

SALMON TANK TEMPERATURE

Students learn how to measure, record, graph, and evaluate salmon-tank temperature.

LEARNING OBJECTIVES

- To understand temperature as an important habitat element to which animals adapt.
- To learn how to read a thermometer and record and graph temperature readings over time.
- To understand the importance of monitoring temperature and evaluating what the data indicates about habitat conditions.

STANDARDS

Environment & Sustainability
Life Science

THEME

Salmon

GRADES

4 - 12

TIME REQUIRED

20-30 minutes

PREPARATION

1. Make each student a copy of "Salmon Tank Temperatures - Getting To Know the Thermometer" and make one copy for yourself.
2. Make each student a copy of the "Salmon Safety - Aquarium Temperatures" worksheet and make one copy for yourself.
3. Print one set of "Salmon Safety - Aquarium Temperatures" by month and mount near the tank.
4. Create a daily monitoring schedule, assigning 1 - 2 students per day for 5 minutes or less.

LESSON

Teach all three parts in one session or individually, as time permits.

Part 1: Reading a Thermometer

1. Give each student a copy of "Salmon Tank Temperatures - Getting To Know the Thermometer" and put your copy on your overhead projector.
2. Review how to use a thermometer, as appropriate for your grade level. Stress that the thermometer in the fish tank is for tropical fish, which need warm water. Say
Every creature adapts to its habitat, including a range of safe temperatures. Warm water is safe for tropical fish because they have adapted to it. Our salmon, however, have adapted to cold water in Pacific Northwest streams, rivers, and lakes. Water that is too warm will kill them as easily as water that is freezing.
3. Have students answer the questions on the worksheet.

Part 2: Recording, Graphing, and Evaluating Data

1. Give each student a copy of the "Salmon Safety - Aquarium Temperatures" worksheet for recording, graphing, and evaluating observed temperature and put your copy on the overhead projector.
2. Explain that one or two students will be responsible for monitoring tank temperature every day they are in school and will use this worksheet to record and graph their data.

3. Put one page of "Salmon Safety - Aquarium Temperatures" by month on the overhead projector and explain how monitors are to transfer their temperature readings to it every day. Stress the importance of evaluating findings. Say

We can't fix a problem if we simply collect information but ignore what it tells us.

4. Return the "Salmon Safety - Aquarium Temperatures" worksheet to the overhead. Ask students to record and graph the temperature readings in the lower left on their copy of the "Salmon Safety - Aquarium Temperatures" worksheet. Stipulate that Day 12 is a Saturday and Day 13 is a Sunday, when no observations will be made.
5. Guide them through recording the temperature on the line provided for each date, then graphing the temperature on the worksheet's chart.
6. To evaluate the safety of temperatures, guide them through answering the questions on the lower right of the worksheet.

Part 3: Ongoing Monitoring

1. Put your monitoring schedule on the overhead and tell students where it will be posted (in the classroom or by the tank).
2. Go through the process with the first monitor(s) and critique for the whole class. If necessary, tell students how you expect them to focus when they are on assignment in the hallway.
3. Tell students whether you want to know temperature and safety daily or just if and when they detect a problem.

NOTE

Other factors are important to monitor, as well. Use the "Salmon Tank Monitoring Record" form provided in your *SIS-Seattle Teacher Handbook* to track these other factors.