

Monday

- Complete IXLs from last week if needed
N. 2 - N. 7

Tuesday

- Complete pgs 1 - 7 at own pace over this week

Wednesday

- Complete pgs 1 - 7 at own pace over this week

Thursday

- Complete pgs 1 - 7 at own pace over this week

**NO HOMEWORK FRIDAY!!
ENJOY YOUR WEEKEND :)**

Reminders

- **Science Fair Final Grade is based on PowerPoint**
 - was due 11/17
 - **WILL NOT** be accepted after 12/12 - 3 weeks late
- **Moon Journal was Due 11/4**
 - I have many moon journals without names, please ask for no name pile to search for yours
- **Life Science Test (tentative, 12/19) depends on the class schedule. Different sections may have different test days depending on class pace.**
- **EXTRA CREDIT: tbd**
- **Students will also be given time in class to complete IXL HW assignments (if time permits)**

Life Science Unit Vocab

Plant Responses & Adaptations

How Do Plants Know What Season It Is? 🍂

Plants don't have calendars, but they are experts at telling time! They sense changes in their environment, and the most important signal is the amount of sunlight they get each day.

As summer turns into fall, the days get shorter. This decrease in sunlight signals to many plants that winter is coming. For example, **deciduous** trees like maple and oak trees stop making food and drop their leaves to save energy and water. This state of low activity is called **dormancy**—it's like hibernation for plants! Then, when the days start getting longer in the spring, plants wake up. Trees grow new leaves, and bulbs like tulips start to sprout.



Important Terms to Know 📖

Adaptation	A physical trait or behavior that helps an organism survive in its environment.
Dormancy	A period of time when a plant's growth and activity stop to survive harsh conditions, like winter.
Phototropism	The way a plant grows or bends in response to light.
Deciduous	Trees or shrubs that shed their leaves annually, usually in the fall.
Evergreen	Plants that keep their green leaves or needles all year round.



Top Tip: Think of "Deciduous" as "Decide to drop." These trees decide to drop their leaves to survive the cold!

Vocabulary Match-Up! 📖

Let's check your understanding of the new words! Read the definitions below. Then, choose the correct term from the word bank and write it in the answer column.

Word Bank:

- Adaptation
- Dormancy
- Phototropism
- Deciduous
- Evergreen

Definition	Word
1. A period of time when a plant's growth and activity stop to survive harsh conditions, like winter.	
2. Plants that keep their green leaves or needles all year round.	
3. A physical trait or behavior that helps an organism survive in its environment.	
4. Trees or shrubs that shed their leaves annually, usually in the fall.	
5. The way a plant grows or bends in response to light.	

Survival Skills: Adaptations 🌵



Plants grow in all kinds of places, from freezing tundras to scorching deserts. To survive, they develop **adaptations**, which are special features that help them live in their specific environment.

Different environments lead to different adaptations. Here are a few examples:

- **In the Desert:** Water is scarce. Cacti adapt with thick, waxy skin to hold in moisture, sharp spines instead of leaves to reduce water loss, and deep roots that spread out wide to soak up water. The spines also protect them from thirsty animals!
- **In the Rainforest:** It rains a lot! Plants here often have leaves with "drip tips" to let rainwater run off. Because the soil is often thin, many trees have shallow roots or large buttress roots for support. To compete for light on the shady forest floor, some plants grow huge leaves.
- **In the Tundra:** It's cold and windy. Plants adapt by growing low to the ground to avoid the wind and having fuzzy stems to trap warmth. Because the ground below is frozen (permafrost), they have shallow roots that can grow in the thin layer of soil that thaws in summer.

More Adaptation Vocabulary 🌿

Let's review the new words you learned about plant adaptations from different environments. Read each definition and write the correct term from the word bank in the space provided.

Word Bank:

- Waxy Skin
- Spines
- Drip Tips
- Buttress Roots
- Permafrost

Definition	Word
1. A thick, shiny coating on plants (like cacti) that helps prevent water from evaporating.	
2. Pointed ends on leaves, common in rainforests, that allow rainwater to run off quickly.	
3. Sharp, pointed structures on a plant (like a cactus) that reduce water loss and protect it from animals.	
4. A thick layer of soil that stays frozen all year round, found in cold regions like the tundra.	
5. Large, wide roots at the base of trees that provide extra support in shallow soil.	

Character Analysis: The Old Oak Tree 🌳

Let's think like writers and scientists at the same time! Imagine a very old oak tree is a character in a story. This tree has seen hundreds of seasons. Analyze its 'character' by answering the questions below, using what you've learned about plant adaptations.

1. Character Traits & Motivation: The Old Oak Tree's main 'trait' is that it's deciduous. What is its motivation for dropping its leaves every fall? How does this trait help it survive?



