SCIENCE

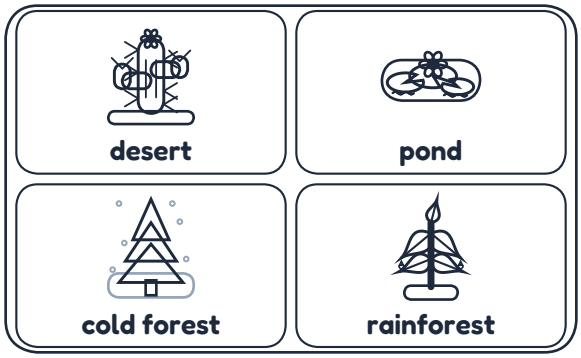
Plant adaptations

Name _____ Date _____

I can explain how special parts help plants survive in their homes.

1 How it works

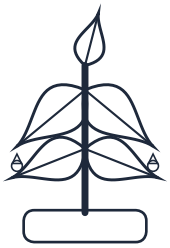
An adaptation is a part that helps a plant survive in its home. A cactus has a thick stem that stores water and spines that keep animals away. A water lily has big, flat leaves that float in the sun. A pine tree has thin, waxy needles that save water in winter. Rainforest leaves have pointed tips, so heavy rain drips off.



2 Where does each plant live?

Use the words in the box.

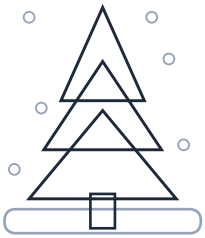
desert **pond** **cold forest** **rainforest**



big-leaf plant

Home _____

Special part _____



pine tree

Home _____

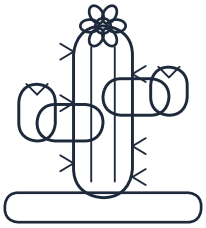
Special part _____



water lily

Home _____

Special part _____



cactus

Home _____

Special part _____

How did I do? ☆ ☆ ☆

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SCIENCE · PLANT ADAPTATIONS

Built to survive

Name _____ Date _____

I can tell how a plant's special parts help it survive.

1 Match each part to its job

thick, fat stem	○	○	keep thirsty animals away
sharp spines	○	○	let heavy rain drip off
big, flat floating leaves	○	○	stores water for dry days
thin, waxy needles	○	○	catch sunlight on top of the pond
leaves with pointed tips	○	○	save water in cold, windy winters

2 Could it live there? Circle one.

1. **A cactus grows in a hot, dry desert.**

   survive well **survive less well** **cannot survive**

2. **A water lily is planted in a dry desert.**

   survive well **survive less well** **cannot survive**

3. **A cactus is planted in a wet, rainy garden.**

   survive well **survive less well** **cannot survive**

How did I do? ☆ ☆ ☆

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Think like a scientist

Name _____ Date _____

I can explain how a plant's parts help it survive in its home.

1 Think about it

1. Why does a cactus have spines, not leaves? _____
2. How does a water lily stay on top? _____
3. How do needles help a pine in winter? _____
4. Could a water lily live in a desert? _____

2 True or false? Circle it.

1. Spines help keep animals away.	true	false
2. Pine needles help save water in winter.	true	false
3. A water lily needs to live in a desert.	true	false
4. A cactus stores water in its stem.	true	false
5. Every plant can live in every place.	true	false

3 Invent a plant for a hot, dry desert. Label its special parts.

How did I do? ☆ ☆ ☆

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Try it: the waxy leaf test

Name _____ Date _____

I can show how a waxy skin saves water.

1 You need

- 2 paper towels
- wax paper
- water
- a plate
- tape

2 What to do

1. Wet both paper towels. Squeeze out the extra water.
2. Roll each towel up like a leaf. Wrap one in wax paper and tape it. Leave the other bare.
3. Put both on a plate in a sunny spot.
4. Feel both towels after 1 hour, 3 hours and 1 day.

3 I predict

Which towel will stay wet longer?

_____

_____

4 What I see

Time	Bare towel	Waxy towel
1 hour		
3 hours		
1 day		

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: plant adaptations

1 Page 1

Homes: 1) big-leaf plant: rainforest (leaves with drip tips); 2) pine tree: cold forest (thin, waxy needles); 3) water lily: pond (floating leaves); 4) cactus: desert (thick stem or spines).

2 Page 2

Jobs: 1) thick, fat stem: stores water for dry days; 2) sharp spines: keep thirsty animals away; 3) big, flat floating leaves: catch sunlight on top of the pond; 4) thin, waxy needles: save water in cold, windy winters; 5) leaves with pointed tips: let heavy rain drip off.

Survive: 1) survive well; 2) cannot survive; 3) survive less well.

3 Page 3

Think: 1) Spines lose less water and keep animals away; 2) Its leaves hold air, so they float; 3) Thin, waxy needles lose little water; 4) No, it would dry out and die.

True or false: 1) true; 2) true; 3) false; 4) true; 5) false.

Drawing: answers will vary. Look for parts that store water, save water or protect the plant, such as a fat stem, spines, a waxy skin or long roots.

4 Page 4: Try it!

The bare towel dries out first. The towel wrapped in wax paper stays damp much longer, because the wax keeps the water from escaping into the air. A cactus and a pine needle have a waxy coat that works the same way, so they save water where it is hot, dry or freezing.

5 Teaching tip

Show real examples if you can: a small cactus, a pine branch and a houseplant leaf. Let children feel the waxy skin, then use the words survive well, survive less well and cannot survive when they argue where each plant belongs.

Safety: no cutting or heat is needed. Wipe up spills so no one slips.

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