In fifth grade science, students learn as scientists – using experimentation, simulation, observation, and research to develop their understanding of the world around them. While exploring a diversity of topics including the Scientific Method, Biology, Ecology, and Chemistry, students hone their scientific process skills including observing, estimating, predicting, experimenting, collecting data, measuring, classifying, constructing charts and graphs, analyzing data, inferring, formulating theories, and communicating.

Core skills covered this year

Over the course of the year we will be focused on helping students master core science skills. These skills form the basis of our ongoing assessment, and you will see them included in the three Lower School report cards. These skills comprise learning to:

- Conduct investigations using the scientific method
- Make accurate measurements
- Develop explanations based upon scientific understanding.
- Apply prior and integrated knowledge.
- Use taught strategies and concepts in scientific research.
- Use taught strategies and concepts in scientific writing.

Units of study

- Unit 1: Biology
  - Biodiversity
  - Relationships between organisms and their surroundings
  - Microscopes and Cells
- Unit 2: Scientific Method and Measurement
  - Using the Scientific Method to conduct experiments
  - Variables and Graphing
  - Metric System
- Unit 3: Chemistry
  - Matter
  - Physical and Chemical Properties and Changes
  - Periodic Table of Elements
- Unit 4: Scientific Explorations
  - Shad Hatchery
  - Garden Experiment
  - Comparative Study: Aquaponics vs. Traditional Gardening

**Methods of assessment**

- Ongoing formative assessment
- Grade level tests and quizzes
- Scientific lab reports
- Class projects
- Classroom participation
- Journal work

**Homework expectations**

- On average, the students will have 20 minutes of science homework nightly.
- Homework is posted for the week on Mondays to allow students the opportunity to pace themselves based on their personal schedules.
- Students are encouraged to advocate for themselves when they have difficulty with their homework – she can email the teacher or come in at the start of the day.

**Ways to support your daughter**

- Ask your daughter to explain what she is learning. Talking through challenging concepts help children clarify their understanding.
- Encourage your daughter to ask questions about the world around her as well as how things work. Help her to find appropriate resources to answer her questions.
- Visit museums (including the zoo!) or take walks in the woods, near a stream, on the beach, etc.
- Ask her if you can help quiz her before a test (using study guide)
- Encourage her to talk to her teachers to advocate for herself
- Allow her to make mistakes; this is when she will learn the most!
- Make sure she gets enough rest.