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mini e-book

PHOTOCOPY MASTERS

Science

Plants

For Middle Primary

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Contents

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▷Activity

Wonderful Wildflowers

■ Read this information about two types of native Australian wildflowers.

Kangaroo Paws

We can find beautiful *Kangaroo Paws* in many parts of Australia. However, they only grow in nature in the south-west of Western Australia. The shape of the flower looks like a kangaroo's paw and the flowers are usually orange and red.

The shape of the flower makes it attractive to birds. Birds like to sit on the Kangaroo Paws' long stems. These stems can grow up to two metres. This way birds can enjoy the flower's sweet nectar and pollinate the flower at the same time.

Kangaroo Paws grow best in sunny places and produce flowers during summer and spring. This plant has become very popular in gardens in Japan and the United States because of its interesting appearance.

Australian Paper Daisy

The famous English explorer William Dampier was the first European to collect the Australian Paper Daisy. He found this delicate little daisy in 1699 near Shark Bay in Western Australia. Today we find the star-shaped daisy with its big yellow centre in gardens all over the world.

Australian daisies grow to about 50 centimetres. They prefer sandy soils and lots of sun. They don't like windy places. During springtime the daisies pop up just about everywhere in south-west Western Australia.

Every year, people travel to Western Australia from far away to see an amazing flower show. Millions upon millions of Paper Daisies cover the countryside like a dazzling pink and white carpet. It's a festival of colour.

■ Complete the table using information from the texts.

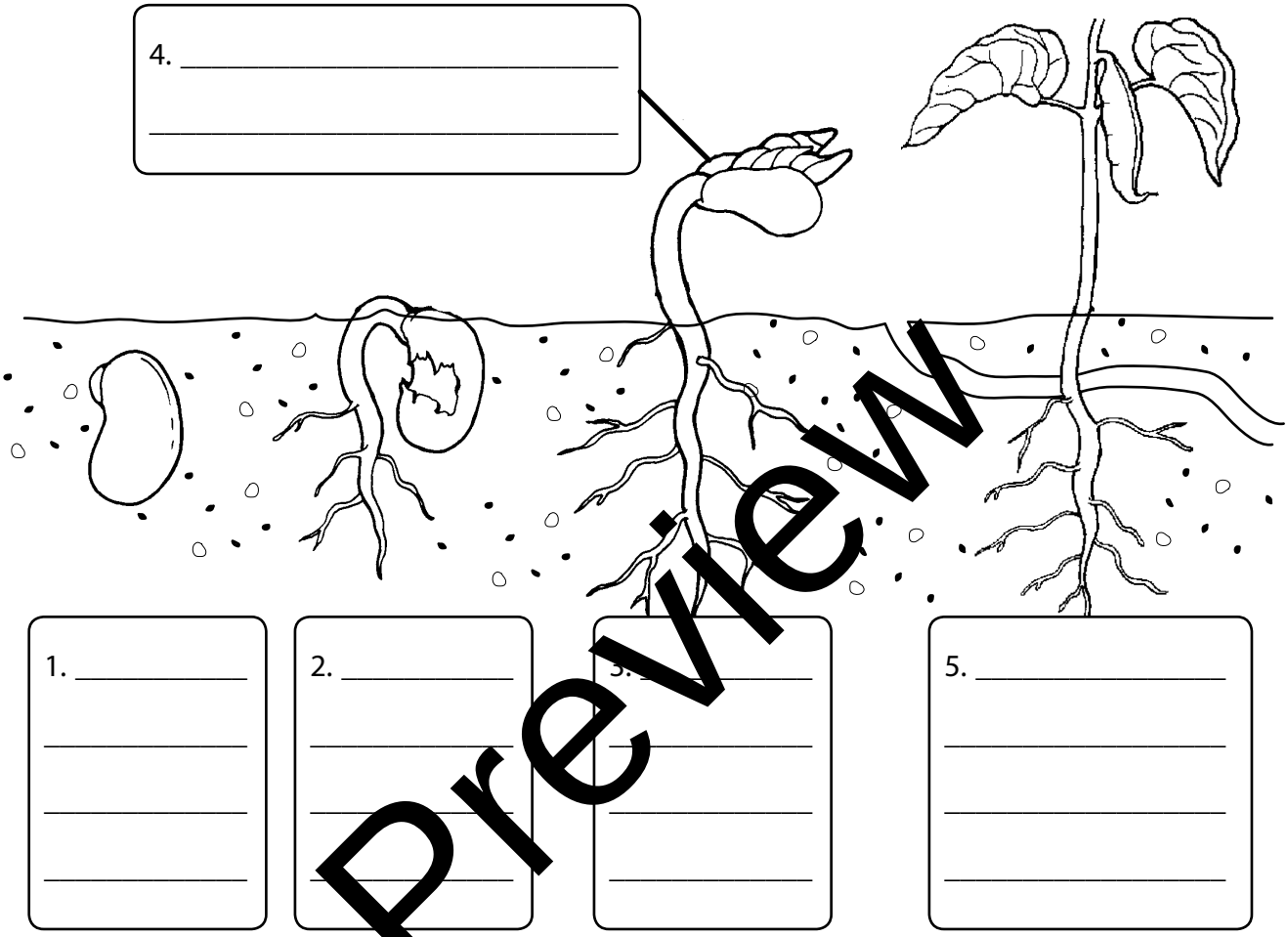
Plant	Location	Height	Flowers	Growing conditions
Kangaroo Paws				
Paper Daisy				

