Stewardship Through First Foods-Camas
3rd Grade

Lesson 4- Science: Ecosystems and Geophytes | 60 minutes

Activity 1: Seasonal Plant Life Cycle Round
Activity 2: Habitat: Observing Conditions & Relationships
Activity 2: Geophyte PowerPoint & Worksheet

Overview

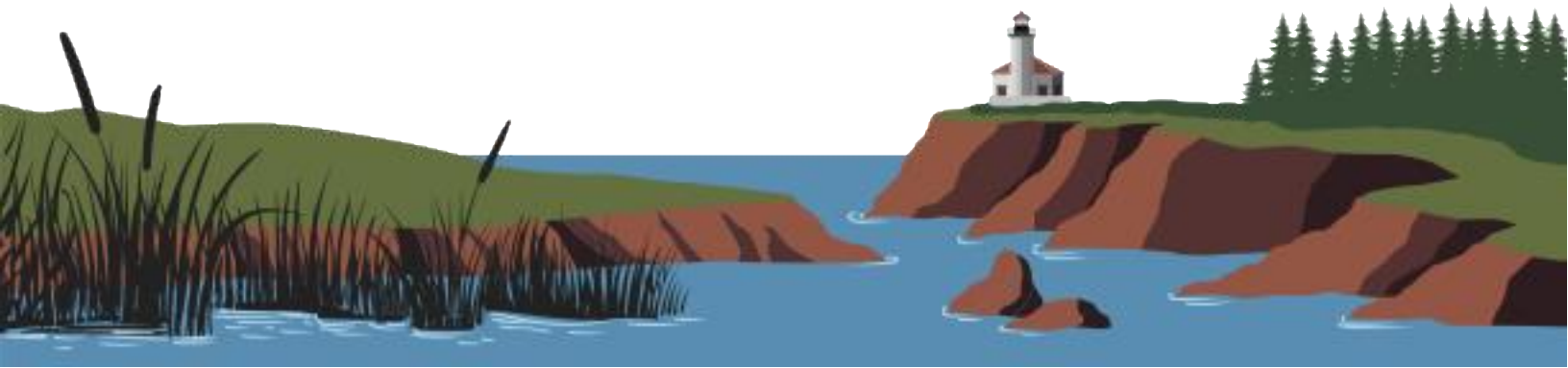
Students explore how Camas grow, rest, and return over time by noticing seasonal patterns, habitat conditions, and relationships within an ecosystem. Through studying Camas as a First Food, students learn that plants are part of connected living systems that depend on specific conditions to continue year after year. As students extend their thinking to other First Foods that store energy underground, they recognize shared plant strategies for living with seasonal change.

The Coos, Lower Umpqua and Siuslaw Peoples' long-standing relationships with land reflect deep knowledge of these patterns and conditions. Studying Camas and other geophytes helps make visible how attention to place, seasons, and relationships supports balance and continuity in living systems.

Key Discovery:

Living systems continue over time when people, plants, and places are in relationship, and the conditions that support life are noticed and tended.

Standards	• Primary: 3.LS1.1, 3.LS4.3, 3.LS3.2
Materials	• Camas Life Cycle Narrative (Science) • Plant Habitat Image • Camas Habitat Worksheet • Geophyte PowerPoint • Plant Life Cycle Worksheet-side A • Camas Life Cycle Worksheet-side B



Vocabulary	
	• **Perennial:** Lasting or existing for a long or apparently infinite time; enduring or continually recurring. • **Camas:** Bulb of the lily family commonly eaten as a first food. • **Habitat**: A specific place where a plant or animal lives. • **Life Cycle:** The series of changes in the life of an organism. • **Germination:** The development of a plant from a seed or spore after a period of dormancy. • **Geophyte:** A plant with a special underground food storage system. • . • **Rhizome:** Rhizomes are thick, underground stems that store energy and water while growing horizontally**.** • **Corms:** Corms are short, solid, swollen stems that store energy and water. When enough energy and water is stored, new growth emerges. • **Tuber**: Tubers are swollen underground stems or roots that store energy and water • **True Bulb:** True bulbs are characterized by fleshy, overlapping scales that store nutrients.

Setup & Logistics:

- Prepare the Plant Life Cycle Side A and Camas Life Cycle Side B for Activity 1 (double-sided).
- Have the Camas Life Cycle Narrative (Science) available for shared or partner reading.
- Prepare the Plant Habitat Image for Activity 2 and Activity 3
    - enough copies for students to mark.
- Copy the Camas Habitat Worksheet for Activity 2.
- Set up the Geophyte PowerPoint for Activity 3.

Optional (Teacher Choice):

- Gather images or real examples of bulbs, corms, tubers, or rhizomes for observational extension during Activity 3.



Class Flow:

Activity 1 – Seasonal Plant Life Cycle Round

This activity introduces seasonal cycles as a way to notice patterns in how plants grow, rest, and return over time. Students use the Plant Life Cycle first to share what they already know, and later revisit it after learning about Camas to deepen their understanding. This activity prepares students to think about stewardship as the protection of the conditions that allow plants to continue year after year.

