**Lesson Plan: The Cycle of Life in the Temperate Rainforest - Field Trip Focus**

**Subject:** TBD  
**Grade Level:** 7-9  
**Topic:** The Cycle of Life in the Temperate Rainforest  
**Duration:** Full Day Field Trip (including pre- and post-field trip lessons)

**Big Ideas [Understand]**

* **Ecosystems are dynamic and interconnected, with each organism playing a vital role in the cycle of life.**
* **Human activity and natural processes affect ecosystems in different ways.**

**Competencies [Do]**

* **Evaluate the roles of organisms within an ecosystem, including the impact of primary producers, consumers, and decomposers.**
* **Use field observations to collect data and identify relationships within the ecosystem.**
* **Apply Indigenous perspectives to understand sustainable ecosystem management.**

**Content [Know]**

* Characteristics and functions of primary producers, consumers, and decomposers in ecosystems.
* Processes of decomposition and nutrient cycling, and their importance in maintaining ecosystem health.
* The role of rebirth, regeneration, and succession in forest ecosystems.
* Indigenous knowledge and practices related to ecosystem management and sustainability.

**Learning Intentions**

* **Students will be able to identify and explain the roles of different organisms in the rainforest ecosystem.**
* **Students will collect field data to analyze the cycle of life in a temperate rainforest.**
* **Students will appreciate the importance of Indigenous knowledge in ecosystem sustainability.**

**Rationale**

A field trip experience allows students to directly observe the cycle of life in the temperate rainforest, enhancing their understanding through real-world connections. Engaging with the forest ecosystem fosters a deeper appreciation for biodiversity, the interconnectedness of life, and the importance of Indigenous stewardship.

**Pre-Field Trip Lesson (1 hour)**

**Hook**

* **Activity:** Show a video or interactive presentation on the temperate rainforest ecosystem.
* **Discussion:** Ask students what they think they might observe on their field trip and how they believe the rainforest supports various forms of life.

**Lesson Overview**

* **Explanation:** Introduce key concepts of the cycle of life, focusing on growth, habitat, decomposition, nutrient cycling, and regeneration. Discuss the interconnected roles of trees, plants, animals, fungi, and microorganisms.
* **Activity:** Use a visual mind map to outline the roles of primary producers, consumers, and decomposers.

**Field Trip Preparation**

* **Safety Briefing:** Go over safety guidelines for exploring the forest, including staying on trails and respecting wildlife.
* **Equipment Check:** Ensure students have the necessary gear (notebooks, pencils, cameras, field guides).
* **Field Journals:** Distribute field journals with prompts for observations (e.g., “Identify a decomposer and describe its role,” “Observe the understory and record what you see”).

**Field Trip Experience**

**Location:** Local temperate rainforest (depending on your location, think Goldstream, Mt. Doug, other local clay deposit spots)

**Field Activities:**

1. **Indigenous Knowledge Integration** 
   * **Focus:** Engage with an Indigenous knowledge holder or ranger (if available) to discuss traditional uses of the forest and the importance of sustainable practices.
   * **Task:** Students reflect on what they’ve learned about the importance of respecting the balance within ecosystems.
2. **Guided Forest Walk** 
   * **Focus:** Observe and identify primary producers, such as Western red cedar, Douglas fir, and understory plants like mosses and ferns.
   * **Task:** Students sketch and label plants in their field journals, noting their role in the food chain.
3. **Habitat Exploration** 
   * **Focus:** Look for evidence of animal activity, such as nests, scat, or tracks. Identify small animals and insects that live in the understory.
   * **Task:** Students document one animal they observe and describe its habitat needs and role in the ecosystem.
4. **Decomposition Station** 
   * **Focus:** Examine nurse logs, fungi, and other decomposers. Discuss how they break down organic matter into nutrients.
   * **Task:** Students collect data on the types of fungi or decomposers found on a single log and record how these organisms contribute to nutrient cycling.
5. **Nutrient Cycling and Water Flow** 
   * **Focus:** Explore areas where water is flowing, like streams or wet soil. Discuss the role of water in nutrient transport and ecosystem health.
   * **Task:** Students test soil moisture levels or observe water clarity and flow, recording their findings in the field journal.
6. **Rebirth and Regeneration Observation** 
   * **Focus:** Identify young plants and signs of succession, such as areas of new growth after a fallen tree.
   * **Task:** Students describe a succession scenario they observe, explaining how the forest is regenerating.

**Post-Field Trip**

**Reflection and Assessment**

* **Discussion on bus home:** Facilitate a class discussion on the field trip experience, encouraging students to share their observations and insights.

**Assessment options**

* **Field Journals:** Evaluate entries for detailed observations, sketches, and responses to prompts.
* **Group Presentations:** Assess understanding of the cycle of life, accuracy of information, and integration of Indigenous knowledge.
* **Class Participation:** Observe engagement during discussions and activities.

**Materials Needed**

* Field journals and pencils
* Cameras or smartphones for photos (optional)
* Magnifying glasses for close observation of plants and decomposers
* First aid kit and appropriate gear for outdoor safety

**Special Accommodations**

* Provide field guides with images to support students with visual learning needs.
* Assign peer partners to assist students with mobility challenges.
* Offer verbal assessments for students who have difficulty with written reflections.