

Target Skill



I can construct a complete circuit using a D-cell, wires, and a lightbulb.

4th Grade - Energy - Investigation 1

Target Skill



I can explain the function of each of the system's components in the circuit.

4th Grade - Energy - Investigation 1

Target Skill



I can turn on and off a circuit with the use of a switch.

4th Grade - Energy - Investigation 1

Target Skill



I can distinguish between specific objects if they are insulators or conductors.

4th Grade - Energy - Investigation 1

Target Skill



I can construct a circuit using more than one lightbulb.

4th Grade - Energy - Investigation 1

Target Skill



I can investigate which type of circuit would be the best design for a string of lights.

4th Grade - Energy - Investigation 1

Target Skill



I can investigate which objects will attract to magnets and which objects will not.

4th Grade - Energy - Investigation 2

Target Skill



I can determine that if an object sticks to a magnet, it is most likely made of iron or its alloy, steel.

4th Grade - Energy - Investigation 2

Target Skill



I can observe that two sides (poles) of magnets are different, either attraction or repelling one another, depending on orientation.

4th Grade - Energy - Investigation 2

Target Skill



I can observe that magnetism acts through air, most metals, and all nonmetals.

4th Grade - Energy - Investigation 2

Target Skill



I can observe that bringing a magnet close to a piece of iron induces magnetism in the iron.

4th Grade - Energy - Investigation 2

Target Skill



I can measure the force of attraction between magnets.

4th Grade - Energy - Investigation 2

Target Skill



I can observe that the attraction between magnets decreases as the distance between them increases.

4th Grade - Energy - Investigation 2

Target Skill



I can discover that a steel core becomes a magnet when current flows through an insulated wire winds around the steel core.

4th Grade - Energy - Investigation 3

Target Skill



I can investigate where and how many winds to wind the wire on the core to produce the strongest magnet.

4th Grade - Energy - Investigation 3

Target Skill



I can apply my knowledge of circuitry and electromagnetism to build a telegraph.

4th Grade - Energy - Investigation 3

Target Skill



I can invent a code and use my telegraph to send messages to other students.

4th Grade - Energy - Investigation 3

Target Skill



I can work in centers to explore evidence of energy when sound, heat and light are produced, and when objects are in motion.

4th Grade - Energy - Investigation 4

Target Skill



I can roll steel balls of different sizes down ramps and explore the system's variables.

4th Grade - Energy - Investigation 4

Target Skill



I can conduct structured investigations to discover how the variables of starting position on the ramp and ball size (mass) affect the speed of a rolling ball.

4th Grade - Energy - Investigation 4

Target Skill



I can use controlled experiments to test the variables of mass and starting position to find out how these variables affect energy transfer.

4th Grade - Energy - Investigation 4

Target Skill



I can experience waves through firsthand experience using ropes, demonstrations with waves in water, spring toys, and a sound generator.

4th Grade - Energy - Investigation 5

Target Skill



I can use videos, animations, and readings to gather information.

4th Grade - Energy - Investigation 5

Target Skill



I can conclude that waves are repeating patterns of motion that transfer energy from place to place.

4th Grade - Energy - Investigation 5

Target Skill



I can analyze compression waves (sound waves) to learn the general properties of waves - amplitude, wavelength and frequency.

4th Grade - Energy - Investigation 5

Target Skill



I can use mirrors to experience reflection light.

4th Grade - Energy - Investigation 5

Target Skill



I can determine that a mirror can be used to reflect light and can use flashlights, mirrors, and water to observe light in a number of ways.

4th Grade - Energy - Investigation 5

Target Skill



I can design series and parallel solar cell circuits and observe the effect on the speed of a motor.

4th Grade - Energy - Investigation 5

Target Skill



I can observe that cells in series make the motor run faster, but cells in parallel do not deliver additional power to the motor.

4th Grade - Energy - Investigation 5

Target Skill



4th Grade - Energy - Investigation