# Food Webs

**Grade:5**

**Subject: Science**

**Materials:**

- Woods Ecosystem Cards set for each group
- 14 pieces of Paper cut into 1-2 inch strips for each group
- A pair of scissors for each group
- Writing Utensils
- Science Notebook

**Technology Needed:**
**N/A**

**Instructional Strategies:**

- ☐ Direct instruction
- ☐ Guided practice
- ☐ Socratic Seminar
- ☐ Learning Centers
- ☐ Lecture
- ☐ Technology integration
- ☐ Other (list)
- ☐ Peer teaching/collaboration/ cooperative learning
- ☐ Visuals/Graphic organizers
- ☐ PBL
- ☐ Discussion/Debate
- ☐ Modeling

**Guided Practices and Concrete Application:**

- ☐ Large group activity
- ☐ Independent activity
- ☐ Pairing/collaboration
- ☐ Simulations/Scenarios
- ☐ Other (list)
- ☐ Hands-on
- ☐ Technology integration
- ☐ Imitation/Repeat/Mimic

Explain:
Students will work together to create their own unique food webs.

**Standard(s)**
**5-PS3-1.** Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.
**5-LS-1** Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

**Objective(s)**
By the end of the lesson, students will assemble a food web depicting the movement of matter through a biosphere using Woods Ecosystem Cards.

**Bloom's Taxonomy Cognitive Level:** Synthesis

**Differentiation**
**Below Proficiency:**
Focus on creating a food chain. (2 organisms)
**Above Proficiency:**
Focus on making a food web with more than 12 organisms.
**Approaching/Emerging Proficiency:**
Focus on creating a food web with 12 organisms.
**Modalities/Learning Preferences:**
Visual, Auditory, Tactile

**Classroom Management- (grouping(s), movement/transitions, etc.)**
Students will be in whole group at their seats. At this time the only supplies needed are any notes taken from yesterdays' video.
During group activity, students may be seated or stand to communicate with their team members. All teams will need a set of Woods Ecosystem cards, a pair of scissors, 14 strips of paper, and writing utensils.

**Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)**
Students will work as a team in their pods to build a food web. They will be expected to collaborate and share ideas with each other.

| Minutes | Procedures |
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| 10 | **Set-up/Prep:**<br>Cut up the strips of paper into 14 long pieces. |
| 5 | **Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)**<br>The students watched a video yesterday explaining that the Earth's system is split into parts. Ask students what they are (Geosphere, Atmosphere, and Biosphere). Explain that an Ecosystem is made up of living parts and non-living parts, ask students what these can include and create a chart on the board, asking students to list items that could fall under these categories. |
| 15 | **Explain: (concepts, procedures, vocabulary, etc.)**<br>• Introduce the Woods Ecosystems cards to the students, informing them of all of the information that is included on a card (use a card to point and model). Students will need to know the **natural history, food,** and **predators** of their animal to complete their tasks.<br>• Hand out a stack of cards and ask students to divide them evenly between everybody in the group to study them. Once they have done so, students will then work as a team to create three food pairs (ONLY 2 PER PAIR!) that go together because one organism eats the other. Ask each group to share one of their findings.<br>• Have the students now make one food chain (ONLY THREE). Meaning One organism eats another, and another organism eats that organism. Ask students to copy it into their notebook. Create your own food chain on the board (Grass-Chipmunk-Hawk) Ask the students which organism does not eat another organism on the food chain you created (grass). Explain that the grass obtains **energy** from the sun, which makes it a **producer.** Also explain that all organisms that eat other organisms are **consumers.** Ask students to organize all of the producers together into one pile and consumers together into another. Students will share their lists with the class. |

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| | • Explain that some organisms are neither consumers or producers. Things that remain uneaten by producers (dead organisms) used for food by **Decomposers,** who **recycle** it back into the environment. Ask students to find the decomposer in their stack (Bacteria).<br>• Ask students to now label their food chain in their notebooks using **producer, consumer, and decomposer** |
| **15** | **Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)**<br><br>• Explain to students that now if you have more than one consumer eating the same organism, you are now creating a food web.<br>• Distribute the paper strips and inform students if they would like to cut them to make shorter strips they may. They will be drawing arrows on the strips to create their very own food webs as a group. Students should use at least 12 cards. When they are done they will record it in their science Journal. |
| **5** | **Review (wrap up and transition to next activity):**<br>Ask students which card had the most arrows pointing from it? Which had the least?<br><br>Students will collect the cards into the bags and bring them up to the table along with the strips to make a pile. |

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| **Formative Assessment: (linked to objectives)**<br>**Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.**<br>Check in with students during group work, asking questions about the vocabulary.<br><br>**Consideration for Back-up Plan:**<br>Provide a card and ask students which category the organism falls into. | **Summative Assessment (linked back to objectives)**<br>**End of lesson:**<br>Students will record a food web in their notebook based upon the collaborative example made in their groups.<br><br>**If applicable- overall unit, chapter, concept, etc.:** |

**Reflection (What went well? What did the students learn? How do you know? What changes would you make?):**

Overall, I feel as if this lesson was very successful. My favorite part about this lesson was the student collaboration. The students were genuinely excited to explore the members of the Woods ecosystem as well as create their very own food webs. They were able to tell the difference between a food pair, a food chain, and a food web based on my questioning from the beginning of the class period. During my frequent check ins with students they were able to explain to me which organisms were consumers, producers, and decomposers, and why. One of the struggles I found within this lesson is that some of the students simply preferred not to collaborate with their groups. It was important at that time to encourage the group to welcome those student's ideas as well as listen for any new information they might be able to share with the group. Another issue I encountered in this lesson was the time limit. Due to student activities in the morning, the lesson was a little shorter than it needed to be, and I had to complete it the next day. If I were to teach this lesson again I would plan to split the lesson over two class periods. Another thing I would change is the technology portion. I would like to create the cards on the computer and have students create their very own food webs or food chains by dragging the organisms along the SMARTBOARD, and creating their very own. Not only would this be incorporating technology, but it would also be eliminating cleanup time as well. The final addition I would make to my lesson would be to make a short formative assessment at the end for students to have a exit slip. I would write an organism on the board and students would tell me if it is a consumer, producer, or decomposer. This assessment would give me a much better view as to the student's understanding. This lesson went very well and I would definitely use it again in the future.