Learning Plan Practice Assignment
ECS 303-030 Dr. Aadmodt
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Lauren Buist, Kristin Plater, Kailee Trost, Simran Ahluwalia

Detailed Lesson Plan:

Subject/Grade: Grade 4 Science
Lesson Title: Plant and Animal Interdependency- Role Play Game & Reflection
Teacher: Created by Simran (further supported by Lauren, Kailee, & Kristin)

Stage 1: Identify Desired Results

Established Goals:

HC4.1

Investigate the interdependence of plants and animals, including humans, within habitats and communities.

f) Classify plants and animals, including humans, according to their role(s) (e.g., producer, consumer, herbivore, omnivore, carnivore, predator, prey, scavenger, and decomposer) in food chains and food webs.

j) Conduct a simulation or role-play to demonstrate the interdependence of plants and animals in a habitat or community.

k) Predict how the removal of a specific plant or animal population may affect a community in the short and long term.

Cross-Curricular Connections:

Physical Education:

PE4.9

and refine selected movement skills, tactics, and strategies while participating in low-organizational, inventive, and cooperative games (e.g., tag games, relay race, prisoner's base)

PE4.10

Apply tactics, strategies, and rules necessary for safe and inclusive involvement in movement activities, including but not limited to cooperative and competitive lead-up games as well as alternate environment activities, when alone and with others.

English Language Arts:

CC4.2

Create a variety of clear representations that communicate straightforward ideas and information relevant to the topic and purpose, including short, illustrated reports, dramatizations, posters, and other visuals such as displays and drawings.

Understandings: (can also be written as 'I Can' statements)
Students will understand…

I can understand that everything is connected, and understanding connections helps us make good decisions and predict the outcomes of our decisions.

I can learn new techniques to present knowledge in an appealing way.

I can understand the different methods to role play.

I can classify plants and animals according to their roles.

Essential Questions:

What role do plants and animals play in our ecosystem?

How do plants and animals interact within their environment?

What plants and animals are present in my community/habitat?

What are examples of plants, plant-eaters, and predators?

How would the removal of a plant or animal within a habitat have an impact on other species?

How can humans have a negative impact on ecosystems/habitats?

In what ways can we protect the plants and animals found in our community and the world?

Students will know…

What types of plants and animals live in which types of communities.

The characteristics of plants and animals.

How plants and animals interact with their environment.

Ways to observe nature without disturbing it.

The role each animal plays in their community and how the removal of one impacts many other species.

How to research effectively.

Examples of indigenous worldviews and how various cultures view interdependence.

Examples of modern technologies that help with scientific understanding.

Students will be able to…

Demonstrate how plants, plant eaters, and predators interact within their environment through play.

Identify plants, plant-eaters, and predators.

Communicate the solution to a variety of questions regarding scenarios related to their role play.

Stage 2: Determine Evidence for Assessing Learning

As a class, students will be assessed on their ability to demonstrate the role of plants, plant-eaters, and predators. This will be conducted through a game of tag specific to how these three organisms interact within their environment. Each student will be given the opportunity to play the role of each organism to further develop their understanding of all three categories.

Students will also be assessed in pairs and small groups through a drawing, written, or oral reflection. Students will be asked four questions unique to their learning experience. These questions require an understanding of the role of plants, plant-eaters and predators within their habitat, the possible impact of humans in their environment, as well as ideas for how we can protect the natural world.

Stage 3: Build Learning Plan

Instructional Strategies:

Role Play - Through a game of tag, students will role play a variety of plants and animals found within their habitat. Students will model plants, plant eaters, and predators. Each student will have the opportunity to role play each of the three categories to further develop their grasp of the concept. The tag/role play aspect of the lesson will contribute to students gaining a greater understanding of the concept along with the ability to represent their knowledge in an alternate and visual way.