▷Activity

What Do Plants Need?

■ Label the five steps of seed germination on the diagram.

■ Add a bird, a worm and a bug to the diagram below.



■ What is the role of insects, birds and earthworms in a plant's life?

Insects: _____

Birds: _____

Earthworms: _____

■ List what plants need here.

• _____ • _____ • _____

■ On the back of this sheet draw a picture of you and a plant side by side and around your picture list what needs you and plants share.

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▷Activity

Making A Boot Planter

■ Fill in the spaces to complete the instructions for making a boot planter.

HOW TO MAKE A BOOT PLANTER

1. Find _____boot that allows plenty of room for the _____ and_____.

2. Make _____in the sole, so the _____ can _____.

3. Line the boot with _____ to help keep the _____ in place.

4. Fill _____.

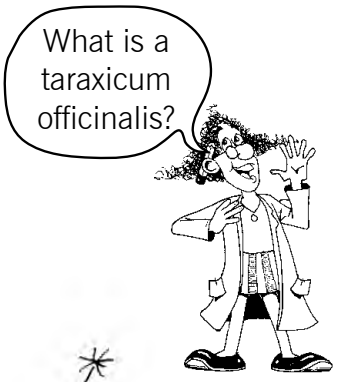
5. Put _____.

6. Give _____.

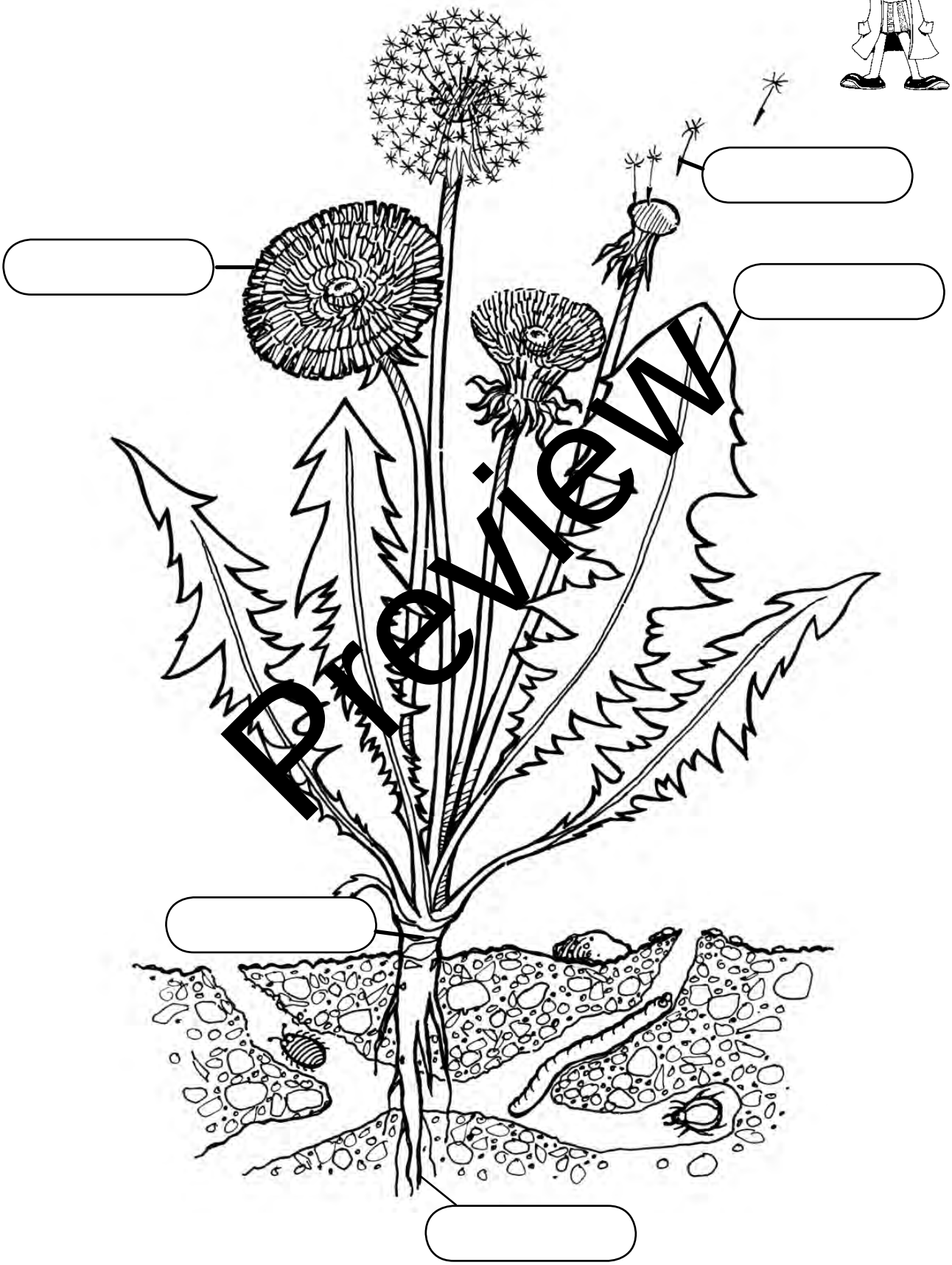
Draw a healthy, colourful plant in the boot.

