

Science

Syllabus: Grade 8

Description:

In order to be well informed in today's society, it is important to have a basic understanding of certain subjects and science is no exception. The reality is, we are immersed in the world that is complex and intertwined. The scientific process can be useful tool in attempting to make sense of the world. Eighth grade science course builds on the concepts covered previously in seventh grade science but with heavy emphasis on topics relating to the physical, chemical and geological sciences.

Science Standards:

Standard 1: Science Practices

Standard 2: Life Science

Standard 3: Earth and Space Science

Standard 4: Physical Science

Science Objectives:

Eighth grade science objectives build upon students' science understanding from earlier grades and provide deeper understandings in these major topics: Structure and properties of matter, chemical reactions, growth, development and reproduction of organisms, natural selection and adaptations and human interactions.

Science Resources & Materials:

Teacher's Resources: Glencoe Science Level Blue (T. Ed)

Student's Resources: Glencoe Science Level Blue (St. Text)

Digital Resources

Class Rules:

1. Arrive on time, prepared, and ready to learn
2. Respect yourself and others
3. Make friends and be thoughtful
4. Take turns speaking and listening
5. Say Please and Thank you
6. Try your best!

Computation of Letter Grade:

| | | |
|----------|-------|---|
| 90%-100% | ----- | A |
| 80%-89% | ----- | B |
| 70%-79% | ----- | C |
| 65%-69% | ----- | D |
| 0%-64% | ----- | F |

Effort and Behavior & Activity

- 1 - Outstanding
- 2 - Satisfactory
- 3 - Needs Improvement
- 4- Unsatisfactory

Methods of Evaluation

Quarterly grade for Grade 1 to 8 is based on:

A. 85% = Class Average

* Class Average = 70% Test + 30% Other
Components such as quizzes, group works, classwork, homework, self-assessments, experiments/demonstrations/research/projec

B. 15% = Quarter Exam

What do we study in Science?

| Standards | Grade Eight |
|-----------|---|
| 1 | <p>Science Practices:</p> <ul style="list-style-type: none"> The ways that scientists ask questions about the natural world, get and analyze data, develop explanations and communicate their evidence-based scientific knowledge. |
| 2 | <p>Life Science:</p> <ul style="list-style-type: none"> Investigate factors that influence seed germination and plant growth, and use evidence to plan a local garden. Represent abiotic and biotic interactions in ecosystems, and predict how changes may affect organism populations. Explain how natural selection can result in changes to a species over long periods of time. Continue work on school gardens. <p><i>Note: Begin School Garden</i></p> |
| 3 | <p>Earth and Space Science:</p> <ul style="list-style-type: none"> Analyze the role of fossils in helping scientists know about Earth's history. Make a model of the carbon cycle to show its reservoirs and flows, and compare the preindustrial and current flows and reservoirs. Model the flows of energy into, within and out of the Earth system, and explain the climate effects of increased carbon dioxide in the atmosphere. Explain how climate change will affect Palau ecosystems, and analyze which adaptation strategies are likely to be most effective in increasing resiliency. Explain how climate change will affect Palau human systems and analyze which adaptation strategies are likely to be most effective in increasing resiliency. |
| 4 | <p>Physical Science:</p> <ul style="list-style-type: none"> Investigate mixtures, identify solutions, distinguish the parts of solutions, and separate solutes from solvent. Based on results of investigations, analyze factors that affect solubility, compare properties of solutions of different concentrations, and use evidence to support conclusions. Compare and contrast three ways that heat energy moves, and explain if and how movements of particles of matter are involved in the energy transfer. Demonstrate science literacy and other science investigation skills. Compare the forces that affect structures, and use investigations to design stronger structures. |