

# Episode 3

Strand 6.4	Standard 6.4.1	Big Idea Resource availability affects populations.
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Title Going, Going, Gone	Time 45 minutes	CCCs Cause and Effect	Practices Asking questions Analyzing and interpreting data
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## Summary of Episode

Phenomenon: June sucker populations in Utah Lake have significantly declined over the last 100 years.

*(Teacher Background Information: The June sucker, named for its annual June spawning run, can only be found naturally in Utah Lake and its feeder streams, including the Provo River. The June sucker is dark gray or brown with a white or slightly greenish belly. It has a lifespan of over 40 years. Typical fish range from 17–24 inches and reach a weight of 5 lbs. It eats zooplankton from the mid-water regions on the lake. While once plentiful in Utah Lake, the June sucker has become critically endangered due to pollution, alteration of water flow leading to loss of vegetation, and competition with nonnative species for limited food supplies.)*

## Gathering

### Obtain Information

To obtain information on the fish that live in Utah Lake, students will read a brief history on the following website:

<https://www.junesuckerrecovery.org/recovery-projects>

## Ask Questions

Students will examine the Theoretical Fish Population Data Table, which shows the declining populations of native fish species in Utah Lake and the increase of non-native fish species during that same time period. Students will construct questions based on their observations of the data to determine the cause of the decline.

Questions could include the following:

1. What patterns do we see on the graph?
2. Does the graph show any long-term trends?
3. How did the introduction of non-native fish species affect the populations of native fish species?
4. Why is one set of numbers decreasing and one set of numbers increasing? How are the populations of native and non-native fish related?
5. Why would the non-native fish affect the population of the native fish species?
6. What other factors may be affecting the number of native species of fish?
7. What new information can be inferred by looking at the historical events in relation to the graph?
8. How could monitoring the June sucker population help biologists determine the overall health of the Utah Lake ecosystem?

## Reasoning

### Analyze Data

Students will graph the data and annotate the graph with important events from the historical events listing. Students will analyze the information in the Theoretical Fish Population Data Table along with the information from the Where Are They Now? chart and list of historical events and look for possible causes to explain the decline of the June sucker population.

### ***Communicating***

#### **Construct an Explanation**

As a group, students will construct an explanation for the cause of the decline in June suckers In Utah Lake. After the group discussion, students will individually construct an explanation for the effects of resource availability on the June sucker population.

Activity adapted from the June Sucker Recovery Implementation Program website  
[www.junesuckerrecovery.org](http://www.junesuckerrecovery.org)

**Assessment:** Students' questions and explanations should demonstrate an understanding that limited resources (both from loss of vegetation and competition from a non-native species) have affected the population of native June suckers in Utah Lake.

#### **Materials, resources, handouts, etc.**

Website Link:

<https://www.junesuckerrecovery.org/recovery-projects>

[6413.a Theoretical Fish Population Data Table, Where Are They Know? Chart, and Historical Events Listing](#)

Newest Info- [June Sucker Success](#)  
[June Sucker to move from Endangered to Threatened](#)