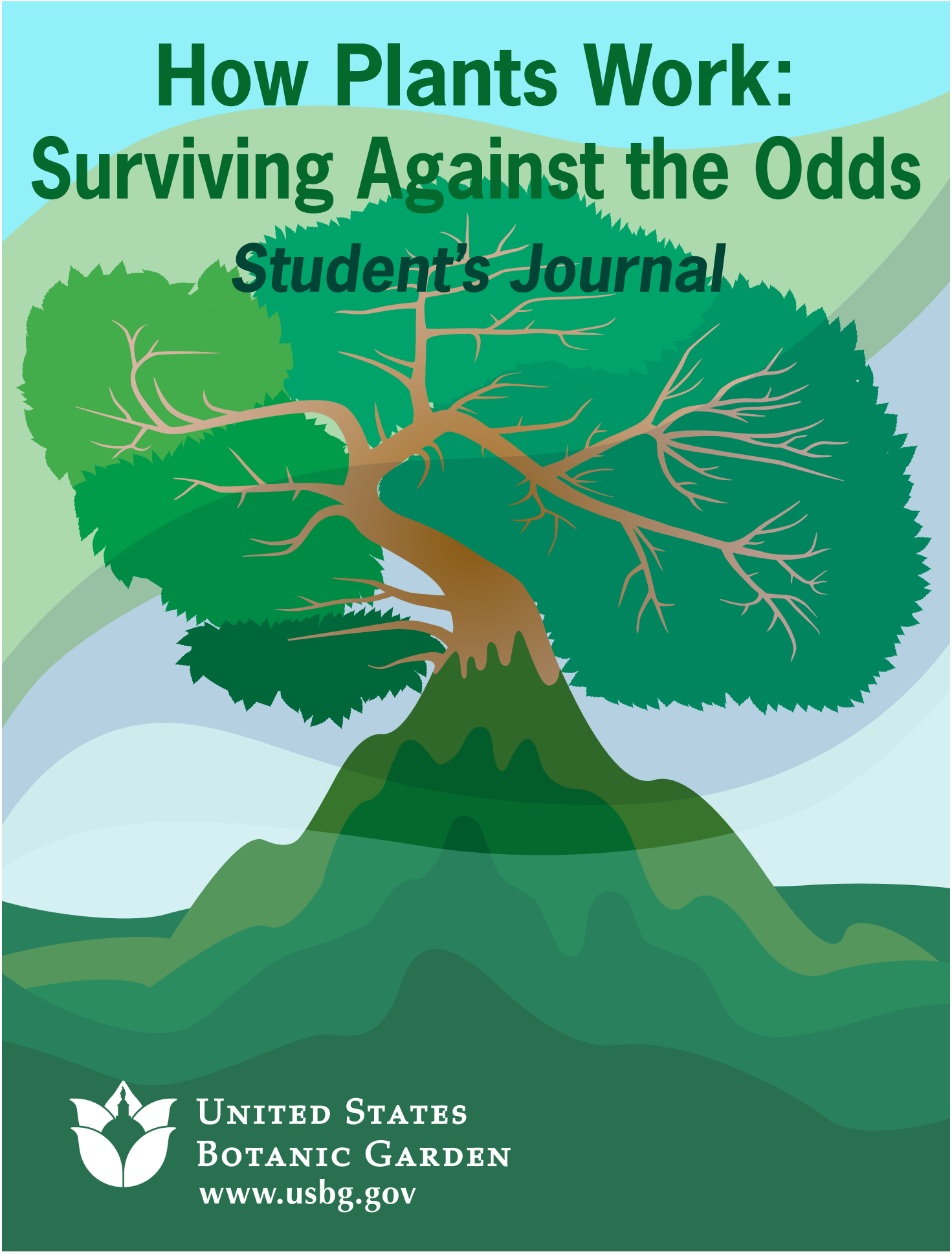
How Plants Work: Surviving Against the Odds

