F |
| 5 | Australia's earthquakes are as strong as Japan's.    | T / F |
| 6 | Ocean earthquakes off Australia can't make tsunamis. | T / F |
| 7 | Faults only form between tectonic plates.            | T / F |
| 8 | All Australian earthquakes happen in the ocean.      | T / F |

## Earthquakes - Solutions

Middle Primary Advance Science

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## Australia's Amazing Ecosystems

Middle Primary Advance Science

Read the passage. Answer the questions below.

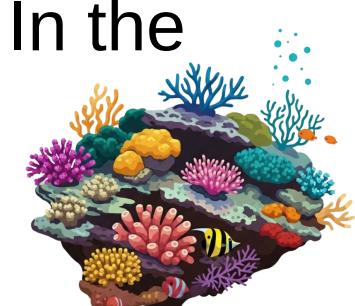
An ecosystem is a special place where plants, animals, and other living things share a home and help each other survive by eating, growing, and making food. Australia has many different ecosystems because of its ancient rocks, hot sun, and wet rains in some spots. Big deserts cover most of the land. They have red sand hills, tough spinifex grass, and trees like acacias that hold water inside. Animals live there too, like the thorny devil lizard that drinks water from its bumpy skin, and the bilby that digs holes and comes out at night to eat.



In the east and south, there are eucalyptus woodlands. Tall gum trees drop their bark and leaves to save water when it's dry. Koalas eat only these leaves, even though they taste bad to others. Kangaroos jump around, and kookaburras laugh from the trees.

Up north in places like the Daintree rainforest, it's always wet and green. Big trees covered in vines grow tall. Cassowaries are huge birds that eat fruits and drop seeds far away. Tree kangaroos hop from branch to branch. In cooler areas, platypuses swim in rivers, and lyrebirds copy sounds like people talking.

Along the beaches, mangroves grow in salty water with crabs and fish. Under the sea, the Great Barrier Reef is the biggest coral home in the world. Colourful corals, fish, turtles, and sharks live there. In the south, kelp forests look like wavy trees underwater for sea dragons and big whales.



All these ecosystems work together. Plants make food from the sun. Animals eat plants or other animals. Things like beetles break down dead stuff to make soil rich again. But dangers hurt them, like big fires, invasive animals from other places, and hot weather changes. People help by making parks like Kakadu to keep them safe.



Adapted from: *sciencedirect*

## Australia's Amazing Ecosystems

Middle Primary Advance Science

Read the passage. Answer the questions below.

**Circle the correct true or false response:**

- 1 An ecosystem is a place where plants and animals live and help each other survive. **T / F**
- 2 Koalas eat only eucalyptus leaves, even though they taste bad to other animals. **T / F**
- 3 The Great Barrier Reef is found in the northern deserts of Australia. **T / F**

**Fill in the Blanks**

- 4 Big deserts cover most of Australia's land and have red sand hills and tough \_\_\_\_\_ grass.
- 5 Thorny devil lizards drink water from rain using their bumpy \_\_\_\_\_.

**Questions**

- 6 Name one animal that lives in the Daintree rainforest and what it does there.

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- 7 How do plants help animals in an ecosystem? Give one way.

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- 8 Name one threat to Australian ecosystems and how people can help stop it. Try to write in your own words.

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**Questions**

- 6 Name one animal that lives in the Daintree rainforest and what it does there.

Cassowary eats fruits and drops seeds far away. (Or tree kangaroo hops in trees.)

- 7 How do plants help animals in an ecosystem? Give one way.

Plants make food from the sun that animals eat. (Or give oxygen/shade.)

- 8 Name one threat to Australian ecosystems and how people can help stop it. Try to write in your own words.

Big fires; people help by making parks or stopping invasive animals.

