

CULMINATING LESSON **Species in Jeopardy!**

Lesson at a Glance

Students demonstrate their knowledge of threatened and endangered species in Hawai'i by creating and playing a game to test their knowledge.

Lesson Duration

One 45-minute period

Essential Question(s)

How are threatened and endangered species in Hawai'i unique?

Key Concepts

- The Fish & Wildlife Service classifies a species (plant or animal in this case) as endangered if it is in danger of extinction.
- A threatened species is likely to become endangered in the near future.
- Plants and animals become threatened and endangered if there have been changes in the specific environmental conditions that they need to survive.
- Non-native species can have negative impacts on the survival of native populations.

Instructional Objectives

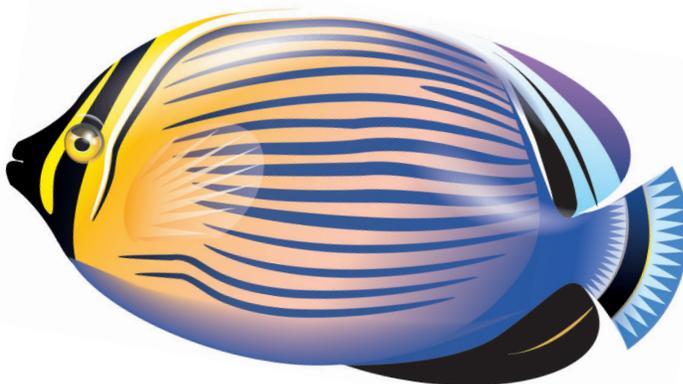
- I can describe how organisms become threatened or endangered, as well as how to protect them.

Related HCPSIII Benchmark(s):

Science SC.4.3.2
Describe how an organism's behavior is affected by its environment.

Science SC.4.5.3
Describe how different organisms need specific environmental conditions to survive.

Science SC.4.2.1
Describe how the use of technology has influenced the economy, demography, and environment of Hawai'i.



Assessment Tools

Benchmark Rubric:

Topic		Science, Technology, and Society	
Benchmark SC.4.2.1		Describe how the use of technology has influenced the economy, demography, and environment of Hawaii	
Rubric			
Advanced	Proficient	Partially Proficient	Novice
Explain how the use of technology has influenced the economy, demography, and environment of Hawai‘i and suggest ways to conserve the environment.	Describe how the use of technology has influenced the economy, demography, and environment of Hawai‘i.	Give examples of how the use of technology has influenced the economy, demography, and environment of Hawai‘i.	Recognize that the use of technology has influenced the economy, demography, and environment of Hawai‘i.
Topic		Interdependence	
Benchmark SC.4.3.2		Describe how an organism’s behavior is determined by its environment	
Rubric			
Advanced	Proficient	Partially Proficient	Novice
Explain and give examples of how different organisms’ behaviors are determined by their environments	Describe how an organism’s behavior is determined by its environment	Identify a way that an organism’s behavior is influenced by its environment	Recognize that an organism’s behavior is influenced by its environment
Topic		Unity and Diversity	
Benchmark SC.4.5.3		Describe how different organisms need specific environmental conditions to survive	
Rubric			
Advanced	Proficient	Partially Proficient	Novice
Explain why different organisms need specific environmental conditions to survive	Describe how different organisms need specific environmental conditions to survive	List specific environmental conditions that organisms need to survive	Recall that organisms need specific environmental conditions to survive

Assessment/Evidence Pieces

Lesson

- Student Worksheet: *Self-evaluation Rubric checklist*

Materials Needed

Teacher	Class	Group	Student
<ul style="list-style-type: none"> • None • Eight 3 x 5 index cards • Marker 	<ul style="list-style-type: none"> • Pocket chart (optional) 	<ul style="list-style-type: none"> • Four 3 x 5 index cards • Tape (if not using pocket chart) • Small white board (optional) • Dry erase marker 	<ul style="list-style-type: none"> • Writing materials • Worksheets from earlier activities

Instructional Resources

Student Worksheet: *Threatened & Endangered Species Jeopardy Self Evaluation Rubric Checklist*

Student Vocabulary Words

a comprehensive list of vocabulary from the previous lessons in this unit

breeding behaviors: how an animal courts, nests, reproduces, and rears young.

critical habitat: the living space that is important for the survival of the species.

endangered species: an animal or plant species whose population size is so low that is at risk of extinction.

endemic: native to a region and existing nowhere else.

extinct species: a species that no longer exists.

migration: the periodic movement of a group or species from one region to another.

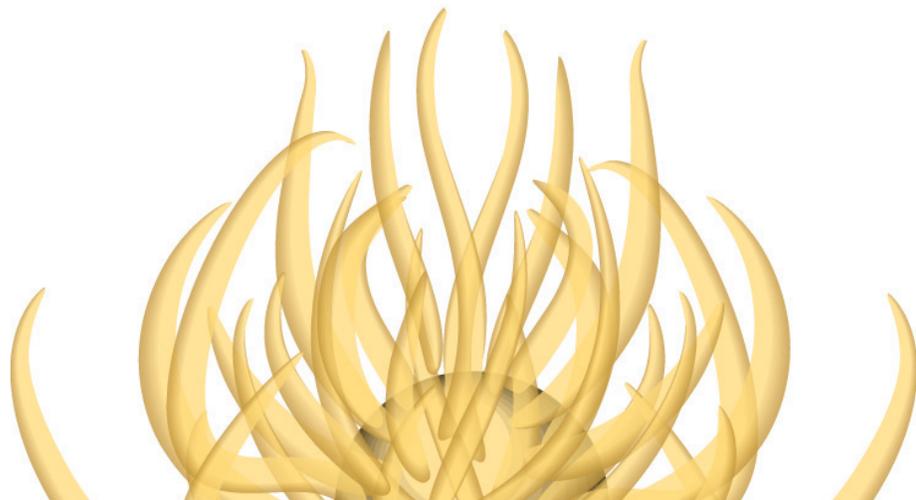
population size: the number of individuals in a population.

range: the geographic area a species occupies.

receivers: electronic devices that convert a signal from a transmitter into useful information, such as migratory patterns, or air or water temperature.

threatened species: an animal or plant species whose population size is decreasing so that it is at risk of becoming endangered within the foreseeable future throughout all, or most of its range.

transmitters: electronic devices that release a signal to a receiver.

