

# Dear Parent,



We're excited to have your student in Science at Whitmore Lake High School.

Each year, we build on the skills that your student has already learned, as well as introduce new ones. See this side of the brochure for details about what we're doing this year in Science.

At home, your student should be encouraged to practice the skills he/she is learning at school. See the other side of this brochure for easy things that you can do to encourage that practice.

By working together, we can make sure that your student acquires the skills he or she needs to be successful in school and life.

We look forward to working with you and your student this year. When you have questions, please feel free to contact us at 449-4461.

Sincerely,  
The High School  
Science Department

## In every grade, we teach Science skills that will help students:

### Learn by investigating

- Use scientific methods to ask questions, conduct investigations using technology, and gather, analyze, and communicate information.

### Understand living things

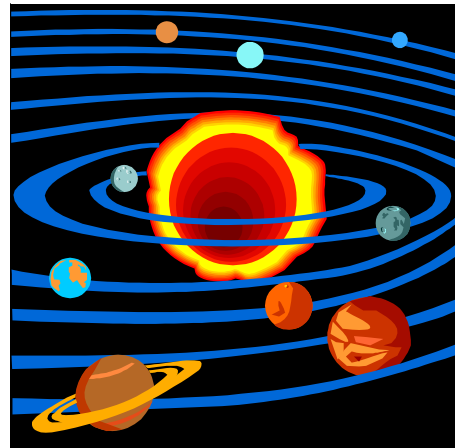
- Understand the structure and function of living things, their systems and how living things interact with the environment.

### Understand natural forces

- Understand the interactions between matter, energy, forces, and motion.

### Understand earth and space

- Understand the cycles and systems of the Earth, solar system and universe.



## In high school, we teach Science skills that will help your student:

### Learn by investigating

- Design and build projects related to the subject.
- Perform experiments and hands-on activities to support the subject area.
- Guide group projects where the students define their own view on topics such as the environment, nuclear power, climate change, etc.
- Use presentations by students and class discussions on topics that relate to the subject.

### Understand living things

- Describe the different parts of plant and animal cells and explain their function.
- Explain the different body systems and their functions.
- Understand heredity and explain how traits are passed from parent to offspring using Punnett squares.
- Explain the function of DNA.
- Understand the concept of natural selection.
- Explain the life cycles of plants, animals, fungi, protist, monerans, and viruses.
- Classify living things into the six kingdom system.
- Describe the technology used in prevention and treatment of diseases.
- Understand the relationship between different parts of an ecosystem and the flow of energy within the ecosystem.
- Describe the effects of agriculture and urban development on an ecosystem.

### Understand natural forces

- Explain the different parts of an atom, such as nucleus, electron cloud, proton, neutron and electron.
- Balance and describe different chemical reactions.
- Describe radioactivity and its function in a nuclear reaction.
- Explain how machines make work easier.
- Measure and find an object's speed and momentum.
- Explain how forces affect our daily lives.
- Describe the role of friction in helping and/or hindering the movement of an object.

### Understand earth and space

- Explain the cause of volcanoes and earthquakes.
- Describe the structure of the interior of the earth.
- Explain the importance of mining and its effects on the environment.
- Explain how rocks are formed.
- Describe the parts of the atmosphere.
- Explain the causes of weather phenomenon and different climates throughout the world.
- Predict the local and global weather patterns using weather station data.
- Explain the effects of human activities such as car exhaust on the climate.



**Parents:**  
Here are some  
easy ways to  
help your  
student practice  
Science skills.

### Learn by investigating

- Read and discuss a science article from a newspaper or magazine.
- Visit science museums (University of Michigan's Natural History Museum, Hands On Museum) including those in different states.
- Chaperone class field trips.
- Watch science-based television programs such as Discovery Channel, Weather Channel, Public Television, and The Learning Channel.
- Ask grandparents or senior citizens about changes to the environment during their lives.
- Ask your student about the topics covered in class and discuss with them.
- Serve as a guest speaker if you have a career that relates to a science field.
- Involve your student in Metropark programs.



- Visit a university science department.
- Get involved in habitat community projects.
- Encourage research on historical people in science and on scientific issues at the library and on the internet.
- Sponsor a science or tech club.

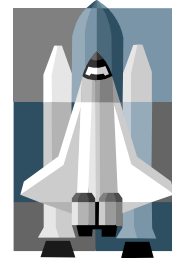
### Understand living things

- Encourage your student to have and take care of a pet.
- Observe and take notes on animal behavior such as a pet, or a wild animal nearby such as a rabbit.
- Chaperone field trips.
- Watch scientific television channels such as: Discovery, NOVA, Weather Channel with your student.
- Encourage your student to keep an aquarium or terrarium.
- Observe the nature in your local area close up for study purposes.
- Involve your student in outdoor activities (fishing, hiking, nature walks, photography).
- Create a family tree and identify common physical characteristics of family members.

### Understand natural forces

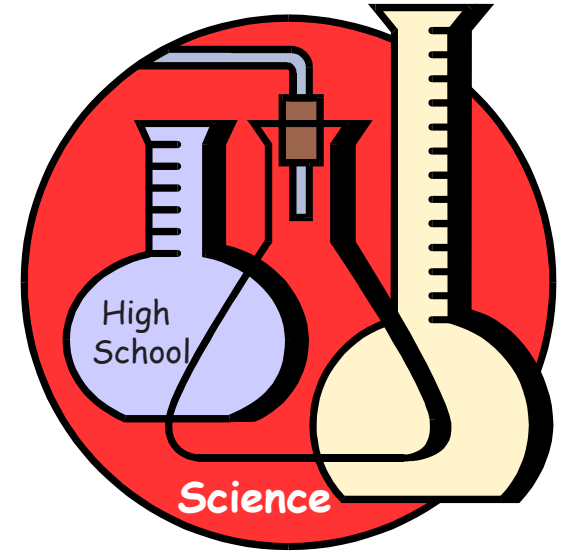
- Inquire about the chemical reactions in everyday life (cooking, cleaning, etc.).
- Learn about motors and engines and how they work.
- Visit an amusement park (Cedar Point) to observe force and energy with roller coasters.
- Watch a NASCAR race and emphasize the physics involved with racing.

- Relate different simple machines as part of complex machines, such as bicycles.



### Understand earth and space

- Plant native vegetation on your property to serve as a mini-wildlife refuge.
- Help clean up your local environment.
- Observe the sky together and identify a few constellations; watch meteor showers and lunar eclipses.
- Get involved with outdoor activities (fishing, hunting, hiking, x-country skiing, etc.).
- Explore volcanic eruptions and earthquakes around the world on the internet and in the newspapers.
- Identify and discuss how unique landforms in your area were formed.



Whitmore Lake High School

In high school,  
we're teaching  
your student  
important  
discovery skills.

*What are these skills?*

*How can you help your  
student practice them?*



*...exceptional,  
personalized education*

**For more good ideas, ask your  
student's teacher, or contact:**

Whitmore Lake High School  
8877 Main Street • Whitmore Lake  
Michigan • 48189  
(734) 449-4461 • <http://www.wlps.net>