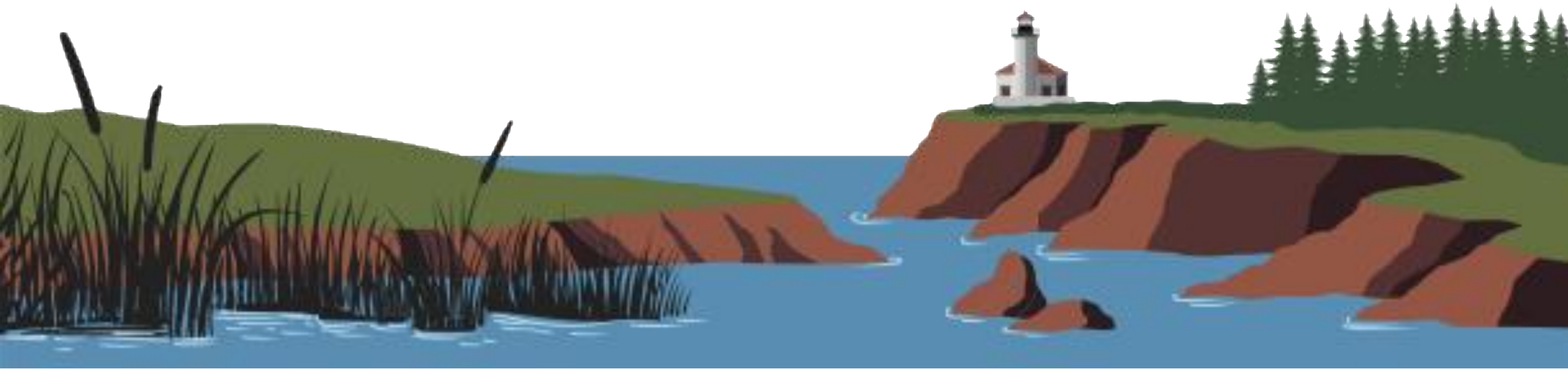
Grade 3

First Foods
Geophytes: An Introduction



What is a Geophyte?

Geophytes are plants that store food underground.

This stored energy helps the plant survive times of cold or dryness. When conditions change, new growth appears above the ground.

Can you think of any geophytes that you may know based on this description?

There are many common geophytes in our modern diets!

Geophytes: A Shared Pattern

All geophytes store energy underground and return across seasons.

Geophytes include:

1. Tubers
2. True Bulbs
3. Corms
4. Rhizomes

<u>Noticing and Thinking:</u>

- What do these plants have in common?
- How might growing underground help plants survive different seasons?

True Bulbs

What is a true bulb?

True bulbs are characterized by fleshy, overlapping scales that store nutrients.

Western true bulbs you might know:
Onion, Lily, Lily of the Valley

Some First Food true bulbs:
Camas, Rice Root (Chocolate Lily)

Environment: Grassland habitats or mountainous regions, prefer well-drained soil.





Photo by Steven Bellemlan



True Bulb: Camas

Camas is a First Food and a true bulb.

Its underground bulb stores energy, helping the plant survive different seasons.

Through careful attention of the Tribes to the plant and the land, Camas have been able to return over time as a First Food.

The ***miluk*** Coos word is ***gem***.
The ***hanis*** Coos word is ***qe'me***.
The Lower Umpqua and Siuslaw word is ***auchiisii***.





Tubers

What is a tuber?
Tubers are swollen underground stems or roots that store energy and water.

Western tubers you might know:
Potato, Carrots

First Food tuber: Wapato

Environment: Tubers prefer partial shade to grow and can also thrive in well-drained sandy soil.



