

## 6<sup>th</sup> GRADE SCIENCE

Ms. Helfrich	Ms. Porter
<a href="mailto:karen.helfrich@thompsonschoools.org">karen.helfrich@thompsonschoools.org</a>	<a href="mailto:brittany.porter@thompsonschoools.org">brittany.porter@thompsonschoools.org</a>
Voice Mail: 613-7255	Voice Mail: 613-7235

### What will we need for class?

Students will need standard supplies: pencil, colored pencils/markers, paper, spiral notebook, 1" 3 ring binder, head phones/earbuds. Textbooks are kept in the classroom and may be checked out by a student for use at home as needed.

### Agenda/Homework

The students are required to write their daily class work and home work assignments in their student agenda. It is the student's responsibility to update their own agenda from the teacher's master agenda if they are absent, and to obtain any missing work from the file. Student's families are encouraged to look through their student's agenda on a daily basis for assignments or upcoming events.

### Bill Reed Middle School Expectations:

**Perseverance**...never give up!

**Respect**...treat yourself and others with care and kindness.

**Integrity**...take responsibility for your actions – own it!

**Dignity**...find the value in yourself and others.

**Encouragement**...look out for each other.

### Student Daily Responsibilities:

1. Be in seat with agenda book and materials **before** class begins.
2. Copy the agenda for the day from the board/screen into your agenda book and put your binder away (under your seat on the floor).
3. Copy the warm-up question off the board/screen and use necessary resources to answer the question on your warm-up sheet.
4. **Always** have the required materials in class.
5. Lab equipment and materials are **NOT** to be touched unless you have been asked to do so.
6. Lab Cleanup: All our labs will require you to clean up your area so the next class can start their lab in a clean area.
7. Dismissal by the teacher, NOT the clock.

### Technology/Lab Safety

Technology and Lab safety is very important. Horseplay or violating lab safety or technology is forbidden. Violations of either may result in suspension from **all** lab/technology activities. We will not allow other students to be endangered by those who disregard safety rules.

## What are we learning this year?

We will be learning about Scientific Method and Process Skills, Cells and Atoms, Forms of Energy, Geology, Human Impact and Astronomy.

### Next Generation Science Standards:

Cells and Atoms	
LS1-2	Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.
PS1-1	Develop models to describe the atomic composition of simple molecules and extended structures.
LS2-3	Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

Forms of Energy	
PS1-4	Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.
PS3-3	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.
PS3-4	Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.
PS2-3	Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.
PS4-1	Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.

Geology and Human Impact	
ESS1-4	Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.
ESS2-3	Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.
ESS2-1	Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.
ESS3-2	Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.
ESS4-1	Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.
ESS3-1	Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
ESS3-4	Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

Astronomy	
ESS1-1	Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.
ESS1-3	Analyze and interpret data to determine scale properties of objects in the solar system.
ESS2-2	Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.
ESS2-5	Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.
ESS2-1	Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.