Reflection - Similar to a "think-pair-share", students will be divided into small groups or pairs and will be asked to discuss and answer a series of four questions related to their learning experience. These groups/pairs will be able to choose between drawing, oral or written reflection to display their understanding. Students will then communicate their knowledge and ideas with the class as a whole (similar to a brainstorming session).

Set (Engagement): **Length of Time: 5 minutes**

Begin with Youtube Video *Plant and Animal Interdependency*:

https://youtu.be/7oRHpu_YoXI

Development: **Time: 10 mins for explanation/prep**
20 min to play (30 min total)

Divide some students to be predators and seven to ten to be plant-eaters. The remainder will be plants. This represents a balanced system where plants are more plentiful than plant-eaters, plant-eaters more plentiful than predators, and predators are the least plentiful. The students will be assigned to groups. Each group will be assigned a team colour in order to differentiate from one another. The predators try to tag the plant-eaters, and plant-eaters try to tag the plants. After a period of time, stop the game to see how many plants, plant-eaters, and predators are left. Play should resume but should be stopped a few times before the end to determine what has happened and why. Play 3 rounds so that students have a chance to experience each role.

Closure: **Time: 25 minutes**

Materials/Resources:

- Projector/computer in classroom to play video.
- Access to gymnasium or outdoor space for 30 mins.
- 3 different coloured vests/scarves for identifying teams.
- Print-out of reflection questions with adequate space for writing/mind-mapping/drawing observations and thinking.
- Students will need writing and art supplies.
- Whistle for pauses in session.

Possible Adaptations/ Differentiation:

- Allow differentiation with reflection response (verbal, drawing, writing, multimodal, etc.).

Management Strategies:

- Pre-arrange groups to avoid any isolation or student conflicts.
- Have all materials prepped and in the classroom before class begins.

After role-play, students are divided into pairs or small groups to reflect on what they have learned using the following prompts: 1. What happens to plants and plant-eaters when there are fewer predators? 2. What happens to the plants if there are fewer plant-eaters? 3. What might happen if humans use too much of one resource? 4. Share one idea of how we can protect the natural world. Students can write, draw, or orally communicate their thinking and further inquiry. Have groups/pairs share one thought with the rest of the class.	- Whistle to get attention in gymnasium/outdoors . **Safety Considerations:** - Ensure students are dressed appropriately for activity in gymnasium or outdoors. - Review safety tips for tag (gentle tapping for tag game, watch where you are running, etc). - Ensure coloured scarf/vest is being worn properly and safely. Review appropriate placement to ensure there is no risky use of materials.
Stage 4: Reflection	
Professional Development Goal is…	

Remaining Series of Lessons

Subject/Grade: 4	**Lesson Title: Exploring Habitats**	**Teacher: Kailee**
Stage 1: Identify Desired Results		
Established Goals: **HC4.1** Investigate the interdependence of plants and animals, including humans, within habitats and communities. ● C. Predict and research the populations of plants and animals that exist in various habitats (e.g., desert, farmland, meadow, tree, forest, rain puddle, seashore, lake, river, tropical forest, tundra, river delta, and mountains).		

Understandings: U *Students will understand…* ● *I can predict the plants and animals that I think would live in my given habitat.* ● *I can research and identify plants and animals that live within my given habitat.* ● *Along with my group, I can clearly represent and share my research on my habitat with my classmates through a poster board display.*	**Essential Questions:** ● Which animals live in my habitat? ● Which plants live in my habitat? ● What does my habitat look like? ● What food web exists within my habitat? ● How can I clearly share this information with my classmates?
Students will know… K ● *What a habitat is.* ● *What a food web is.* ● *What habitats are made up of (plants, animals)* ● *A basic understanding of each type of habitat.*	*Students will be able to…* ● *Use resources provided (books, videos, websites) to research their given habitat.* ● *Use research to create their information poster board display.* D

