



In-Class Science Program

2023-2024 School Year

The WISE In-Class Science Program is available to all teachers in the **Copper River School District** and **Valdez City Schools** as well as home-school families. We have science kits and experienced teachers available to come to your class and share hands-on lessons. Most of the lessons are designed to be approximately an hour long, but we are happy to work with classroom teachers to customize the content and length of presentations based on the needs of your class.

This year the In-Class Science teachers will be:

- **Robin Mayo**, WISE Staff
- **Jolene Nashlund**, WISE Staff
- **Felicia Riedel**, Retired CRSD Teacher

To request a class, please call the WISE office at 822-3575, or email contact@wise-edu.org. Whenever possible, we will try to schedule several classes at a location to reduce travel costs.



The In-Class Science program was established in 2011 with the help of grants from the Copper Valley Electric Association and Copper Valley Telecom, for the purpose of expanding opportunities for local students in the sciences. Lessons are designed to spark interest through hands-on exploration, and help fulfill grade level standards for science learning.

We appreciate the continued support of the Copper Valley Electric Association Community Foundation and Copper Valley Telecom who make this program possible.



Wrangell Institute for Science and Environment

(907)822-3575 contact@wise-edu.org www.wise-edu.org

WISE In-Class Science Program 2023-2024

All Classes are approximately one hour unless otherwise noted. We can customize length and content.

Magnetism Grades K-2: Understanding the unseen force of magnetism, distinguishing between magnetic and non-magnetic items, polarity, attract and repel, and everyday magnets. Hands on activities include manipulating lots of magnets, sorting magnetic and non-magnetic materials, and magnetizing steel.

Introduction to Electricity Grades K-2: Covers the difference between static electricity and electric current, conductors and insulators, and creating simple electric circuits. Balloons are used for static electricity experiments, and batteries, wires and bulbs are assembled into circuits. Safety is an important element of this lesson.

Electricity Grades 3-6: A more advanced exploration of the above topics.

Simple Machines Grades 2-4: Attributes of a simple machine, defining work, and making 6 basic types of simple machine. Teams of students work with kits and common classroom objects to assemble and demonstrate the 6 different types. (Note: Doing a thorough job of simple machines takes at least two hours)

Sound Grades 2-4: What makes sound, sound waves, frequency, intensity, and pitch. How the human ear works, and how to protect our hearing. This activity has a wide range of hands on materials including tuning forks, a megaphone/ear trumpet, pan lids to crash, and good old fashioned cup and string walkie-talkies.

Water Cycle Grades 2-5: This lesson begins with a review of the water cycle, and introduces the concept of a watershed. Then we use the interactive game "The Incredible Journey" in which students roll dice to simulate a journey through the water cycle, and map their results.



Birdwatching Grades K-6: We learn to use binoculars and identify common local birds using cutout silhouettes. This can also be an indoor or outdoor lesson. We can also help set up classroom bird feeders, and facilitate participation in Audubon's Christmas Bird Count.

Skins and Skulls Grades K-6: WISE has a large collection of skins and skulls of local furbearers, from least weasel to grizzly bear, which we love to share with all ages.

We have a lesson that divides them into families, explains the unique adaptations of each critter, and explores what can be learned about the diet and habitat.

Introduction to Snowflake Science Grades 3-6: Students will learn about the different snowflake shapes, the science behind how each shape is formed, and use hand held microscopes to observe, compare, and categorize the different snow crystals they discover. This will be an indoor and outdoor class.



Chemistry- Chemical Change & Reactions Grades 4-6: Younger grades will be an introductory level. Solid, Liquid, and Gas. Students will learn about chemical changes of state and reactions. When substances are mixed together and react or combine in some way, a chemical reaction has occurred. The result is a new substance with a new chemical formula. Students will utilize the scientific method and evaluate the results of an experiment to determine whether the mixing of two or more substances result in a chemical change. Lab Experiment will include Elephant Toothpaste.

Chemistry- Physical Change Grades 4-6: Younger grades will be an introductory level. Solid, Liquid, and Gas including Newtonian and non-Newtonian Fluids. Students will learn about physical changes of state, solute and solvent, mixtures, and perform lab experiments to support learning. Students will use the scientific method and evaluate the results of an experiment to determine whether the mixing of two or more substances result in a physical change. Experiment will be Ooze.

Chemistry- Water Properties Grades 4-6: Younger grades will be at an introductory level. Building on the changes in state of water; solid, liquid, or gas- Students will learn about the unique properties of water such as temperature, pressure, polarity, and density and the effects that can be observed through experimentation. Students will utilize the scientific method and evaluate the results of an experiment. Lab experiment will be creating a Density Tower.

Questions? Ready to schedule? Please call WISE 822-3575 or email jolene@wise-edu.org