▷Activity

Parts Of A Plant

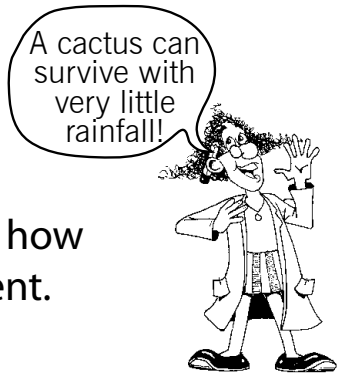


■ Label the *dandelion (taraxicum officinalis).*

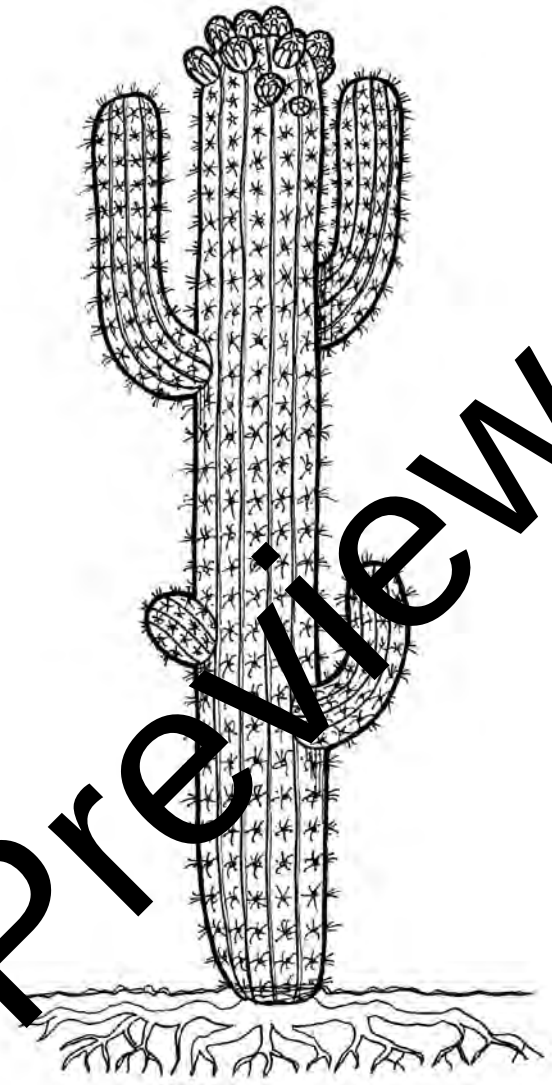


▷Activity

Cool As A Cactus



■ Label the cactus' adaptations and briefly describe how they help the cactus to survive in a dry environment.



A cactus is a good plant to have in the garden because:

_____

_____

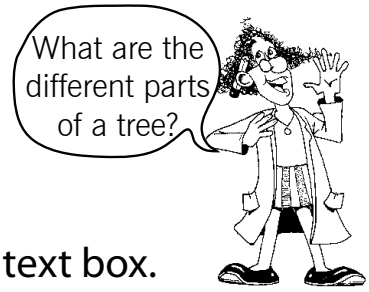
_____

_____

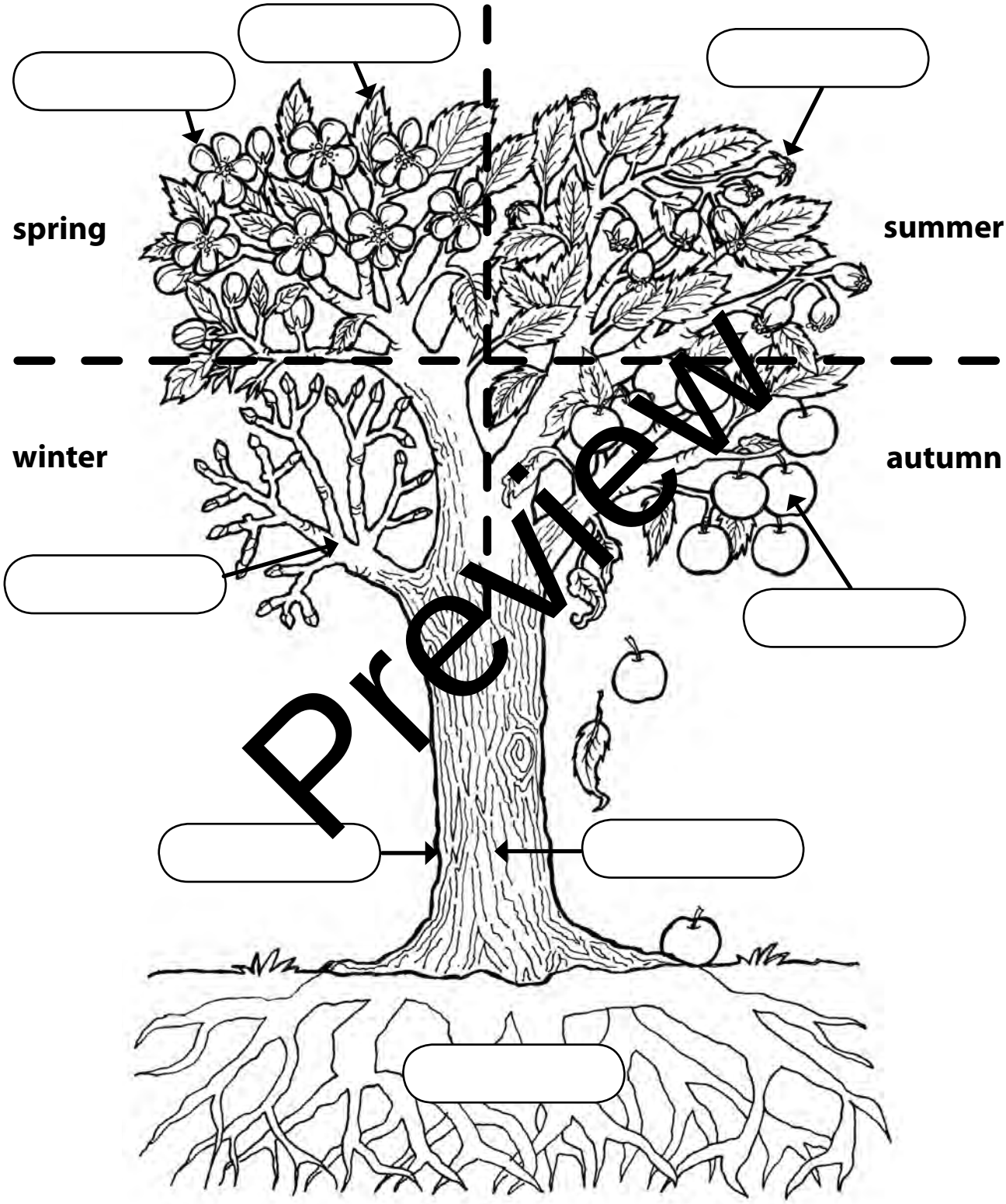
_____

▷Activity

Parts Of A Tree



■ Label the parts of a tree with the words from the text box.



trunk	**branches**	**roots**	**bark**
flowers	**fruit**	**leaves**	**buds**

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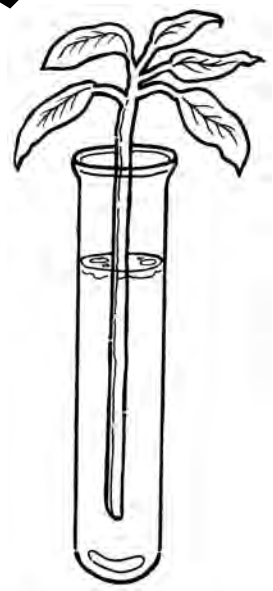
▷Activity

What's Transpired?

■ How much water does a plant transpire through its leaves?

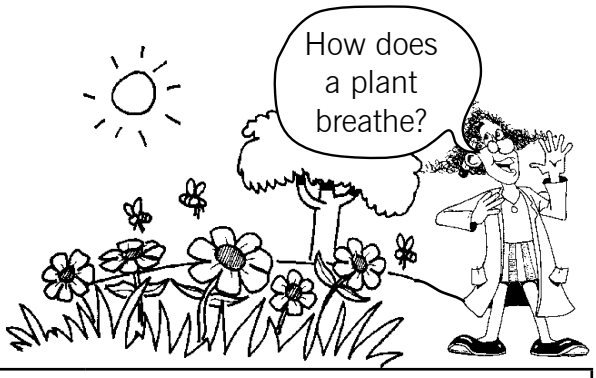
Aim:	To measure how much water a plant transpires through its leaves.
My prediction:	
Equipment:	•*test tubes and test tube holders* •*plant cutting with stem and leaves* •*olive oil* •*non-permanent pen markers*
Method:	• Fill the test tubes to the centimetres below the rim with water and put the plant cuttings into the tubes. • Gently pour a little olive oil into the test tubes. It will stay on the surface. • Place the test tubes in the area indicated by your teacher. Record over the next three days the water level in the test tubes with a non-permanent marker.
Observations:	**My diagram:**



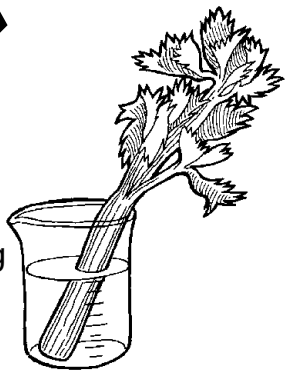
▷Activity

Let's Experiment

How does a plant breathe?



Aim:	To observe how a plant breathes by absorbing and transporting water through its stem to its leaves.
My prediction:	
Equipment:	• two stalks of celery with plenty of leaves • two small beakers or glasses filled with water and a spoon • food colouring (two different colours) with eyedroppers
Method:	**1.** Make a 10 centimetre slit in the base of each celery stalk and place them in different beakers. **2.** Fill the beakers with the same amount of water, covering the bases of the stalks. **3.** Put 10 to 12 drops of different food colouring in each beaker and stir with a spoon. **4.** Leave the stalks to rest overnight.



