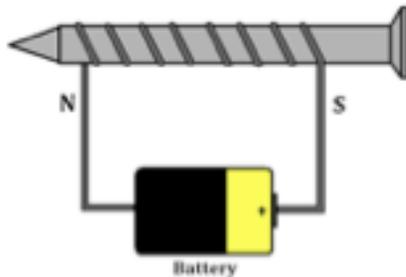


Lesson #1

Ms. Salazar’s students are analyzing the data table from an investigation they conducted that answered the question: Which type of electromagnet is the strongest? The students created electromagnets by wrapping a wire around a nail and connecting the ends of the wire to a battery. This generated an electric current and turned the nail into a magnet, called an electromagnet (see image below).



The students varied the number of times the wire was wrapped around the nail and the material the nail was made of to see how this affected the strength of the electromagnet. They measured the strength of the electromagnet by counting how many paperclips it could pick up. The table below shows the students’ experimental results.

Number of Times Wire Wrapped Around Nail	Nail Material	# Paperclips Picked Up
10	Iron	2
25	Iron	20
10	Aluminum	2
25	Aluminum	5

After analyzing the data table, Ms. Salazar had students engage in a whole class debate about which type of electromagnet is strongest.

Lesson #2

In the middle of a unit on density, Ms. Moore had her students conduct an investigation to determine whether different types of balls would sink or float in water. Below is a table the students created after collecting data about the mass and volume of water, a ping-pong ball, a golf ball and a bowling ball. The students then calculated the density of each object by dividing the mass by the volume. Ms. Moore hoped that this investigation would help students understand that objects with a density less than water will float, and objects with a density greater than water will sink.

	Mass	Volume	Density
Water	20,000.00 g	20,000.00 mL	1.00 g/ mL
Ping-Pong Ball	2.70 g	33.51 mL	0.08 g/mL
Golf Ball	45.93 g	40.49 mL	1.13 g/mL
Bowling Ball	4,989.52 g	5,454.52 mL	0.92 g/mL

Using the density calculated from the students' measurements, Ms. Moore had her students write arguments answering the question: What will happen to the balls?
