JSD 3D Learning Activity Template

Grade: **6th**	**Title: Develop a simple model to describe onion's ecosystem or other living things ecosystem**

Utah Science with Engineering Education Standard (SEEd):
Standard 6.4.3
Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. Emphasize food webs and the role of producers, consumers, and decomposers in various ecosystems. Examples could include Utah ecosystems such as mountains, Great Salt Lake, wetlands, and deserts.

Key crosscutting concept(s) (CCC): Cause and effect: mechanism and explanation; stability and change; energy and matter: flows, cycles and conservation.
Key science and engineering practice(s) (SEP): Develop a model, constructing explanations and designing solutions.

Materials: Video clips, Three regular onions , one onion has mold on it, one perfect onion, another growing onion. Google slide.

Time: two 60 minutes lessons

Teacher background, key content information and hints: Teacher should know that human all have been victimized by decomposers: Lettuce rots and bread becomes moldy. Bacteria and fungi often consume our food before we've had a chance to. However, if we stop to consider the important work that decomposers do, we may applaud their presence. In addition, teacher also needs to know that decomposers, moisture in the air and light can have crucial effects on the ecosystem.

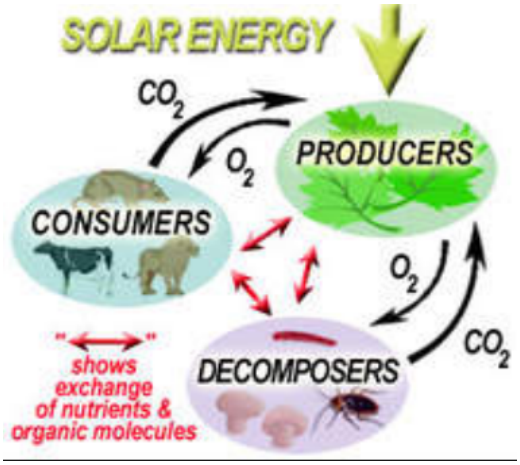
Prior knowledge that students need: Stand 6.4.1 and 6.4.2 knowledge

Learning Activity Plan

These three aspects of a lesson should be identified in your learning activity.

Gathering: *(Obtain Information, Ask Questions/Define Problems, Plan & Carry Out Investigations, Use Models to Gather Data and Information, Use Mathematics/Computational Thinking.)*	***Reasoning:*** *(Evaluate Information, Analyze Data, Use Mathematics/Computational Thinking, Construct Explanations/Solve Problems, Develop Arguments from Evidence, Use Models to Predict & Develop Evidence.)*	***Communicating:*** *(Communicate Information, Argue from Evidence (written & oral), Use Models to Communicate).*

Phenomenon:



Students can either continue to use the onions that they observed in previous lesson to develop onion food web ecosystem or they can use computer to choose their favorite living things to develop a model of food web to describe and emphasize food webs and the role of producers, consumers, and decomposers in various ecosystems.
Students will use previous questions to guide their google slide presentation and develop their choice of living thing model food web and explain the role of producers, consumers, and decomposers in their living thing ecosystems.

Assessment of student learning: Students google slide presentation and rubric

Rubric for presentation

	10 points	8-9 points	6-7 points	4-5 points	0-2 points
Living things choice	Paper has 10 organisms. Not all animals are producers or consumers. Name of organism is below drawing.	Paper has 8-9 organisms. Not all animals are producers or consumers. Name of organism is below drawing.	Paper has 6-7 organisms. Not all animals are producers or consumers. Name of organism is below drawing.	Paper has 4-5 organisms. Most organisms are either producers or consumers. Name of organism is below drawing.	Paper has 3 or below organisms. Most organisms are either producers or consumers. Name of organisms are not below drawing.
Arrows	Arrows show the student understands the relationship between consumers and Producers. All arrows are connected correctly.	Arrows show the student understands the relationship between consumers and Producers. Most arrows are connected correctly.	Arrows show the student somewhat understands the relationship between consumers and producers. Most arrows are connected correctly.	Arrows show the student needs remedial work on the relationship between living Things. Some arrows are connected correctly.	Arrows show the student needs remedial work on the relationship between living Things. Very few arrows are connected correctly.
LABELS	Student accurately labels all 10 organisms as producers and/or consumers.	Student accurately labels 8-9 organisms as producers and/or consumers.	Student accurately labels 6-7 organisms as producers and/or consumers.	Student accurately labels 4-5 organisms as producers and/or consumers.	Student labels less than 3 organisms correctly.