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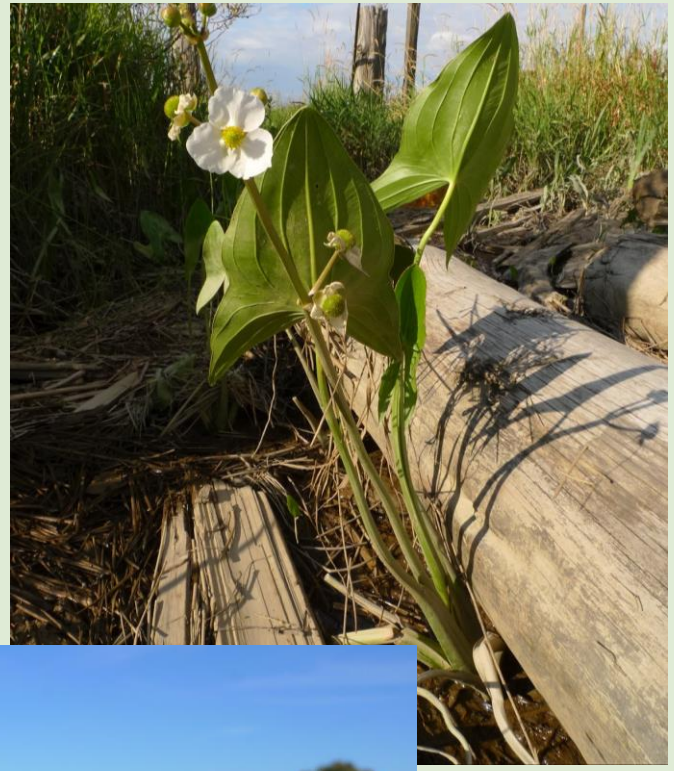
Tuber: Wapato

Wapato, a small potato-like tuber, is an important First Food.

Through extensive knowledge of wetlands and waterways, the Tribes support conditions that allow Wapato to thrive.

The ***miluk*** Coos, ***hanis*** Coos, and ***Lower*** Umpqua and Siuslaw word is ***qwíi'məts***.





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Corms

What is a corm?
A corm is a short, solid, swollen stem that stores energy and water.

Western corms you might know:
Crocus, Gladiola

Some First Food corms:
Brodiaea (Harvest Lily)

Environment: Corms prefer to grow in a humid, warm, and sunny location.







Photos by Jon Richfield

Corms: Harvest Lily

Harvest Lily, also called Brodiaea and Cluster Lily, is a First Food and a corm.

Like Camas, it stores energy underground and returns across seasons when land conditions are supported.

The ***miluk*** Coos and the ***hanis*** Coos word is ***willits***,
The Lower Umpqua and Siuslaw word is ***k'wusk'w***.



https://www.wildflower.org/gallery/result.php?id_image=73583

Rhizomes

What are rhizomes?

Rhizomes are thick, underground stems that store energy and water while growing horizontally.

Western rhizomes you might know:
Ginger, Iris.

Some First Food rhizomes:
Bracken Fern, Skunk Cabbage, Nettles.

Environment: Rhizomes prefer well-drained soil that remains consistently moist but not waterlogged.



Photo © Kenneth Walker



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Photo retrieved 5/15/2026:https://propg.ifas.ufl.edu/07-geophytes/02-othergeophytes/07-geophytes-rhizome.html

Rhizomes: Skunk Cabbage (***yayəx̣, yaiyəx̣, kimetɬ, ts'ya'nax***)

Skunk cabbage is a First Food and a rhizome.

Its underground rhizome helps the plant survive different seasons and return over time.

Through knowledge of seasonal cycles and care for the land, skunk cabbage continues to be a First Food.



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The ***miluk*** Coos word is ***willits***; the ***hanis*** Coos word is ***willits***, the Lower Umpqua and Siuslaw word is ***k'wusk'w***.

