**Lesson Design Template**

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| **Lesson Title: Sources Of Energy Course: ESCI 317 (Science Education)** **Designer: Laneise Scharback**  |
|  **Learning Outcomes/Intentions** |
| **Formal Unit Outcome(s):** Outcome IE7.2**Observe, illustrate, and analyze living organisms within local ecosystems as part of interconnected food webs, populations, and communities.**Indicator (i)- Classify organisms in a variety of ecosystems as producers, consumers, or decomposers and further classify consumers as herbivores, carnivores, or omnivores.Indicator (j)-Interpret interdependence within natural systems by constructing food chains and food webs to illustrate the interactions among producers, consumers, and decomposers in a particular ecosystem. |
| **Understandings:**There is a difference between a consumer, producer, and decomposer. There is a difference between the illustrations of a food chain and a food web. | **Essential Questions:** How does one know if an organism is a consumer, producer, or a decomposer?What criteria do scientists use to classify organisms*?*  |
| **Knowledge:**Students will need to know the characteristics of a decomposer, producer, consumer, and secondary consumer. Students will need to know the difference between food chains and food webs. | **Skills:**Learners will use classification skills to identify decomposers, producers, consumers, and secondary consumers. The students will use design skills to draw and create food chains. |
| **“I can . . .” statements:**I can determine the difference between a decomposer, producer, consumer, and secondary consumers. I can create food chains to illustrate what I know.  |
| **Assessment Evidence** |
| **Formative Assessments (Assessment for Learning):** -I will provide them with guiding questions. I will ask them questions to discover if they already have a grasp on how to classify. -The students will communicate their knowledge on ecosystems through the initial definition task. -They will converse their ideas in groups to help classify the organisms they choose to include in their visual diagrams.  |
| **Summative Assessments (Assessment of Learning):**-The students will be able to justify their visual representations and their reasons for their organization methods. |
| **Safety** |
| The students need to be taught the proper way to hold and walk with scissors before beginning the activity.  |
| **Materials** |
| PowerPoint (Requires projector or SMART board) Chart paper or Poster board MarkersScissorsGlue or tape Magazines  |
| **Learning Plan** |
| **Learning Experiences & Instruction:****Procedure:** **Engage:*** The students will be asked to put all technology away because it would be a distraction and they do not need it.
* The students will learn about ecosystems, types of ecosystems in our province, decomposers, producers, consumers, and secondary consumers through a PowerPoint presentation with descriptions and diagrams (see attached PowerPoint).

**Explain:** * The students will break down the large terms within the definition of ecosystem defined on the PowerPoint. This is done in table groups and then they explain their answers to the class.

**Engage:** * The PowerPoint requires student engagement because the slides have fill-in-the-blanks
* As the students provide the correct answers, the correct terms will be written on the chalkboard. (Some of the correct answers are as follows: oxygen, waste, energy, carnivores and omnivores, pathways, food. Students may provide other correct answers that are similar and correct).
* Ask the students to provide examples of possible wastes when you get to the “decomposers” slide
* The students will watch a short video on food chains (<https://www.youtube.com/watch?v=MuKs9o1s8h8>)

**Explain:** * The students will be asked to create food chain diagrams using chart paper, magazine photos, tape/glue, markers, and scissors (the requirements are on the PowerPoint).
* The students will need to explain their food chain posters in a large class discussion.

**Evaluate:** * Provide each group with a peer evaluation sheet
* Assign each group another group to critique/evaluate as the presentations are occurring
* The peer evaluation sheet is attached

At the end of the lesson, tell the students that the lesson will be posted online for them to access (could have a class Wikispace or a Google Community).  |

**Peer Assessment Sheet**

**Names**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Members of group being assessed:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Did all group members have a clear understanding on the placement and purpose of energy pathways? How do you know?**
2. **Did the group provide clear explanations for each of their photos? (Example- “This is a producer because” or “This is a consumer because”)**
3. **On a scale of 1-4 (1-unorganized, 2-cluttered, 3-somewhat organized, 4- organized), how organized did the poster look? Why do you think this?**
4. **Did the group have the required number of food chains on their poster? Yes or No?**
5. **Is the information on the poster accurate or are there errors? How do you know? What are they?**
6. **Do you think that overall this group met expectations? Why or Why not?**