Invasive animals are foreign creatures in Australia that spread fast, eat

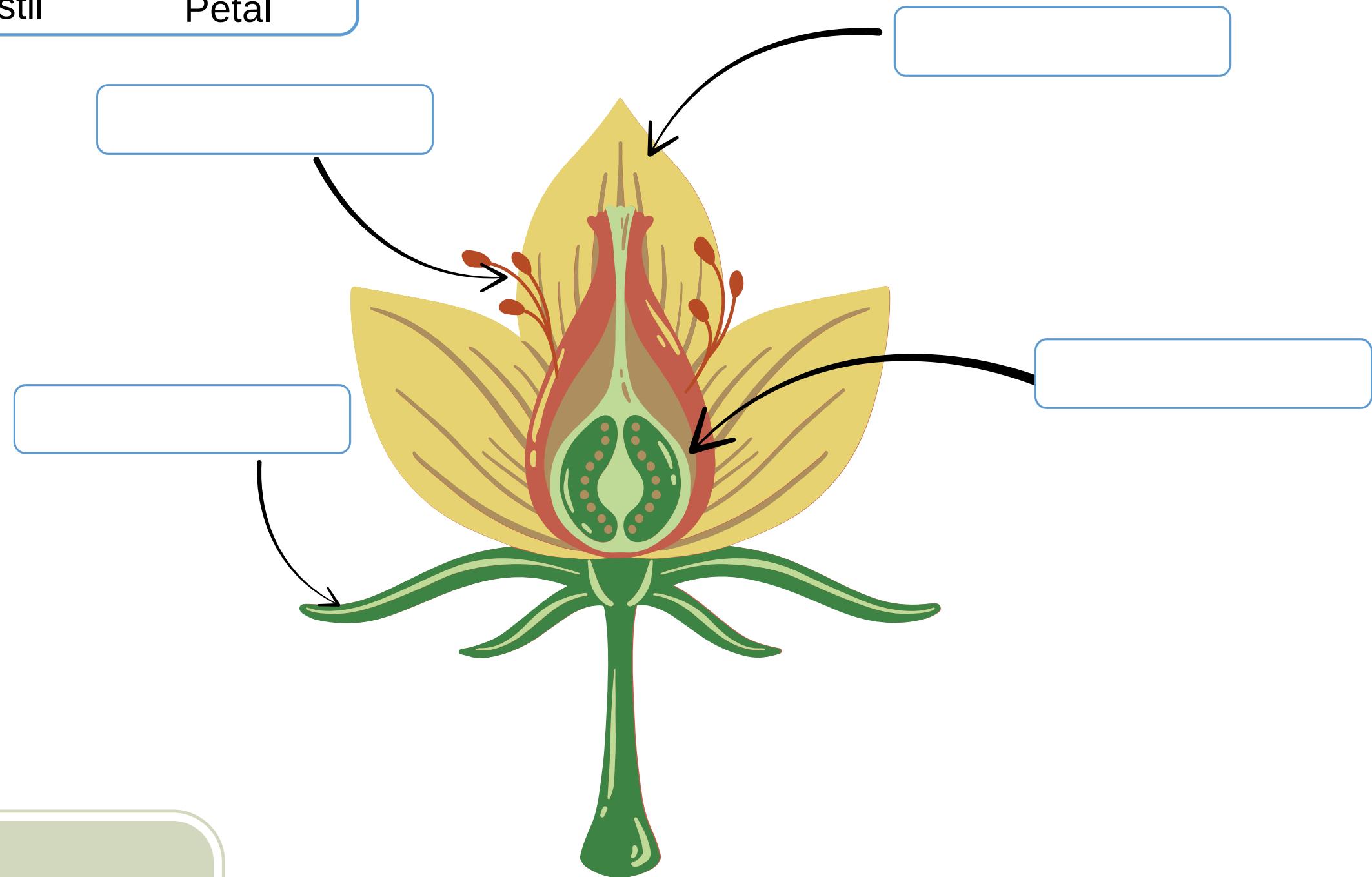
local food, and hurt native wildlife like the cane toad does to frogs.

## Parts of a Flower

Middle Primary Advance Science

Label the parts of the flower diagram using the word bank. Then, match each part to its correct function by writing the number in the box.

