

8th Grade Physical Science

Welcome to 8th grade science. This course will include the study of the basic concepts and skills of Chemistry and Physics.

Students will engage in **inquiry based investigations** in which they work cooperatively to discover and solve problems. Students will collect data in order to make conclusions that answer key questions. These conclusions are integrated into the teaching of the required science content in order to combine reasoning and thinking with scientific knowledge. Major concepts grow out of the investigations. A key responsibility will be maintaining a **well-organized detailed laboratory notebook** because investigations form the backbone of the course. We will use a classroom set of textbooks occasionally as a resource for an investigation.

Topics that will be explored include Forces and Motion, Work and Energy, Properties of Matter, Changes in Matter, Water and Solutions, Sound and Waves, Light and Optics.

What do we expect from our 8th grade students?

1. To work together cooperatively in a positive manner.
2. To think like scientists. Why does this occur? How can we change the outcome?
3. To maintain a scientific notebook that contains data and conclusions.
4. To pull content from data, worksheets, notes in order to study for assessments.
5. To complete individual projects on time and according to detailed instructions.

How can our parents help our students be ready to go in the late summer?

1. Go to the library and find something interesting to read related to science and **ask questions**.
2. Watch a program on the Discovery Channel and **ask questions** during the show.
3. Experiment in the kitchen with baking ingredients and ask questions.
Experiment in the workshop and improve something by building and of course **ask questions**.
4. **Your kids will be writing in science class!** Have them write the answer to a question. Why is the sky blue? Why does it thunderstorm in the afternoon on summer days? Why does it take so long for a loaded train to stop? Why are there so many simple machines in a kitchen and workshop? Why aren't balloons filled with hydrogen anymore? How does a heavy airplane fly? Why doesn't a heavy steel boat sink? **Ask questions!**

We look forward to a great year of science with your future 8th grader! Please contact us if you have any questions

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