Observations:	**Labelled diagram**

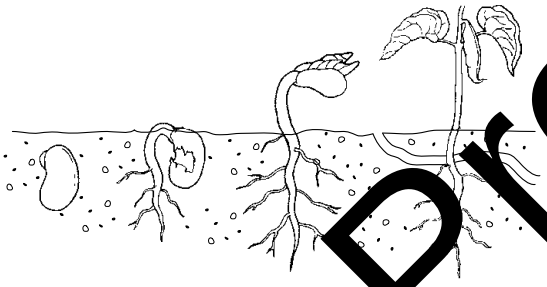
Answers

Page 3

Plant	Kangaroo Paws.
Location	South-west Western Australia.
Height	About two metres.
Flowers	Look like kangaroo paws, orange and red flowers in spring and summer.
Growing conditions	Sunny position.

Plant	Australian Paper Daisy.
Location	South-west Western Australia.
Height	50 centimetres.
Flowers	Little star-shaped, pink and white, grow in huge numbers, appear in spring.
Growing conditions	Like sun, sandy soils, not windy places.

Page 4



1. A seed is planted in the soil.
2. Seed loses its skin.
3. Roots and stem start to grow.
4. Seed gets sunlight and leaves grow.
5. Roots, stem and leaves hold up the plant to absorb sunlight and water.

The role of insects, birds and plants on a plant: **Insects**, like bees, pollinate flowers, so they have a positive effect on plants. When they transfer pollen from one flower to another, fertilisation occurs (the development of the female parts of the plant into fruits and seeds). Seeds are then dispersed. **Birds** have a negative effect on plants, as they eat insects, can damage plant leaves and spoil fruit.**Earthworms** make little tunnels in the earth so that water and air can reach plant roots.
Plants need: air, water and sunlight.

Page 5

1.) an old, soil, plant. 2.) some holes, water, drain out. 3.) plastic mesh, soil. 4.) the boot up with potting mix/soil. 5.) some seeds/a plant in the soil. 6.) the plant water and light.

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Page 7

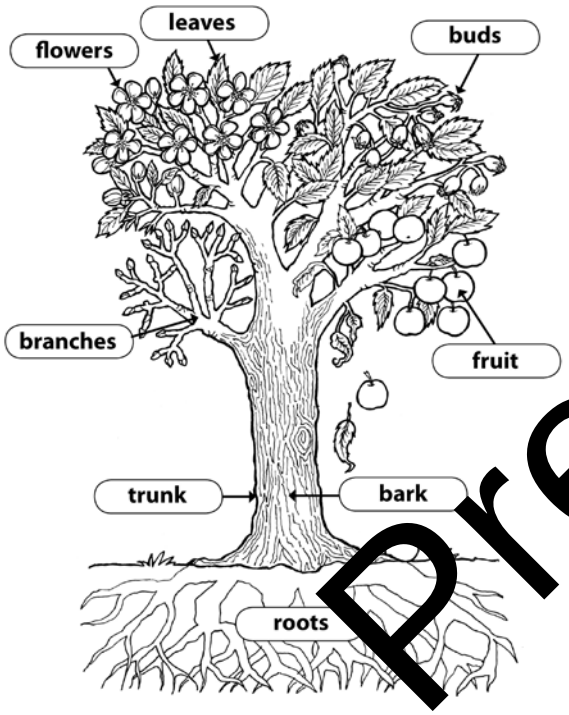
Adaptations could include:

- *Its leaves are long, thin and spiky so that the cactus doesn't lose water through transpiration.*
- *Its spiky leaves stop animals and insects from eating the cactus and stop other plants growing close to the cactus and 'stealing' precious water and nutrients.*
- *Its ribbed stem funnels water to the roots and can expand to store water when it rains.*
- *Its waxy stem helps stop water loss*

and reflects the sun's heat.

- *Its blue-greyish colour reflects heat from the sun (like eucalyptus leaves).*
- *Its large shallow root system absorbs rainwater quickly.*
- *A cactus flower closes when it's hot so that it doesn't transpire.*

Page 8



Page 10

Observations: The food colouring has travelled up the stem and dyed the leaves. This shows that plants absorb water through their roots and transport it to their leaves, where the water is released as vapour.