Food Chain and Food Web Lesson

Teacher:	**Subject:**	**Grade:**
Wendy Snyder Boise State Writing Project	Life Science	3rd

Standards:

The goal of this lesson is to help students see the connections between various food chains and how they are interconnected creating food webs. Students will build models that represent food chains and will then use the created models to make conncections to other food chains. These connections will be explicitly modeled using string, thus creating a visual food web.

LS4.D Biodiversity and Humans Populations live in a variety of habitats and changes in those habitats affect the organisms living there. (LS2-2-1)

Science Practices
Develop and use models
Obtain, evaluate and communicate information

Lesson Objective:

- Students will create a models of a food chain for a specific Idaho animal
- Students will identify the types of organisms in their food chains (producer, decomposer, hervivore, omnivore or carnivore)
- Students will use models to make connections between differing food chains to create food webs
- Student will comminicate their observations to others with reasons/evidence to support their thinikng.

Materials:

- **Large poster paper, approximabely 9" 18"**
- **Color strips of construction paper measuring 2" x 9"**: (colors include: green/producers, brown/decomposers, yellow/herbivore, orange/omnivore and red/carnivore)
- **Plastic hangers** (1 per group of students)
- **Yellow construction paper for sun, approximately 8"**
- **Graphs of data collected from opinion survey's**
- **String**

Engage

Teacher Will:	**Students Will:**
• Ask students to create posters that trace four different food chains for their Idaho animal from the sun all the way through it's consumers, producers and decomposers • Answer questions posed by students for clarification. • Observe as students independently create food chain posters (See pictures below)	• Use background knowledge gained from animal research to create a poster that identifies four food chains related to their Idaho animal • Ask clarifying questions to ensure they understand the difference between producers, decomposers and consumers (herbivore, omnivore and carnivore) • Color code each organism in the food chain according to decomposer, producer, omnivore, herbovore, carnivore

Explore

Teacher Will:	Students Will:
• Have stuents work in small groups using their food chain posters to create food chains traced from the sun to the final organism in each food chain • Encourage students to explain the reason each organism is a specific color • Observe and listen as students interact • Ask probing questions to clarify students thinking when necessary	• Work in small groups to reate food chains for their Idaho animal starting with the sun and eneding with the final organism in each food chain • Use text to support their reasoning for the colors used in their food chains • Communicate with others using text evidence

Explain

Teacher Will:	Students Will:
• Encourage students to explain food chains using text evidence • Ask for justication (evidice) and clarification from students • Ask probing questions to encourage students start noticing similarities and differences between differing food chains	• Smallg roups share their food chains with the class • Use text evidence to support color coding of each organism • Ask clarifying questions as groups share their food chains • Make and notice connections between different organisms food chains

Ellaborate

Teacher Will:	Students Will:
• Ask probing questions to students to consider similarities and differences between food chains • Encourage students consider the unintentional effects across food chains and food webs. • Observe and listen as students interact in small groups and with the class	• Work in small groups use string to make connections between organisms in their food chain and those of others • Create food webs • Examine, argue and reason about the connections between food chains and the unintentianal effects across them • Backup reasoning with text evidence and experience

Evaluate

Teacher Will:	Students Will:
• Observe students as they: create independent food chain poters • Observe students as they work in small groups to create food chains and webs • Look for evidence that students understand the difference between producer, decomposer and the various consumers (herbivore, omnivore and carnivore) • Ask probing questions and look for evidence that students understand the connections and effects of those connections between food chains and food webs	• Accurately represent organisms in their food chains with the correct identifying color on their posters (individual) and in their webs (small groups) accurately identifying producers, decomposers and consumers as omnivore, herbivore, carnivore. • Answer open-ended qestions using observations, evidence and previously accepted explanations • Make connections between food chains/webs • Evaluate and commnicate how organisms in different food chains and webs effect each other

• Ask open ended questions, such as: “Why do you think…? What evidence do you have…? What do you know about…? How would you explain…?”	• Demonstrate an understanding of the effects of humans on organisms living in Idaho ecosystems • Commnicate their thinking verbally and in writing via exit ticket(s)