



Science Log – 5th

Topic: Plant Adaptations

Learning Goals:

1. Create a model of a plant illustrating the parts of a plant.
2. Explain the role of photosynthesis in the survival of plants.
3. Describe the traits of a plant that allow it to survive in its environment.

Topic: Plant Life & Adaptations

K What do you already know about the topic?	W What do you want to know about the topic?	L What did you learn about the topic?







Vocabulary Preview

Seed-producing plants	Have roots, stems, leaves, and flowers (aka vascular plants!)
Pollination	Part of the reproductive process of flowering plants; pollen is transferred from the stamens to the stigma.
Stamen and Pistil	Reproductive parts of the flower.
Sepals	Small leaves that form the housing of the developing flower.
Plants with spores	Nonvascular plants!
Photosynthesis	How planets produce their own food.
Spores	A small usually single-celled reproductive body produced by fungi and some plants.
Pollen	The very tiny grains produced by the stamens of a flower that fertilize the seeds and usually appear as fine yellow dust.
Vascular	Plants that have specialized tissues for conducting water, minerals, and photosynthetic products through the plant.
Nonvascular	Plants that have no roots, stems, or leaves, so the plants cannot retain water or deliver it to other parts of the plant body.

PLANT DESIGN CHALLENGE

You are **botanist** (plant scientist) on hike through the wilderness when you discover a plant that has never been seen.

STEP 1: Find your birth month. Use your birth month to determine the environment in which you discovered your plant. Read details about the type of environment, or habitat, in which your plant survives.

January February	March April	May June	July August	September October	November December
Wetlands	Arctic Tundra	Desert	Grasslands	Rainforest	Forest
					
<ul style="list-style-type: none"> • The land is covered by or saturated with water. • 59 to 200 inches of rainfall per year. • Four seasons. • Average temperature range 76°F to 30°F. • Dominated by trees. • Home to hundreds of insects, reptiles, amphibians, and birds. 	<ul style="list-style-type: none"> • Land frozen and covered with ice most of the year. • Cold (-30°F to 20°F) and windy climate with little rainfall. • All day sunlight in the summer. • All day darkness in the winter. • Animals: mountain goats, sheep, birds, polar bears, caribou, oxen. 	<ul style="list-style-type: none"> • Very hot (up to 122°F) and dry climate. • Cold nights. • Less than 10 inches of rain a year. • Most animals are nocturnal. 	<ul style="list-style-type: none"> • Temperatures range from -40°F to 90°F. • Little to moderate rainfall (10 to 40 inches per year). • Generally open flat land. • Up to 25 species of large plant-eating animals. • Natural and human-caused fires are common. 	<ul style="list-style-type: none"> • Hot and Humid (steamy) climate. • Average temp: 86°F Daytime; 68°F Nighttime. • 70 inches or more of rain per year. • Moist and soggy soils rich with nutrients. • Little sunlight filters through the all trees to the ground. • Many fruit eating animals and insects. 	<ul style="list-style-type: none"> • Four season with moderate climate. • 30 to 60 inches of rain per year. • Nut eating animals like squirrels and chipmunks. • Birds and butterfly migrate to another habitat in the winter.

My plant has the adaptations needed to survive in the _____ environment.

I will name my newly discovered plant _____.

STEP 2: Brainstorm

- Decide if your newly “discovered” plant produces a product useful to humans. If so, please share what the product is and how the plant is used to create it. (Example: Oak tree’s trunk is cut down and the bark is removed before the trunk is cut to produce lumber to build houses.) CHECK ONE BELOW.
 - My plant will not produce a product for humans to use.
 - OR
 - My plant will produce _____ for _____.

PLANT DESIGN CHALLENGE

- Your plant must have a way to get energy, a way to protect itself from weather/climate and animals, and a way to reproduce. Explain how your plant will...

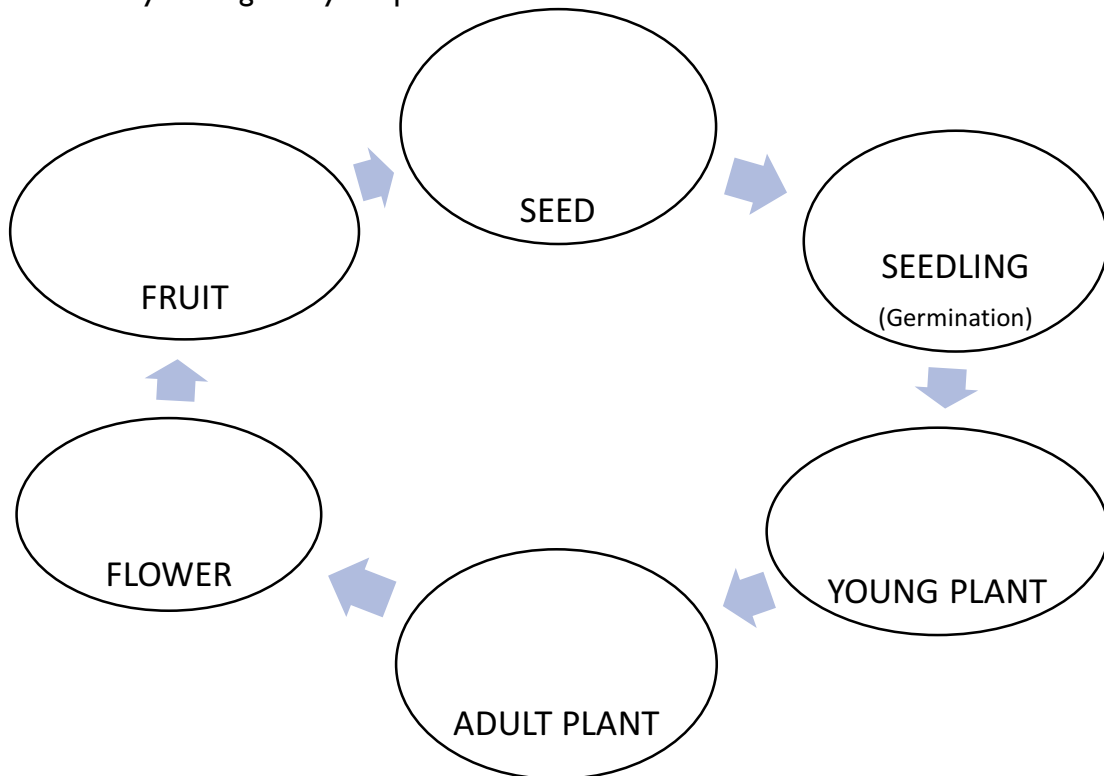
- Get energy: _____

- Protect itself from weather/climate: _____

- Protect itself from animals: _____

- Reproduce: _____

STEP 3: Draw the life cycle stages of your plant.



STEP 4: Using craft supplies, design your plant in its final stage of life. Label the plant's roots, stems, and leaves. Take a picture of your plant and share it with us at Explorers@Blueskyfund.org or by posting it on social media with the hashtag #ThinkOutsideWithBlueSky

HAVE FUN SCIENTISTS!!!