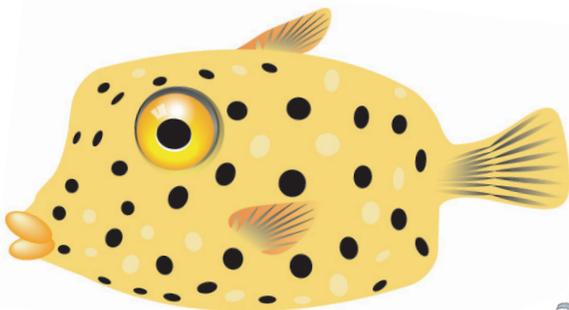


Lesson Plan

Lesson Preparation

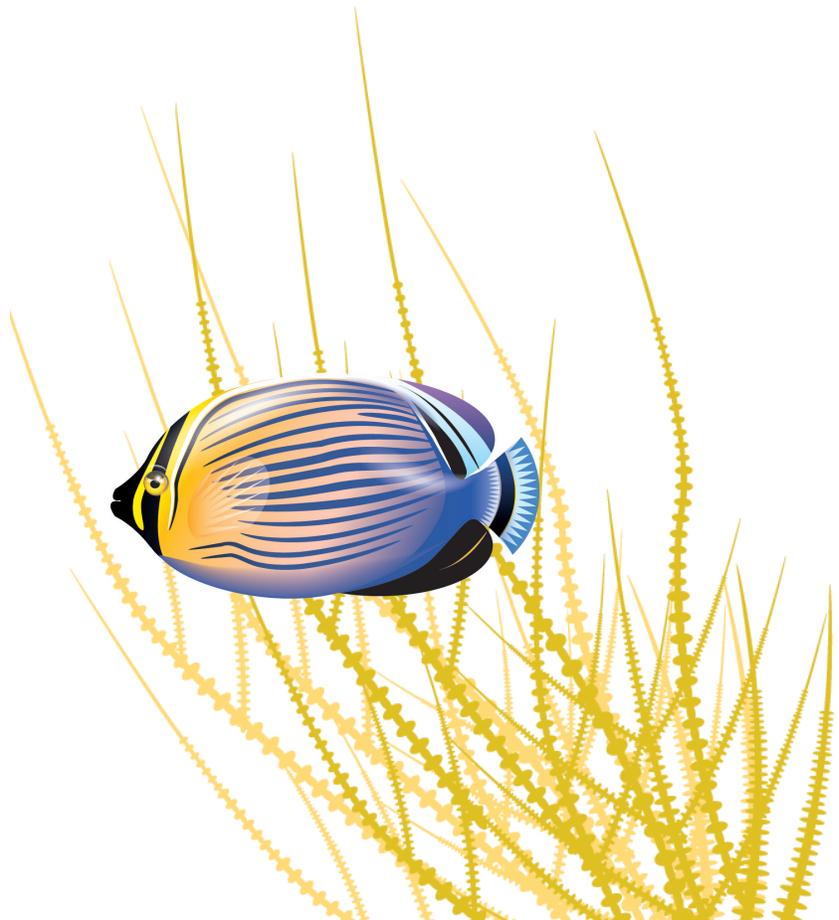
- Write the names of the species students researched in the prior lessons on four of the 3 x 5 index cards:
 - o Humpback Whales
 - o Sea Turtles
 - o *Ae'o*
 - o Monk Seal
- Write category topics on four of the 3 x 5 index cards:
 - o Characteristics/Habitat
 - o Technology used to monitor
 - o Why Endangered
 - o Ways to help protect the species
- Place the species name and category topics across the top and side of the pocket chart (if using) or on a white board to resemble this:

	Species	Species	Species	Species
Topic				



I. *Game Board Creation*

- A. Place students into the same species expert groups they were in for the previous lessons.
- B. Pass out four 3 x 5 index cards to each group.
- C. Have them write the topic category on the front side of the index card.
- D. Tell them to turn the card over and write down the answer to that topic for their species. For example, the monk seal group will write on one side of the card, “Characteristics/Habitat” and will write, “Lives in wetlands of Hawaiian Islands” on the other side.
- E. Once the students have completed filling out the index cards, have them tape the cards on the wall in the correct spot, or place in the correct pocket – answer not showing.
- F. Form new competition teams containing at least one member from each expert group.
- G. Pass out white boards and dry erase markers, if using. If not, ensure students have paper and writing material.
- H. Explain that when you (the teacher) asks about a topic and names the species, the teams will write down their answer on the white board.
- I. The first team to hold up an answer will go up to the board, pull off that card and read the answer aloud to the class.
- J. The teacher will control the game and be the judge to decide if the students answered the question correctly or if the answer-as-read was complete.
 - 1) If the answer was correct, the team gets one point. If incorrect, zero points.
 - 2) Teams may provide more examples or answers than read from the card. If so, the teacher may award two points for the team.
- K. Start the game. Ask the teams, “What is the technology to monitor humpback whales?” and wait for the first team to hold up an answer. Determine points scored and progress through the game questions in random order always asking topic then species. For example, ask, “How can we help protect monk seals?” or “Why are sea turtles endangered?”
- L. The teacher keeps score. The team with the most points at the end of the game wins.
- M. After the game, have students complete the Student Worksheet: *Self-evaluation Rubric checklist*



CULMINATING LESSON

Threatened & Endangered Species Jeopardy Self Evaluation Rubric Checklist

Name: _____ Date: _____

Put a checkmark next to the way you feel about your work

OBJECTIVE	WOW! 	YES! 	ALMOST 	NO 
Identified species characteristics and habitat				
Identified the technology used to track the species				
Identified why it is endangered and threats to survival				
Identified ways to help protect the species				
Contributed effectively to filling out index cards and answering questions during the game.				

What did we do well, what needed improvement, and what would we do differently to improve?