Brief Geophyte Recap:

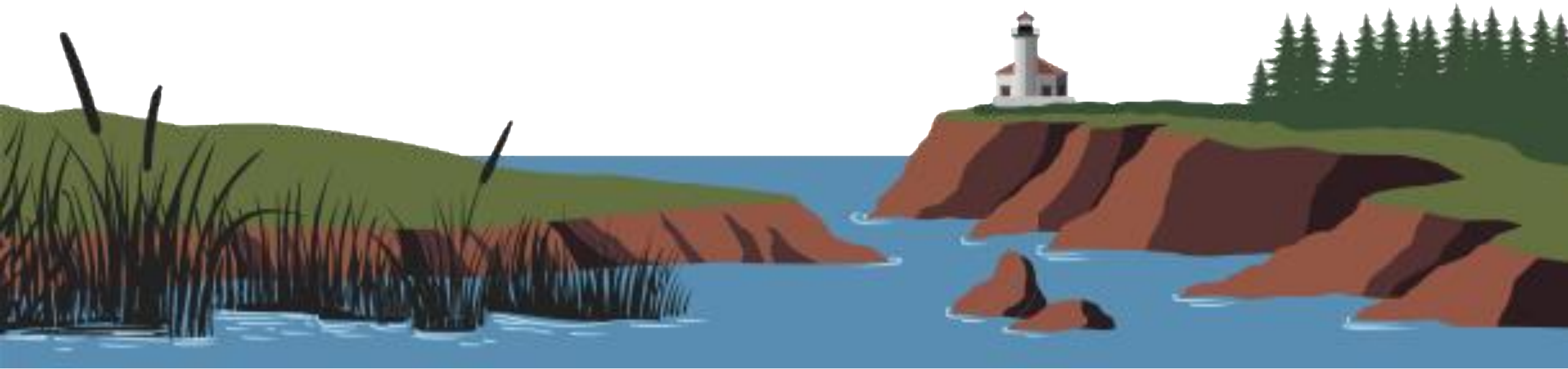
True Bulbs True bulbs are characterized by fleshy, overlapping scales that store nutrients First Food: Camas	**Tubers** Tubers are swollen underground stems or roots that store energy and water First Food: Wapato
Corms A corm is a short, solid, swollen stem that stores energy and water. First Food: Harvest Lily	**Rhizomes** Rhizomes are thick, underground stems that store energy and water while growing horizontally. First Food: Skunk Cabbage

<u>Noticing and Thinking:</u>

- What do these plants have in common?
- How might growing underground help plants survive different seasons?
- Why are geophytes dependable First Foods?

Grade 3

First Foods Geophytes
End of Slideshow



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Corms, bulbs, and tubers

Virginia Cooperative Extension

Extension Master Gardeners

Corms

A corm is a solid, swollen stem whose scales have been reduced to a dry, leaf-like covering. A large new corm forms on top of the old corm, and tiny cormels form around the large corm. Examples include gladiolus and crocus.





Bulbs

Tulips, lilies, daffodils, and onions are plants that produce bulbs – shortened, compressed, underground stems surrounded by fleshy scales (leaves) that envelop a central bud located at the tip of the stem.





Tuberous roots and stems

A tuberous stem is shortened, flattened, enlarged, and underground. Buds and shoots arise from the crown, and fibrous roots are found on the bottom of the tuberous stem. Examples are tuberous begonia and cyclamen.



A tuberous root is an underground storage organ, which is often confused with a bulb or tuberous stems. However, these are roots, not stems, and have neither nodes nor internodes. Examples are dahlia and sweet potato.



2023 Virginia Cooperative Extension Master Gardener Program

Want to learn more about plants?
Check out the *VCE Gardener Handbook* at pressbooks.lib.vt.edu/emgtraining

Image source: Virginia Cooperative

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Rhizomes: Skunk Cabbage (***yayəx̣, yaiyəx̣, kimetɬ, ts'ya'nax***)

Some examples:

Bracken Fern ɬk'wa (rhizome), ɬq'wa (rhizome), yauxa (rhizome)
And Licorice fern

Skunk cabbage is also a rhizome- yayəx̣, yaiyəx̣, kimetɬ, ts'ya'nax

Nettles- Roots pounded and leaves used to make tea. walaq'as Miluk/hanis

Wapato (***kwíi'məts , qwíi'mits***)