2. Character Development: Describe how the Old Oak Tree's 'relationship' with the sun changes from summer to winter. How does this changing relationship affect its appearance and actions throughout the year?

Plant Adaptations

Adaptations Around the World 🌍

A plant's home, or **habitat**, determines the challenges it faces. To survive, plants develop special features called **adaptations**. An adaptation that works in a hot desert wouldn't work in a shady rainforest! Let's look at a couple of examples.

In the Rainforest Canopy:

Many rainforests are dense, so plants must compete for sunlight. Some plants, like orchids, become *epiphytes* (air plants). They adapt by growing on the branches of taller trees to get closer to the sun, absorbing water and nutrients from the air and rain.





In Bogs and Swamps:


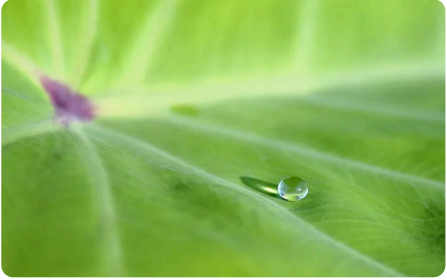
The soil in bogs is very poor in nutrients. To solve this problem, pitcher plants have adapted to become carnivorous. Their leaves form a deep cup filled with liquid that traps insects. The plant then digests the insects to get the nutrients it needs.

These are just two examples of how plants develop unique parts to survive. Now, let's explore some more!

Picture This: Plant Parts 🖼️

Match each plant adaptation description with the image that shows it. Write the sentence number on the image that it matches with, **large enough to see**. Think about how each special feature helps the plant survive in its environment.

Adaptation	Example
1. Sharp thorns growing on a stem to protect the plant from being eaten by hungry animals.	
2. A waxy coating on leaves that causes water to bead up and roll off, preventing water loss.	

Adaptation	Example
3. A carnivorous plant with hinged leaves that snap shut to trap insects for nutrients.	
4. Light, feathery seeds that can be carried long distances by the wind to spread to new areas.	

Vocabulary Refresh 🧠

Match the key terms to their correct definitions below.

Word Bank: Adaptation, Habitat, Carnivorous, Succulent

Definition	Word
1. A trait or behavior that helps an organism survive in its environment.	
2. The natural home or environment where a plant or animal lives.	
3. Plants with thick, fleshy tissues adapted to store water (like cacti).	
4. Plants that trap and digest insects to get nutrients.	

Visual Analysis: Leaf Structures 🌿



1. Rainforest Floor:

These giant lily pads float on top of the water. Why is it helpful for them to be so **wide and flat**?

2. Cold Mountains:

Pine trees have thin, waxy needles instead of flat leaves. How does this shape help the tree survive **heavy snow**?



Complete the Concept 🖋️

Use the word bank to complete these key sentences about survival strategies.

Word Bank: sunlight, roots, dispersal, thorns

1. In dry environments, plants often have very deep _____ to reach water far underground.
2. In the dark rainforest understory, plants grow large leaves to capture as much _____ as possible.
3. Some seeds have hooks or wings to help with seed _____ so they can grow in new places.
4. Plants like roses grow sharp _____ to stop animals from eating them.


Key Reminder 💡






Remember: Adaptations can be **Structural** (body parts like thorns or waxy skin) or **Behavioral** (actions like growing toward the light or closing flowers at night).

Action or Part? 🌱

Read the description of each adaptation. Is it a physical part (**structural**) or an action the plant takes (**behavioral**)? Match each description to the picture that shows it. Write the sentence number on the image that it matches with, **large enough to see**,

Adaptation	Example
1. A cactus has sharp spines instead of leaves. This is a <u>structural</u> adaptation that protects it from thirsty animals and reduces water loss.	

Adaptation	Example
<p>2. A sunflower turns its head to follow the sun across the sky. This is a <u>behavioral</u> adaptation to maximize sunlight for photosynthesis.</p>	
<p>3. A flower has brightly colored petals. This is a <u>structural</u> adaptation designed to attract bees and other pollinators.</p>	
<p>4. A prayer plant folds its leaves up at night. This is a <u>behavioral</u> adaptation that may help conserve water or protect the plant.</p>	

Defining Adaptations 🖋️

You just saw examples of adaptations that are physical parts and adaptations that are actions. Now, let's lock in the official terms! Match each type of adaptation to its correct definition.

Word Bank: Structural Adaptation, Behavioral Adaptation

Definition	Word
<p>1. A physical feature of an organism's body that helps it survive in its environment. <i>Examples: thorns, waxy leaves, deep roots.</i></p>	
<p>2. Something an organism <i>does</i> to survive in its environment. <i>Examples: a plant growing towards sunlight, or a flower closing its petals at night.</i></p>	