Step 1: Orientation to Seasonal Patterns

- Share the Plant Cycle Round with the students.
- Explain that the round is a tool for noticing how time moves in a cycle and how plants change across a year.
- Suggested Prompts:
    - What do you notice about how plants change during the year?
    - What do you notice about what plants need to grow, rest, and
    - return?
    - Where do you think plant activity is happening that we might not be able to see?

Step 2: Representing Seasonal Change

- Invite students to complete the Plant Life Cycle:
    - Label the seasons and months.
    - Show what plants might be doing at different times of the year, both above and below the ground.
- Students may work independently, with a partner, or through guided discussion.

Step 3: Share and Notice

- Invite students to share observations from their rounds.
- Elevate common patterns that the students are noticing (growth, rest, changes across seasons).
- Record or restate student ideas using their language.
- Suggested Prompts:
    - What do you notice happening to plants over the year?
    - Where do you see times of growth or rest?
    - Do plants seem to do the same thing all year?



Step 4: Introduce Camas Through Narrative

- Read the Camas Life Cycle Narrative together (whole group or partners).
- Introduce Camas as a First Food whose life cycle makes seasonal patterns and plant relationships to land more visible.

Step 5: Apply the Pattern of the Camas Life Cycle

- Let students know they will now use what they learned about Camas to create a second life cycle round focused specifically on Camas.
- Provide the Camas Life Cycle_Side B.
- Invite students to show how Camas:
  - Grows
  - Rests
  - Returns

Step 6: Share, Reflect, and Respond

- Invite students to share one thing they noticed about how Camas grows, rests, and returns across the seasons.
- Support students in connecting plant life cycles to human behavior by reflecting on how paying attention to seasons and conditions helps plants continue over time.
- Suggested Prompts:
  - What did Camas help you notice about plant life cycles that you didn't think about before?
  - Why might people who depend on plants like Camas pay close attention to these seasonal patterns?
  - How does understanding a plant's cycle help people care for land over time?

Activity 2 – Camas Habitat- Noticing Conditions and Relationships

Students use the Camas habitat image to identify and explain how environmental conditions support Camas over time, applying what they learned from the life-cycle narrative.

Step 1: Habitat Thinking Invitation

- Distribute the Plant Habitat Image and the Camas Habitat Worksheet.



- Invite students to look at the Plant Habitat Image carefully and consider the questions in Section 1:
  - What parts of this place help plants grow?
  - Which parts of this place might support plants during different seasons?
  - Which parts of this place help plants return year after year?
- Invite students to share with a partner or small group.

Step 2: Show Patterns

- Invite students to move into Section 2 of the Camas Habitat Worksheet.
- Students use the Plant Habitat Image as a thinking tool. Students:
  - Circle areas that might provide water or moisture
  - Sketch where sunlight reaches the ground
  - Draw arrows to show relationships (water → plants, plants → pollinators)
  - Add Camas, additional plants, sunshine, or animals that belong in this habitat
  - Include short labels or notes to explain your thinking

Step 3: Share and Name Patterns

- Invite students to share one thing they added to the habitat and why.
- Students may hold up their worksheet, point to the image, or describe their thinking.
- Suggested Prompts:
  - What did you notice about how water supports plants in this habitat?
  - What patterns did you notice across different students' habitats?
  - How does this place help Camas grow, rest, and return over time?
  - What conditions seem especially important for plants here?

Activity 3: Geophytes: Shared Underground Strategies

Students expand their understanding of Camas by noticing that other First Foods also store energy underground. This shared pattern helps plants survive seasonal changes and return when conditions are right.

Step 1: Introduce Shared Plant Patterns

- Introduce other First Foods that are similar to Camas in important ways.
- Explain that these plants store energy underground, which helps them live well in places with changing seasons.
- Invite students to use the Plant Habitat Image that was used in Activity 2 or distribute a new Plant Habitat Image.
- Let students know the habitat will be used as a thinking space during the slideshow.



Step 2: Geophyte PowerPoint with Pattern Mapping

- Begin the Geophyte PowerPoint.
- Move through the slides once, pausing as each plant is introduced: Camas → Wapato → Harvest Lily → Skunk Cabbage
- For each plant, invite students to:
  - Point to places in the habitat where the plant might grow, or
  - Mark the habitat if using individual copies
- Guiding Prompts (repeated gently):
  - What condition does this plant seem to grow well with?
  - How is this plant like Camas?
  - What stays the same, even though the plant looks different?
  - How might storing energy underground help this plant live through the seasons?

Step 3: Think and Share

- Invite students to share:
  - Where they placed one plant in the habitat
  - What condition supported that location
- As students share, restate ideas using their language and help name the shared pattern:
  - Many First Foods store energy underground
  - Different plants grow in different places
  - All rely on specific conditions to return overtime
- Closing question: Why do you think people who rely on plants like these pay close attention to place and seasons?

Optional Activity:

If available, teachers may bring examples of bulbs, corms, tubers, or rhizomes (or photos). Invite students to notice how different plants store energy underground and what they have in common.