Stage 2: Determine Evidence for Assessing Learning

Students will be split into visibly random groups and awarded a habitat at random to further explore. Groups will work together to find all the necessary research to fill their poster board by following along a question/pre-writing workbook. Students will include the name of their habitat, the animals and plants within it, and any other relevant information. Poster board displays will be clear and organized. They will include both pictures and words. The poster board will be engaging and interesting to look at. Students will be assessed on the content they provide and the clarity in which it is presented. Students will assess their group members, as well as their own role within the group, via a group assessment sheet

Stage 3: Build Learning Plan

Instructional Strategies:

Set (Engagement): **Length of Time:** 10 mins Watch a short video from Crash Course Kids called *Home Sweet Habitat* as a recap/refresher on habitats and their components. On the board, map out the information required for their habitat research. **Development:** **Time:**	**Materials/Resources:** ● Video: *Home Sweet Habitat* on YouTube https://www.youtube.com/watch?v=p15IrEuhYmo **Possible Adaptations/ Differentiation:**

Closure: **Time:**	**Management Strategies:** **Safety Considerations:**

Stage 4: Reflection

Professional Development Goal is…

Subject/Grade: Grade 4 **Lesson Title:** Interdependence of Plants and Animals Around Us **Teacher:** Kristin

Stage 1: Identify Desired Results

Established Goals: (Learning outcome/s & indicator/s from the curriculum)

HC4.1 Investigate the interdependence of plants and animals, including humans, within habitats and communities

a. Identify the plants and animals which can be found in the communities (e.g., house, village, farm, reserve, and city) in which students live.

b. Differentiate between populations, communities, and habitats using local and regional examples.

c. Predict and research the populations of plants and animals that exist in various habitats (e.g., desert, farmland, meadow, tree, forest, rain puddle, seashore, lake, river, tropical forest, tundra, river delta, and mountains).

d. Discuss stories that demonstrate the interdependence of land, water, animals, plants, and the sky in traditional worldviews.

e. Draw upon facets of Indigenous worldviews, such as the Medicine Wheel or circle of life, to examine understanding about the interdependence of plants and animals in various habitats and communities.

Cross-Curricular Connections:

ELA: **CC4.2** Create a variety of clear representations that communicate straightforward ideas and information relevant to the topic and purpose, including short, illustrated reports, dramatizations, posters, and other visuals such as displays and drawings.

CR4.3 Listen, summarize, paraphrase, and evaluate what was listened to and draw conclusions.

Art: **CP4.7** Create visual artworks that express own ideas and draw on sources of inspiration from Saskatchewan.

Social Studies: **DR4.1** Correlate the impact of the land on the lifestyles and settlement patterns of the people of Saskatchewan.

DR4.2 Explain the relationship of First Nations and Métis peoples with the land.

Understandings: (can also be written as 'I Can' statements)
Students will understand…

- I can identify plant and animals that can be found where I live
- I can explain what a population, community and habitat is using local and regional examples
- I can describe the plants and animals that exist in various habitats (farmland, forests, tundra, lakes, etc.)
- I can share stories that describe the interdependence of land, water, animals, plants, and the sky in worldviews.
- I can share examples of indigenous worldviews and how various cultures view interdependence.

Essential Questions:

- Why is understanding ecology and the interconnections between things so important to us?
- How can we be stewards for the land and animals?
- How do Indigenous ways of knowing better help us understand the earth and our responsibilities to all our relations?
- Why is it important to study ecosystems during times of climate change?

Students will know…

- The following vocabulary: population, community, habitat, interdependence, herbivore, omnivore, carnivore, predator, prey, scavenger, decomposer, food chain, circle of life
- What types of plants and animals live in which ecosystems/communities
- The differences between population, community, and habitat
- What plants and animals need to survive

Students will be able to…

- Identify the plants and animals which can be found in the communities (e.g., house, village, farm, reserve, city) in which students live.
- Differentiate between populations, communities, and habitats using local and regional examples.
- Predict and research the populations of plants and animals that exist in various habitats (e.g.,

