





BOTANIST'S JOURNAL

PROPERTY OF:

What do plants need to grow and survive?	
Fill-in plants' four basic needs.	

1.	3.
2.	4.

How do plants get what they need?

After the experiment, fill-in the blanks below.



One function of roots is to absorb _____



One function of stems is to transport ______



One function of leaves is to absorb _____



What is life like in a desert environment? How do plants survive there?

Think like a botanist to hypothesize about desert plant adaptations.



$Step\ 1$: Observe the environment



?
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Rainwater...

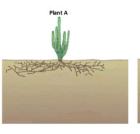
It rains...

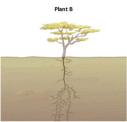
- a. soaks deep into the ground
- a. often
- b. stays near the surface
- b. rarely

Step 2: Observe the plant.



Choose 2 words from the Word Box to describe each plant's roots. Write them below.





Word Box Deep

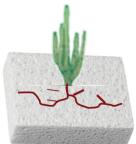
Horizontal Shallow

Vertical

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Step 3: Collect data.

Shade the area of Plant A's roots that are wet



Shade the area of Plant B's roots that are wet



Which roots accessed more of the rainwater?

Which roots accessed more of the groundwater? _____

<u>Step 4:</u> Make a hypothesis using evidence from Steps 1-3.

I expect to find plants with roots like Plant A in the desert because

I expect to find plants with roots like Plant B in the desert because



What is life like in a tropical rainforest environment? How do plants survive there?



Think like a botanist to hypothesize about rainforest plant adaptations.

United States Botanic Garden				

Step 1: Observe the What do you see?	environ	ment.	

The temperature is ____ °F.

This would feel...

It rains...

a. warm

a. often

b. cool

b. rarely

Step 2: Observe the plant.



What helped moss to grow on this leaf?



A lot of





How much sunlight can a mossy leaf absorb?

a. More

b. Less

Step 3: Collect data. Trace the outline of each leaf image below.

Shade the area of **Leaf A** that is wet



Shade the area of Leaf B that is wet



- Which leaf has less water on its surface? _____
- Why do you think that is? _____

Step 4: Make a hypothesis using evidence from Steps 1-3.

I expect to find less moss on leaves shaped like _____ in the rainforest because

Plants with less moss on their leaves get MORE / LESS sunlight.