

Unit Plan that Incorporates the Use of Thinking Tools

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School District	USD 469 Lansing
School City, State	Lansing, KS
Classroom Information	
Subject Area	
Science	
Grade Level(s)	
4 th grade	
Unit Overview	
Unit Title	
The Circle of Life	
Unit Summary	
<p>Throughout this unit, students will be participating in various activities about ecosystems in our world and how they effect one another. Each group of students (2-3) will research an ecosystem and present the information to the class based on producers, consumers, scavengers, and decomposers found in their system. The life cycle of the butterfly and other plants and animals will be studied, illustrated, and tested over. The interaction and effects of the food webs will be a big part of this unit and what we learn. Understanding human interaction will all organisms in our world will help us understand the importance of protecting the ecosystems with live in.</p>	
Building the Foundation	
Habits of Learning Taxonomy	
<p>Knowledge: memorization and recalling Application: Using concepts in new situations with different information Analysis: Breaking information down into related parts, classify and categorize organisms Synthesis: Create new information from existing material</p>	
Standards	
<p>3.1.01 Life Science- Observes organisms and compares and contrasts different structural characteristics and the distinct functions of these structures. 3.2.01 Life Science- Compares, contrasts, and asks questions and life cycles of various organisms.</p>	
Learning Objectives	
<p>Students will use information to create a food web using all the different orders. They will order the life cycles of three different organisms to include one plant. There will a group discussion of how living things effect each other and the importance of each in our world. They will present to the class their discussion notes from what things are effected in an ecosystem when there is a flood, fire, earthquakes, etc.</p>	

Curriculum-Framing Questions	Essential Question
	What is the circle of life?
	Unit Questions
	How do organisms interact in the environment? Why are animals important to the world? How do plants and animals change as they grow? How do food webs effect an ecosystem?
	Content Questions
	What is a food web? What is an ecosystem? What are the stages of the life cycle of the butterfly? What do animals do for our earth? how do plants help us?

Student Assessment Plan		
Assessment Summary		
<p>Students will develop individual, then classroom “KWL” charts about the different organisms in our text including plants. Students complete part 1 and 2 of the Visual Ranking tool and will be scored according to a rubric. The students will keep a journal of discussions on ecosystems and how they effect each other. Each group will gather information about their ecosystem and share with the class. A grading rubric will be used to score these journals and the class presentation.</p>		
Assessment Timeline		
Before Project Work Begins	While Students Work on Projects	After Project Work Ends
<ul style="list-style-type: none"> Pre-assess prior knowledge of different organisms and how they contribute to the environment. Visual ranking pre-activity based on school/class rules. (Rubric) Seeing Reason activity to map cause and effect relations of an ecosystem and it’s organisms. 	<ul style="list-style-type: none"> Group work on different ecosystems and how they effect one another using journals to reflect in . Revise rubric as a class. Finalize rubric for journals and presentations. Collaboration checklist for all group work. 	<p>Teacher evaluations over presentations. (oral presentation rubric)</p> <p>Visual Ranking Tool to rank the Life Cycle of the butterfly.</p> <p>Knowledge-based test over content concepts and unit concepts, aligned with standards addressed in unit.</p>
Visual Ranking Elements (Complete this section if this tool will be used in the unit)		
Visual Ranking Project Name (For the <i>Visual Ranking</i> workspace)		
The Life Cycle of the Butterfly		
Project Description (For the <i>Visual Ranking</i> workspace)		
The life cycle of the butterfly will be studied and researched. The number of stages it’s life will be illustrated and put into correct order of events happening.		
Prompt (For the <i>Visual Ranking</i> workspace)		
Starting with the beginning stage of the life cycle of the butterfly put the following in order. On your second log in, rank the stages in order of importance for survival.		
Sorting List (For the <i>Visual Ranking</i> workspace)		
Egg Larva Pupa Adult Butterfly		
Practice Ranking (For your future quick reference)		
Teacher ID: evansc	Password: fourth	
Practice Team ID 1:Evans1	Password: Evans1	
Practice Team ID 2:	Password:	

Seeing Reason Elements (Complete this section if this tool will be used in the unit)

Seeing Reason Project Name (For the *Seeing Reason* workspace)

How do food webs effect an ecosystem?

Project Description (For the *Seeing Reason* workspace)

Exploring the food webs of producer, consumer, scavenger, and decomposer and the relationship to its ecosystem. Use this information to create a food web in an ecosystem and explain each organism's relationship to each other.