- The characteristics of plants and animals (how do they survive where they do) - How plants and animals interact with their environment - Ways to observe nature without disturbing it - How animals meet their basic needs - Indigenous understandings and stories of interconnectedness	desert, farmland, meadow, tree, forest, rain puddle, seashore, lake, river, tropical forest, tundra, river delta, and mountains). - Discuss stories that demonstrate the interdependence of land, water, animals, plants, and the sky in traditional worldviews. - Draw upon facets of Indigenous worldviews, such as the Medicine Wheel or circle of life, to examine understanding about the interdependence of plants and animals in various habitats and communities. - Classify plants and animals, including humans, according to their role(s) (e.g., producer, consumer, herbivore, omnivore, carnivore, predator, prey, scavenger, and decomposer) - Construct a visual representation of the interdependence of plants and animals in a habitat or community. - Write a reflection on collected data and findings - Predict how the removal of a specific plant or animal population may affect a community in the short-term and long-term (climate change) - Show concern and respect for the safety of self, others, and plants and animals when maintaining a habitat (stewardship).

Stage 2: Determine Evidence for Assessing Learning

For this lesson, students will be going on a nature walk in their local area. Prior to entering the field, they will predict what plants and animals they will see on their walk. They will record these predictions in their journals. Throughout the walk, they will record the species they see and hear, as well as the conditions of the environment around them. Upon returning to the classroom, they will compare their notes to their predictions and reflect on the data. Using this data they will use a Venn Diagram to demonstrate how plants, animals and humans depend on each other based on their survival needs. They will then create graphic representations of the plants and animals they recorded, as well as the condition and behaviours that enable them to live/grow there. Students will then write a short summary reflection on what they illustrated, and must include one suggested action to save or maintain the habitat.

Stage 3: Build Learning Plan

Instructional Strategies:

Set (Engagement): **Length of Time:** **Development:** **Time:** **Closure:** **Time:**	**Materials/Resources:** *"We Are Water Protectors" by Carole Lindstrome* **Possible Adaptations/ Differentiation:** **Management Strategies:** **Safety Considerations:**
Stage 4: Reflection	
Professional Development Goal is…	

Subject/Grade: 4	**Lesson Title: Habitat Dioramas**	**Teacher: Lauren**

Stage 1: Identify Desired Results

Established Goals: (Learning outcome/s & indicator/s from curriculum)

HC4.1 - Investigate the interdependence of plants and animals, including humans, within habitats and communities.

(a) Identify the plants and animals which can be found in the communities (e.g., house, village, farm, reserve, and city) in which students live.

(f) Classify plants and animals, including humans, according to their role(s) (e.g., producer, consumer, herbivore, omnivore, carnivore, predator, prey, scavenger, and decomposer) in food chains and food webs.

(g) Construct a visual representation of a specific food chain that exists within a habitat or community.

Understandings: (can also be written as 'I Can' statements) U

Students will understand…

- I can represent my research through a habitat diorama.
- I can create a food web.
- I can identify which animals are present in my habitat.
- I can identify which plants are present in my habitat.
- I can identify what plants and animals in my habitat are producers and consumers.
- I can explain why and what I chose to include in my diorama.

Essential Questions:

- What plants are found in my habitat?
- What animals are found in my habitat?
- What are producers and consumers?
- What other elements are found in my habitat?
- With what animals and plants in my habitat can I create a food web?
- How can I use this information to create a visual?
- Can I explain what I chose to include in my habitat and why?

Students will know… K

- What animals are in their habitat.
- What plants are in their habitat.
- What a food web is.
- How to create a food web.
- What producers and consumers are.

Students will be able to… D

- Use multiple methods and resources (both found and provided) to research their specific habitat.
- Use the information from their research to create a diorama based on that specific habitat.
- Create a diorama based on their research.

