Name: _____ Date: _____

Desert Cactus, Rainforest Fern

Circle group

Plants live almost everywhere, but a plant that does well in one place may not live in another. A desert cactus and a rainforest fern show this well. Their homes are almost opposite.

A desert gets very little rain. A cactus is built to save every drop. Its thick stem swells as it stores water inside. A waxy skin keeps the water from leaking out. It has sharp spines instead of broad leaves. Broad leaves would lose water in the heat. The spines also help keep animals from biting the cactus. Its roots spread out near the surface, so they can soak up water fast when a rare rain comes.

A rainforest is warm and wet. A fern on the forest floor does not need to save water. Its problem is too little light. The tall trees above block most of the sun. So the fern has thin, wide fronds. They spread out to catch the little light that gets through. Many rainforest plants have leaves with pointed tips. The tips help rain run off, so the leaves do not stay soggy.

Both plants live well. Each has different tools for a different home.

Questions

1. How does a cactus store water?

_____

_____

2. Why does a cactus have spines instead of broad leaves?

_____

_____

3. Why do cactus roots spread out near the surface?

_____

_____

4. What problem does a rainforest fern have?

_____

_____

5. How do wide fronds help the fern?

_____

_____

6. What do pointed leaf tips do for rainforest plants?

_____

_____

Words to know

spines: sharp, pointed parts on a plant
fronds: the large, feathery leaves of a fern
waxy: smooth and slippery, like wax
soggy: soaked with water

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Desert Cactus, Rainforest Fern

Triangle group

Plants live almost everywhere, but a plant that thrives in one place may not survive in another. A desert cactus and a rainforest fern are good examples, because their homes are nearly opposite.

A desert gets very little rain. A cactus is built to save every drop. Its thick stem can swell as it stores water inside, and a waxy skin keeps that water from escaping. Instead of broad leaves, which would lose water in the heat, it has sharp spines. The spines also help protect the cactus from animals that might bite into it. Its roots spread out close to the surface, so they can soak up water quickly when a rare rain arrives.

A rainforest is warm and wet. A fern growing on the forest floor does not need to save water. Its problem is a lack of light, because the tall trees above block most of the sun. So the fern has thin, wide fronds that spread out to catch the little light that gets through. Many rainforest plants have leaves with pointed tips. The tips help rain run off, which keeps the leaves from staying soggy.

Both plants live well, but each has different tools for a different home.

Questions

1. How does a cactus store water?

_____

_____

2. Why does a cactus have spines instead of broad leaves?

_____

_____

3. Why do cactus roots spread out near the surface?

_____

_____

4. What problem does a rainforest fern face?

_____

_____

5. How do wide fronds help the fern?

_____

_____

6. What do pointed leaf tips do for rainforest plants?

_____

_____

Words to know

thrives: grows well and stays healthy
spines: sharp, pointed parts on a plant
fronds: the large, feathery leaves of a fern
waxy: smooth and slippery, like wax
soggy: soaked with water

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Desert Cactus, Rainforest Fern

Square group

Plants have colonized nearly every habitat on Earth, but a species that flourishes in one environment may be unable to survive in another. A desert cactus and a rainforest fern illustrate this principle well, because their homes are almost complete opposites.

A desert receives very little rainfall, and a cactus is built to conserve every drop. Its thick stem can swell as it stores water inside, and a waxy skin prevents that water from escaping. Instead of broad leaves, which would lose moisture in the scorching heat, it bears sharp spines that also help protect it from animals that might bite into it. Its roots spread out close to the surface, allowing them to absorb water quickly whenever a rare rain arrives.

A rainforest, by contrast, is warm and wet. A fern growing on the forest floor has no need to conserve water. Its difficulty is a shortage of light, since the tall trees overhead block most of the sunshine. Consequently, the fern has thin, wide fronds that spread out to capture the little light that filters through. Many rainforest plants also have leaves with pointed tips, which help rain run off so the leaves do not remain soggy.

Both plants live successfully, but each uses different tools suited to a different home.

Questions

1. How does a cactus store water?

_____

_____

2. Why does a cactus bear spines instead of broad leaves?

_____

_____

3. Why do a cactus's roots spread out close to the surface?

_____

_____

4. What difficulty does a rainforest fern face?

_____

_____

5. How do wide fronds help the fern?

_____

_____

6. What do pointed leaf tips do for rainforest plants?

_____

_____

Words to know

spines: sharp, pointed parts on a plant
fronds: the large, feathery leaves of a fern
waxy: smooth and slippery, like wax
soggy: soaked with water

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Desert Cactus, Rainforest Fern

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Desert Cactus, Rainforest Fern

Easier · 194 words · Flesch-Kincaid grade 2.9

1. Its thick stem swells as it holds water inside.
2. Broad leaves would lose water in the heat, and spines help keep animals away.
3. To soak up water fast when a rare rain comes.
4. Too little light, because tall trees block most of the sun.
5. They spread out to catch the little light that gets through.
6. They help rain run off so the leaves do not stay soggy.

Triangle: Desert Cactus, Rainforest Fern

This passage · 203 words · Flesch-Kincaid grade 4.9

1. Its thick stem swells as it holds water inside.
2. Broad leaves would lose water in the heat, and spines also protect it from animals.
3. To soak up water quickly when a rare rain arrives.
4. A lack of light, because tall trees block most of the sun.
5. They spread out to catch the little light that gets through.
6. They help rain run off so the leaves do not stay soggy.

Square: Desert Cactus, Rainforest Fern

Harder · 213 words · Flesch-Kincaid grade 8.7

1. Its thick stem swells as it holds water inside.
2. Broad leaves would lose moisture in the heat, and spines also protect it from animals.
3. So they can absorb water quickly whenever a rare rain arrives.
4. A shortage of light, because tall trees overhead block most of the sunshine.
5. They spread out to capture the little light that filters through.
6. They help rain run off so the leaves do not remain soggy.