Student's Journal



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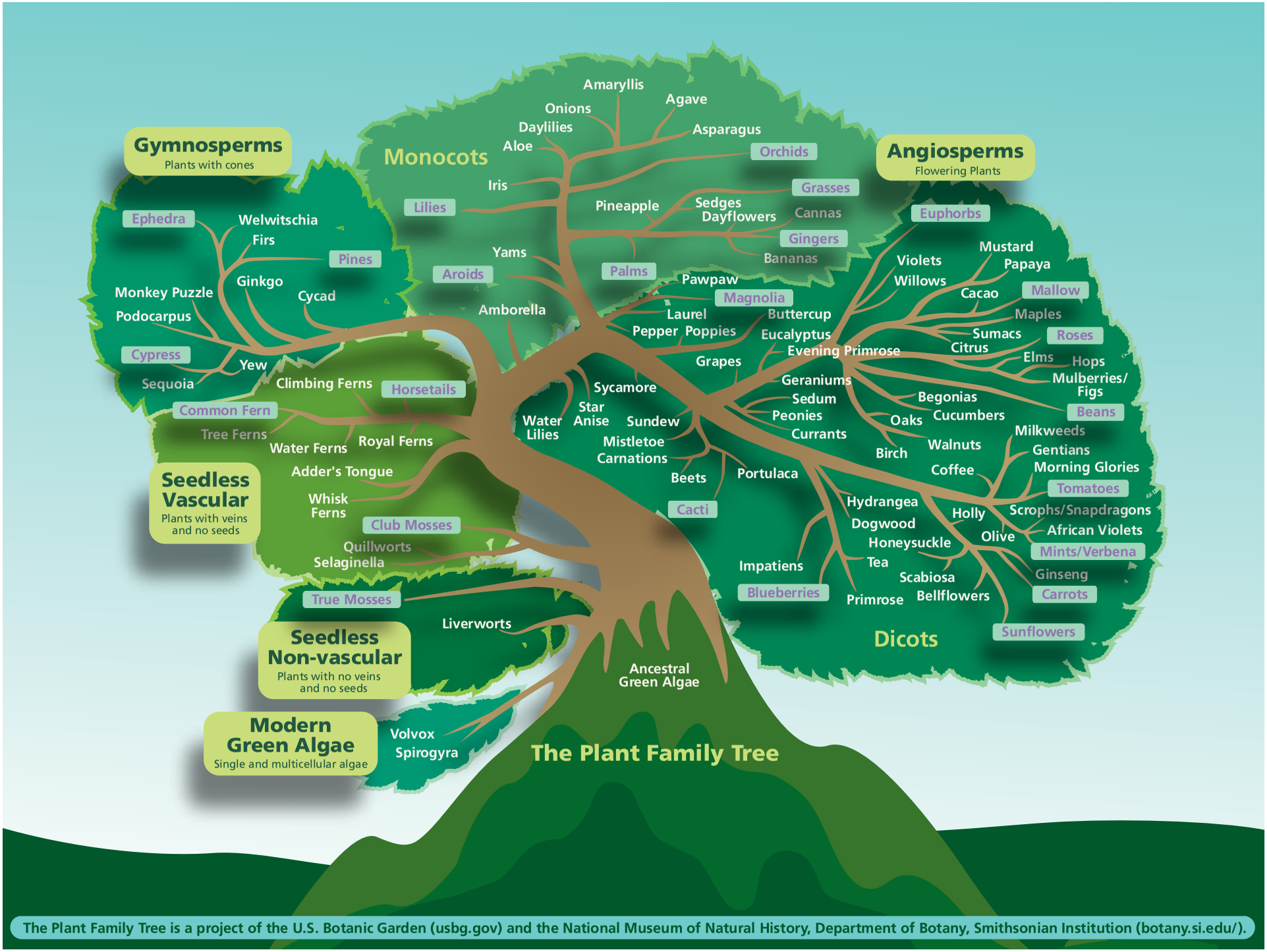
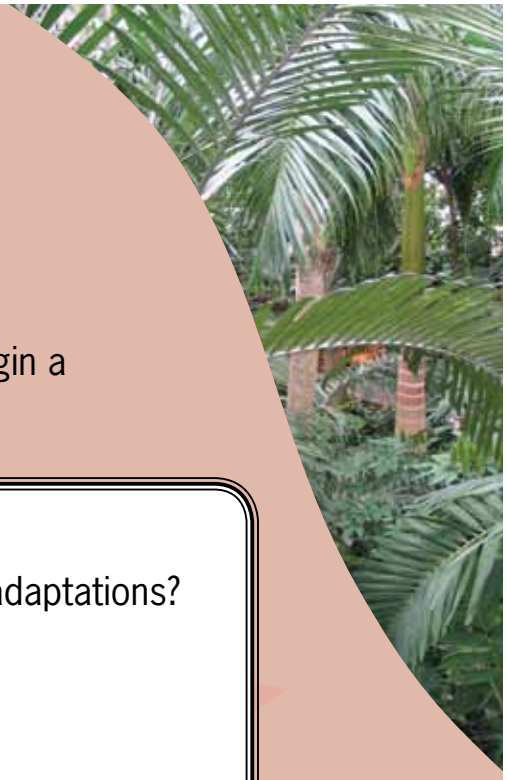


The Plant Family Tree is a project of the U.S. Botanic Garden (usbg.gov) and the National Museum of Natural History, Department of Botany, Smithsonian Institution (botany.si.edu/).

