**Lesson:** Needs of Brook Trout

**Content Area:** Ecology

**Grade:** 6-12

**Standards:**

* S7.D.14.2.7.B
* S8.B.3.2.1

**Overview:**

1. This lesson should give students an understanding of the ecology brook trout need to survive in a stream.
2. They will be able compare the environment brook trout thrive in when found in an aquarium vs. their natural environment.

**Resources:**

* <http://www.troutintheclassroom.org/sites/www.troutintheclassroom.org/files/documents/Brook%20Trout%20Information%20Sheet.pdf>

**Materials**

* Internet access
* “What trout need” resource

**Objective:**

* TSWBT Identify what trout need in a habitat to survive
* TSWBT Compare and contrast the environment in a tank vs. the wild

**Set-Up:**

* Break class into small groups.
* Have each group research the habitat trout need.

**Introduction:**

1. Explain to students that they will be comparing the life a brook trout has in the wild to the one they have in captivity. Ask them to decide which environment is better and explain why they chose that answer.

**Procedure**

1. Discuss with students how the aquarium will simulate a brook trout's environment in nature.
2. Have students work in small groups to research what needs Brook Trout have in their natural environment.
3. Have students predict what Aquariums do to meet the needs found

**Closure:**

1. Ask students to share their ideas about which habitat might be better for the trout, and why. How is the tank better? How is nature better?

**Evaluation**

* Students will be evaluated basedconducting research and developing hypotheses, understand contributing factors in the water system, and knowing the importance of watersheds to Brook trout.

**Extension/Demonstration:**

With no internet access

|  |  |
| --- | --- |
|  In Nature  | In the Aquarium  |
|  Limited Light |   |
|  Cold Water (42˚ - 55˚ F)  |   |
|  Oxygen |   |
|  Clean Water |   |
|  pH 6.5 to 7.5 |   |
|  Predators  |   |
|  Food |   |

1. Discuss with students how the aquarium will simulate a trout's environment in nature. Review the conditions for trout development. Copy the above chart on the board.
2. Have students work in small groups. Distribute the [trout information sheets](http://www.troutintheclassroom.org/sites/www.troutintheclassroom.org/files/documents/Brook%20Trout%20Information%20Sheet.pdf) to each student. Give students 20 minutes to read the sheets and to discuss how a trout's natural habitat meets the conditions listed.
3. Allow time for groups to share their findings. Record responses on the board. For each item, call in students to say how the aquarium will meet those same conditions.
4. After the discussion, have students copy the chart in their journals.

<http://www.troutintheclassroom.org/sites/www.troutintheclassroom.org/files/documents/Brook%20Trout%20Information%20Sheet.pdf>

* Field trip idea- have students visit different streams and determine which have good habitat and which do not and how to improve habitat.