Sepal  
Pistil  
Stamen  
Petal



1 Sepal

2 Stamen

3 Petal

4 Pistil

Receives pollen for seeds  
(female part)

Protects the unopened bud

Attracts pollinators with colour

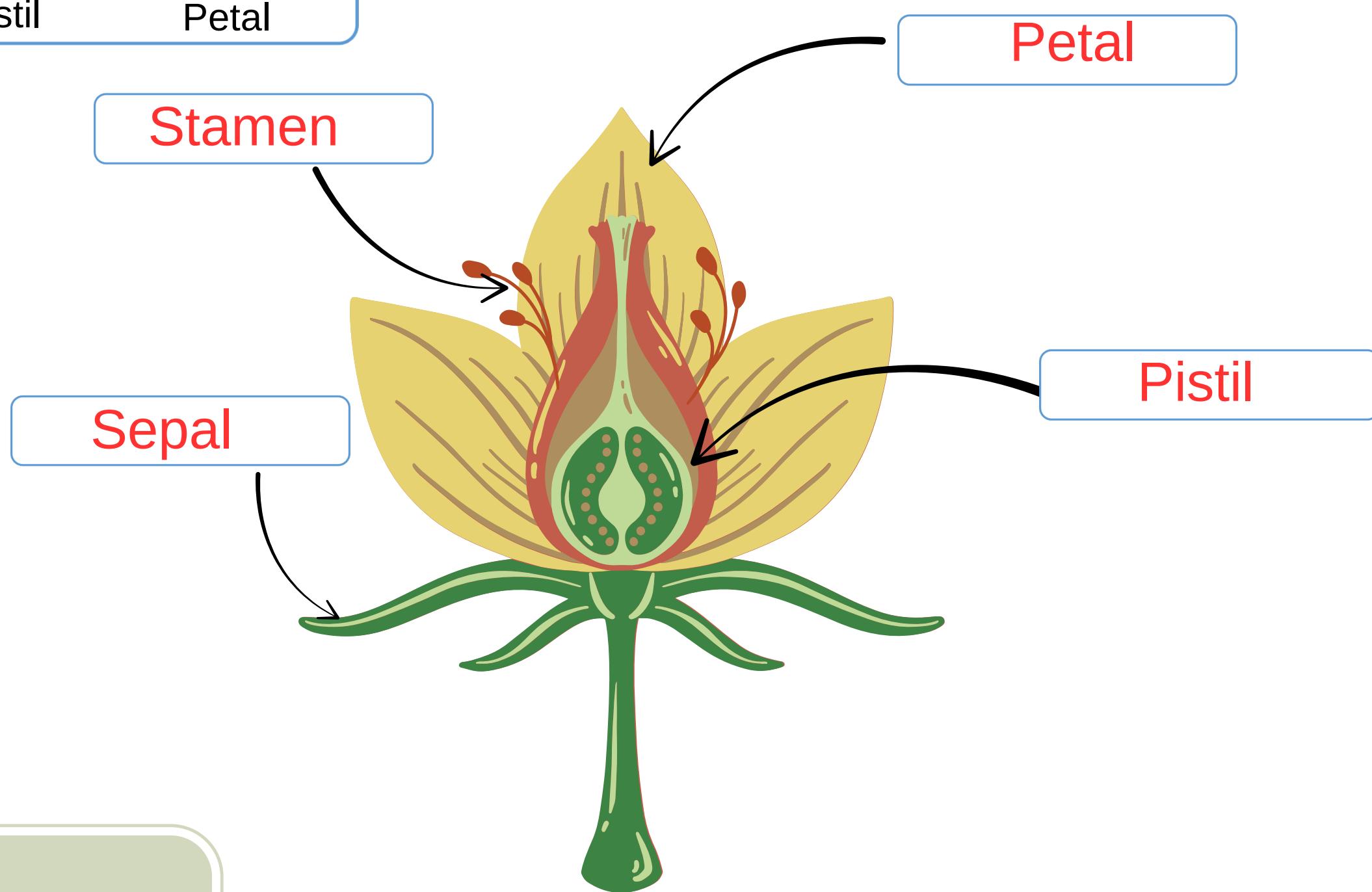
Produces pollen (male part)

## Parts of a Flower - Solutions

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- 1 Sepal
- 2 Stamen
- 3 Petal
- 4 Pistil

- 4 Receives pollen for seeds (female part)
- 1 Protects the unopened bud
- 3 Attracts pollinators with colour
- 2 Produces pollen (male part)