

WHERE ARE THE BROOK TROUT? - CHALLENGE:



Brook Trout are not only an incredible species of fish in the Adirondacks, but are an example of what is called an **Indicator Species**. **Indicator Species** are organisms (plants or animals) who can give us clues about the overall health of an ecosystem. **For example, Brook Trout are usually found in cold, clean water with high levels of oxygen.** Use the information below along with Adirondack water chemistry data to determine where you might be able to find brook trout.

WHAT DO BROOK TROUT NEED IN THEIR HABITATS?

Water Condition	Best Ranges for Brook Trout
Temperature - Degrees Celsius (°C)	Brook Trout survive best in cold water , but can be found in water between 7 – 25°C (though they become stressed and stop eating above 20°C)
Dissolved Oxygen (DO) – mg/L	Brook Trout are typically found in water with high levels of dissolved Oxygen , above 4-5 mg/L.
pH (Acidity)	pH is measured from Acidic at 1 to Basic at 14, with Neutral around 7. Brook Trout are usually found in a range from 6-8.5, though tend to do best around neutral at 7.
Velocity (Distance /time)	Use clues on the Lake pictures to help you find out if the water is moving or not. When water is moving oxygen from the air can mix into it increasing the amount of dissolved oxygen.
Other Ecosystem Clues:	Cold, highly oxygenated water is the best habitat for Brook Trout. Trees along the banks can provide shade to keep the water nice and cold. Water deep in a Lake or Pond is usually cooler as well.

I Think _____ Lake/Pond would be the best Habitat for Brook Trout because: