

Before the Basin

1. If Lake Champlain is a freshwater lake, why have scientists discovered fossils of saltwater animals in the basin?
2. List some of the animals that are found in the Champlain Sea Tide Pool.
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
3. One of the animals in the tide pool is related to spiders. Which one is it and what are some other interesting characteristics it has?

Land of Opportunity

4. Find an animal that is a threatened species in Vermont. What is it?

What does it mean to be a threatened species?

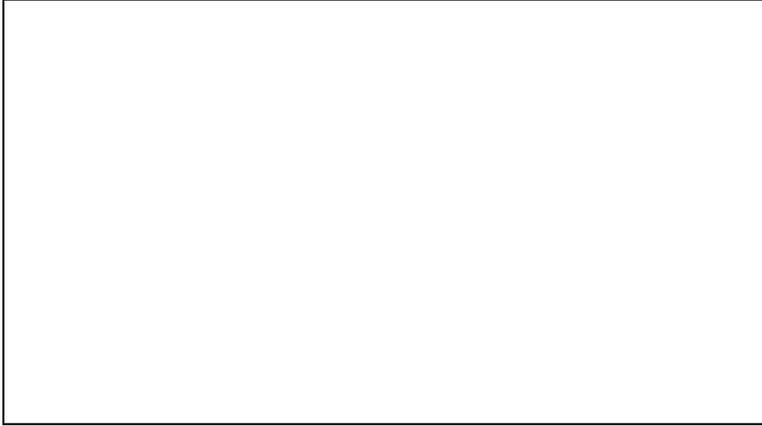
How did this animal become threatened in Vermont?

5. Which two organisms work together to form lichens?

Where do lichens live?

Why are lichens important to the alpine ecosystem?

6. Go to the *What is in the Water* station. Look at all the *macro invertebrates* under the microscope. There is one that is not identified. Study it and draw what you see. Make an educated guess about whether or not it is a predator or a collector. How do you think this animal feeds?



Predator Collector

It feeds by

Into the Lake (1st Floor)

7. Find the sturgeon in the large tank. Notice how they are swimming right along the bottom of the tank. Why do you think they skim the bottom? What do they use their whiskers (scientists call them barbels) for?
8. Look in the tall, round tank. The fish found in this tank are favorites for sport fisherman. What kind of fish are they?

Invasive Species (1st floor)

9. What is an aquatic invasive species?
10. Name one invasive species that lives in Lake Champlain. Why is it harmful to Lake Champlain?
11. How do invasive species get into the lake?

ECHO Ecology Trek
Grades 6-8
ANSWERS

1. Lake Champlain was not always a fresh water lake; about 13,000 years ago it was a salt water sea known as the Champlain Sea. The fossils of saltwater animals that have been found by scientists in the area are left over from the time of the Champlain Sea.
2. Sea Stars, Brittle Stars, Green Sea Urchins, Horseshoe Crabs, Hermit Crabs, Periwinkle Snails, Blue Mussels, and Sea Anemones can all be found in the Champlain Sea tank.
3. The Horseshoe Crab is related to spiders; both are part of the Chelicerata SubPhylum. Some other interesting characteristics of Horseshoe Crabs are that they swim upside down and use their tails to right themselves. Their blood is blue and is very useful in testing pharmaceuticals for contamination. They also have an interesting type of gill called a book gill and have been on earth since before the dinosaurs.
4. The Spiny Softshell Turtle is threatened in Vermont. A threatened species is one that could become endangered in the near future if measures are not taken to help increase their population. The Spiny Softshell Turtle became threatened in Vermont due to habitat loss, disturbed nesting sites and pollution.
5. Lichen is formed through the cooperation of fungi and algae. Lichen will grow on most any sunny and stable surface including trees, rocks, soil, and the tundra. Lichen is very important in an alpine ecosystem for several reasons. First, over time they create small pockets of soil and allow other plants to take root and grow. Second, they are an indicator species – they are sensitive to changes in pollution levels. When lichen are absent from an area, it could indicate high levels of air pollution.
6. This invertebrate looks like a predator with claws that might be used to attack food and bring it to their mouth.
7. Sturgeon swim along the bottom of the tank in order to stir up the sand with their long snouts; they then use their whisker-like barbels to find sources of food. With their siphon-like mouth, they suck up edibles like a vacuum and expel unwanted silt.
8. Lake Trout and Atlantic Salmon
9. Non-native plants and animals that don't belong in the lake and harm lake health.
10. Possible answers include: Zebra mussels – clog pipes, cut feet and hands, and out compete native mussel species, Spiny Water Flea – fouls fishing gear and threatens native plankton communities, Eurasian Water Milfoil – makes swimming unpleasant, boating difficult and threatens native plants
11. By accident: hitchhike on boats
On purpose: released pets and baitfish