Surviving Against the Odds

How do plants adapt and survive?



Exploring the Conservatory...

Follow your teacher or adult leader into the Jungle to begin a scavenger hunt of the Conservatory.

Think Tank!

What does it mean to adapt? Why do plants need adaptations? List some of the ways plants adapt.

Which adaptation interests you most? Why?

Become a Savvy Plant Sleuth!

Think Tank!

If plants did not adapt, they would not survive. Plants have only so much energy, so they need to make good use of it. Adaptations take energy and time to evolve. What would happen if the Venus Flytrap could not trap insects?

Make your way to the Jungle. Work with your group to brainstorm one or two adaptations a plant may want to have in the jungle. Why would the plants want to use its energy to have the adaptation(s) you choose? List your reasons below.

1. _____
2. _____

The U.S. Botanic Garden would like your help in charting different plant adaptations in our Conservatory. Follow your teacher or chaperone on a scavenger hunt and fill in the chart on this page.

Adaptive Traits:

1. Leaves that appear to be already chewed
Plant: _____ Country of Origin: _____
Why would a plant grow this way? _____

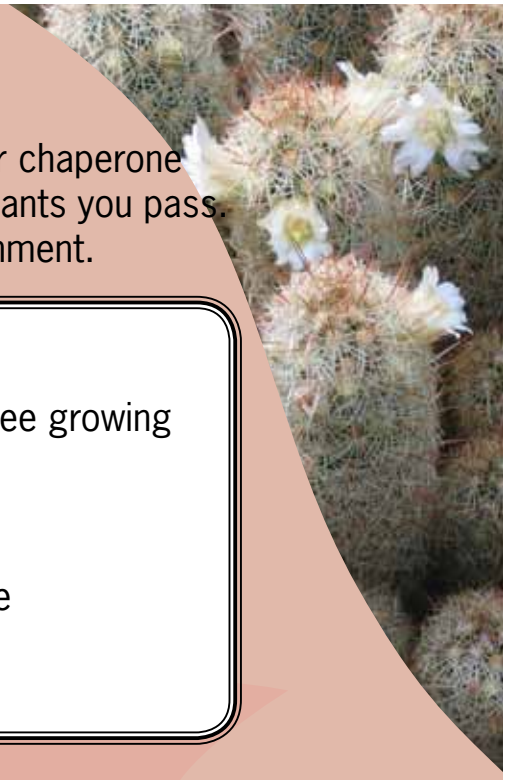
2. Aerial roots
Plant: _____ Country of Origin: _____
How do these roots help the plant survive in its environment? _____

3. Two different plants that thrive in a very wet environment
Plant: _____ Country of Origin: _____
Plant: _____ Country of Origin: _____
What is it about these plants that might help them thrive in a wet environment?
_____

4. A plant that appears to depend on another plant for survival
Plant: _____ Country of Origin: _____
How does the plant live like this?_____

5. Looks like it could stop herbivores from eating it
Plant: _____ Country of Origin: _____
How does the plant deter the predators?_____

6. A plant that has characteristics to help protect it from the hot sun
Plant: _____ Country of Origin: _____
How do these help in a hot environment? _____



If you are not already there, please follow your teacher or chaperone through World Deserts. As you are walking, look at the plants you pass. Consider how each plant is specially suited for its environment.

Think Tank!
List several adjectives to describe the plants you see growing in World Desert.

Why might a plant growing in the desert need these adaptations?

Dig Deeper…
Think about your own experiences adapting to your environment. Talk with your group and come up with different ways you adapt to various weather conditions.

What do YOU do if it is…wet, windy, hot or dry?
Now consider what a plant would do in the same conditions. List your answers below.

What does A PLANT do if it is…
Wet? _____
Windy? _____
Hot? _____
Dry? _____

Think Tank!
Think about yourself, where you live, and someone who is a friend. If you could create any adaptation for yourself or your friend, what would it be?

Choose your favorite of the adaptations you just created. In the space below, draw your choice. Be prepared to explain why it is important and how it works to make life better.

Name of Adaptation: _____

What Did You Learn?

Think Tank!
Why do plants need adaptations? Could plants survive without certain adaptations? Why or why not?