

CONCEPTUAL

WORLDVIEW:

Our students will learn and gain knowledge on the main characteristics of a biosphere reserve and understand the animals, plants, and landscape of the Olympic biosphere reserve.

PHILOSOPHY:

Knowledge of biosphere reserves is crucial to fully understand how different wildlife can survive in different climates. This knowledge will also serve as the framework to understand characteristics about wildlife.

THEORIES:

Meaningful learning

- Novak
- Ausubel

PRINCIPLES:

The learning process should use the student's background knowledge; doing this will grow the student's knowledge by allowing them to grow on what they already know.

Students will be motivated to actively participate in hands-on learning to engage student knowledge and understanding.

CONCEPTS:

- Definition of a biosphere reserve.
- Characteristics of animals, landscapes, and plants in the Olympic biosphere reserve.
- Understanding of the steps in a plant's life cycle

MAIN QUESTIONS

- What is a biosphere reserve?
- What are the types of plants, animals, and landscapes found in the Olympic biosphere reserve?
- What type of characteristics do certain plants, landscapes, and animals have in the Olympic biosphere reserve?
- What are the steps in the plant cycle?

EVENTS-OBJECTS:

Students will create numerous activities to enhance their knowledge on biosphere reserves. They will create flyers, journal entries, 3D models, posters, and a book catalog. Students will present some of their work and they will learn from others.

METHODOLOGICAL

VALUE JUDGEMENTS:

Students will understand biosphere reserves, and even have deeper knowledge on a specific reserve in Washington. They can use this knowledge to research more biosphere reserves and understand how different wildlife survive and adapt in the world.

KNOWLEDGE JUDGEMENTS:

Biosphere reserves are areas in the world that are preserved to help ecosystems thrive.

Plants: Sitka spruce, western hemlock, etc.

Animals: Spotted owl, marbled murrelet, etc.

Landscapes: Rivers, mountains, etc.

Plant Life Cycle: Seed, seedling, baby plant, plant, fruit

TRANSFORMATIONS:

- Concept maps
- 3D models
- Book catalogs
- Student presentations
- Student plants
- Biosphere flyer
- Journal entries

REGISTRIES:

- Observe students during activities.
- Observe students completed work.
- Evaluate the final 3D model project to gain understanding on students' knowledge of their assigned area of the biosphere.
- Observation throughout the planting of a lentil activity.
- Grading of the understanding of the plant life cycle through reading student's journal entries