

# I want to...

Senior Scientists - Recommended for Grades 3-5



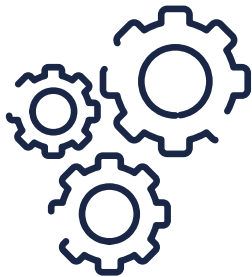
## Create an Invention:

- Identify a problem
- Research! Learn more about your problem and existing solutions
- Design your solution
- Build a prototype
- Test and Evaluate (Did it work the way you intended? Think about what would work well or need improvement in real life)
- Analyze and Redesign (How could you make it better?)
- Share what you've learned

## Reverse it!

- Learn about how a common household item works by taking it apart and putting it back together (don't forget to ask for permission first!)

Create a trifold, poster or display to show your work!



# Demonstrate!

## Collection with Classification

A collection is a set of objects that have been placed into groups according to similar properties. Your project should include the objects as well as a cardboard tri-fold with a title and information about the collection. Each object should be labeled with a description, or keyed to a description on your tri-fold.

## Model, Demonstration or Display

On a cardboard tri-fold, describe the project in writing and include pictures or drawings, if possible.

Here are some examples of projects:

- Make a model of an engine out of cardboard, with diagrams to show the parts.
- Demonstrate how light reflects off different objects using a set of mirrors.
- Create a display about different kinds of monkeys and their habitats.



# Experiment!

## Conduct an Experiment using the Scientific Method

- Ask a question: Observe the world around you and ask a question you would like to answer. (Examples: Why is the moon always shining? Why do we put salt on icy sidewalks? How does a rain puddle dry up? How does your body get energy from food? What kind of metal do magnets attract?)
- Form a hypothesis: After deciding on a question, do some research to try to guess the answer to your question. This is called your hypothesis. You can find resources at the Ridge Library, Ridgewood Public Library in the Children's Department or online. See attached for some helpful sites.
- Test the hypothesis: Gather information or perform an experiment to test your hypothesis.
- Analyze the results: Describe the results of your experiment or research. (This is what happened...)
- Draw a conclusion: Was your hypothesis correct? What did you learn?