Mr. Renwick's Science Class
Worksheet – The Scientific Method

Name: _____
Block: _____

Learning Intentions

1. To understand how the scientific method helps us to find the truth.

Notes

1. Watch the Teacher's Pet video "The Scientific Method" at

   https://www.youtube.com/watch?v=SMGRe824kak

2. The scientific method is an _____ process. This means that

3. There are several steps to each iteration of the scientific process:
   - Find a question or topic to investigate and do _____ _____.
   - Create a _____.
   - Create a set of _____ to test the hypothesis.
   - Collect _____ using your procedures.
   - Perform an _____ of your data.
   - Draw _____ from your analysis.
   - Figure out _____ _____, based on new questions that are raised.
4. _____ data uses numbers; _____ data uses words and observations.
5. In an experiment, the experimenters control the _____ variable and measure the _____ variable. They try to _____ (keep constant) all other variables.
6. When graphing data, the independent variable is placed on the _____ axis and the dependent variable is placed on the _____ axis.
   - Time is almost always a/an (independent / dependent) variable.

See over →

Activity

For each of the following scenarios, identify the independent variable(s), the dependent variable(s), and the control variable(s).

1. A child adds more and more teaspoons of sugar to their cereal, testing how it tastes after each addition of sugar.
2. To track their fitness, an athlete keeps track of all the calories they are eating and weighs themself every day.
3. A runner tries running 100 m using different types of running shoes.
4. A single person tries creating 2 different online dating profiles, and records how many messages they receive with each profile.
5. A soccer player compares the accuracy of their shot when using the left foot vs. using the right foot.
6. A teacher compares how loud the class is when students are seated next to their friends, versus when they are seated randomly.
7. A student compares the food their parent cooks at home to the food that they can buy at school.