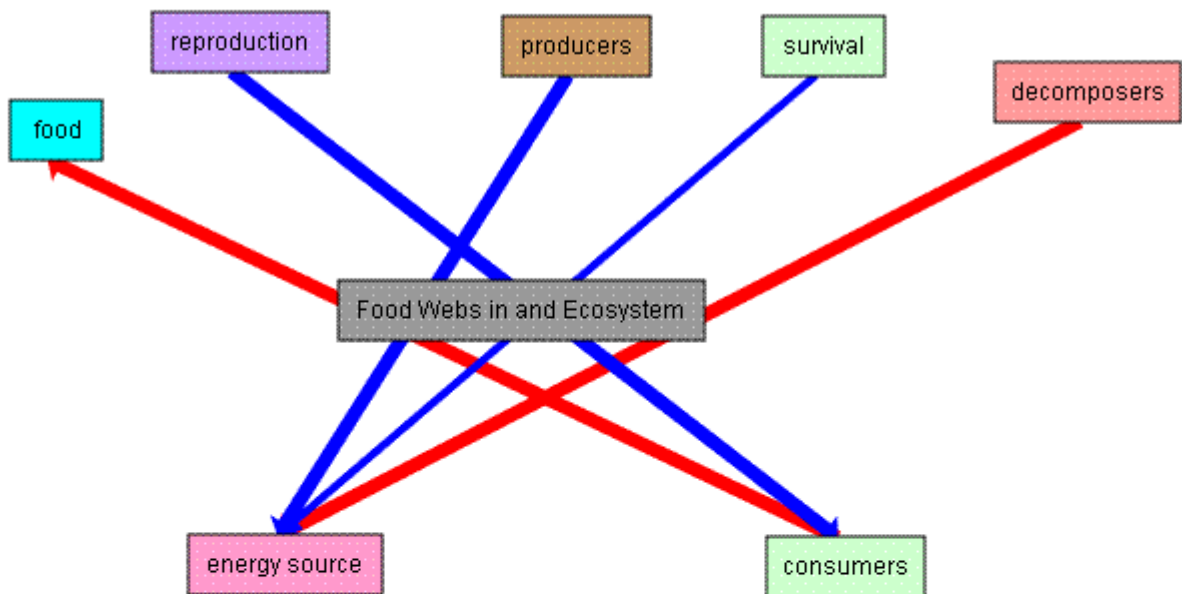
Research Question (For the *Seeing Reason* workspace)

What is the relationship between the organisms in an ecosystem?

Practice Map (For your future quick reference)

Practice Team ID: Evans2

Password: Evans2



Unit Details	
Approximate Time Needed	
3-4 weeks. 45min. each day	
Prerequisite Skills	
Basic computer function skills, internet searching, research skills, some knowledge of organisms.	
Procedures	
<p>Before: Pre-assess prior knowledge of ecosystems using “KWL” chart. Students will complete the first set of Visual Rankings and then make comparisons to their second ranking later in the unit.</p> <p>During: Visual Ranking tool assessment on ranking organisms based on their importance to the ecosystem and their place in the ranking.</p> <p>Go over rubric to be used in all group activities and presentations as a class.</p> <p>Research organisms and their life stages and log in journal, present them to the class as a group.</p> <p>Complete Seeing Reasoning tool</p> <p>Completion: Self, peer, and teacher evaluations based on work accomplished in class according to rubrics and checklists.</p> <p>Teacher evaluation over presentation.</p> <p>Visual Ranking tool to rank the stages of the butterfly’s life.</p> <p>Knowledge based test over content concepts and unit concepts, aligned with standards in the unit.</p>	
Accommodations for Differentiated Instruction	
Resource Student:	Steps to be followed on the computer will be written and shown on the overhead. Verbal directions will be given and students will repeat them for clarification. Teacher will be available to direct and redirect questions that may come up in project.
English Language Learner:	Students will work in groups to complete information. Visuals in the project will assist students. Assistance in presenting work will be given where needed for the students.
Gifted Student:	Students will be given an choice of a certain ecosystem and will be required to have more information about them. They will be asked to write a letter or a message to a conservation office about their concerns for an ecosystem in their area.
Materials and Resources Required For Unit	
Printed Materials:	“Real Science” SRA textbook. Additional reading materials gathered from sources and teachers, rubrics, checklists.
Supplies:	Everyday school supplies, poster board. Any additional materials they choose to use for their presentation.
Technology – Hardware	Overhead projector, computers in classroom and lab. Internet Explorer (or equivalent)
Internet Resources:	www.intel.com/education/thiningtools
Other Resources:	All grade level classrooms, conservation office, guest speakers from local conservation offices or animal protection agencies.