Stage 2: Determine Evidence for Assessing Learning

Individually or in pairs, students will be asked to research a specific habitat in saskatchewan and create a shoebox diorama for that habitat (ie. prairie, aspen parkland, etc.). Included in their diorama must be 4 animals that reside in their habitat and 2 plants that can be found in their habitat. To accompany their diorama, students must complete a food web that connects all the plants and animals to illustrate their role in the habitat (producers, consumers, etc.). The diorama should also contain a background, landscape, and other details relevant or found in their chosen habitat. Students will also be asked to do a short written

description of their landscape, what it includes, and why they chose to include it. Assessment will be on all 3 components: the diorama, food web, and write up. Clarity, detail, eye appeal, and thoughtfulness will be evaluated.

Stage 3: Build Learning Plan

Instructional Strategies:

Set (Engagement): **Length of Time:**

Development: **Time:**

Closure: **Time:**

Materials/Resources:

Possible Adaptations/ Differentiation:

Management Strategies:

Safety Considerations:

Stage 4: Reflection	
Professional Development Goal is…	

Subject:

Science

Outcome:

HC4.1 Investigate the interdependence of plants and animals, including humans, within habitats and communities.

Possible Cross-Curricular Connections:

- Social Studies
  - Relationships, Interconnectedness, Indigenous Worldviews
- Math
  - Using fractions/multiplication, etc to represent relationships (“there are 2 times as many birds in this habitat as deer, for example”) Using charts, diagrams to show relationships. Create and represent Patterns
- ELA
  - Compose/create presentations that reflect community, identity, social responsibility, etc.
- Art
  - Create visual artworks that express own ideas and draw on sources of inspiration from Saskatchewan.

Lesson ideas:

1. Nature Walk: Take students for walk in nearby nature area. Have them record what natural phenomena they see. Discuss treaty connections. Have them record their data, using charts/tables/diagrams. Have them create art of their favourite part/finding, and compose or orally tell a story of the area/findings
2. Split students into groups by habitat (desert, farmland, meadow, forest, lake, etc) and have them predict and research the populations of plants and animals that exist in their given habitat. Create a work booklet to guide them in their predictions and research. Students can co-create display boards, word mobiles or poster boards to display around the class so everyone has access to this information. Have each group share their findings with the class.
3. Students create their own habitat diorama.
4. Observe & maintain a habitat - bring in a terrarium, ant farm, or fish bowl for data analysis.
5. Create a matching game either physically or with a Smart Board. Classify plants and animals to their roles (producer/consumer, herbivore/carnivore/omnivore, predator/prey, scavenger/decomposer).
6. Food web something, something?? If anyone is interested in developing that further??

Ideas for Infographic:

- Maybe find ways to incorporate the *3 Broad Areas of Learning*

Resources:

- https://saskoutdoors.org/
- Crash Course Kids on YouTube
    - Intro to habitats https://www.youtube.com/watch?v=p15IrEuhYmo
    - Intro to food webs https://www.youtube.com/watch?v=Vtb3I8VzIfg&list=PLhz12vamHOnZv8kM6Xo6AbluwIIVpulio&index=9
- https://canada-ant-colony.com/pages/ants-for-schools
- https://kids.nationalgeographic.com/nature/habitats

With your assigned group, using Understanding by Design / Backwards Design, create a series of learning plans (i.e. 3-5 lessons) in any subject area or with interdisciplinary subject areas (highly encouraged) for a particular grade level (K-8). Design an infographic (i.e. using Canva or another graphic design software) to organize and communicate the ways that these lessons are (inter)connected and how they flow from/into one another, while paying particular attention to curriculum. Together, submit the Series Infographic which highlights these connections, along with one detailed Learning Plan (using Understanding by Design / Backwards Design) to accompany the series.

Suggestion: consider how your pre-internship placement could inform this planning practice and how this could be useful for your future field experiences.

Kailee - I will keep working on this tomorrow afternoon to find more resources, etc.! But I have the general lesson plan written out and have listed cross-curricular connections for you to reference in my ***Stage 1 section.*** Just text me if you need any help/have any questions!

- Kristin

Looks good, thanks!! I have more than enough information to start building! --Kailee