Welcome to 8th grade Science!

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Classroom Expectations:
Students are expected to act as leaders in the classroom this means striving to always follow H.O.W.L. expectations appropriate to the classroom.

Students are also expected to uphold the highest model of integrity in accordance with the classroom's integrity policy:

> "I affirm that I will uphold the highest principles of honesty and integrity in all my endeavors at Centennial Campus Magnet Middle School and foster an atmosphere of mutual respect within and beyond the classroom."

Required Materials:
1- full size (8 ½ X 11 in) 5 subject notebook, Glue sticks, Pencil, Highlighter

Grades:

Tests and Projects	45%
Labs, Projects, and Classwork	45%
Homework	10%

Make-Up Work:
For absences approved in advance where work is given to be completed during absence work is due the day student returns to class. For all unexpected absences between 1 and 3 days students have 1 day to make up the assignment per day absent. For absences longer than 3 days students have 2 days for each day absent to make up work.

Homework:
Students can expect homework after almost every class as preparation for high school. All homework will be listed on the board and should be written down in agendas every day as part of procedures for entering the classroom.
If a student fails to turn in homework they should fill out a "pink slip" and check why they do not have their homework with them. Turning in the pink slip gives them the opportunity to turn the assignment in up to TWO days late. Each day the assignment is late ten points will be deducted from the grade, for example if the assignment is only one day late then the highest

possible score that could be received is a 90. If the student does not turn in a pink slip on the day that the assignment is due the assignment cannot be turned in.

Labs:

As part of science instruction students can expect to complete labs in class frequently. During labs students are expected to treat all lab materials with respect and stay focused on the lab, following all procedures. Failure to follow lab procedures can become a safety issue and will result in the student being removed from the lab and given an alternate assignment.

8th grade's big science questions

Interactions of Matter/ Chemistry:

- What is matter?
- How can you tell the difference between elements, compounds, and mixtures?
- How are atoms arranged? How does atomic arrangement affect classification of matter?
- What are the physical and chemical properties of elements? Why are these properties important for the arrangement of the Periodic Table of Elements?
- What differentiates a chemical change from a physical change?
- What is conservation of mass?
- How does the law of conservation of mass help us balance chemical equations?

Energy and Nutrition:

- How do we get energy from food?
- How does food give us the material to "rebuild" our bodies?
- Why are a healthy diet and exercise important to the health of body systems?

Diseases and Biotechnology:

- What are the basic characteristics of viruses, fungi, bacteria, and parasites?
- How do viruses, fungi, bacteria, and parasites spread and how are they treated to prevent disease?
- What is the difference between and epidemic and a pandemic?
- How can we define biotechnology?
- What genetic information does biotechnology access?
- How has biotechnology affected North Carolina?
- What ethical issues are involved in biotechnology relating to agriculture?

Hydrosphere:

- How is water distributed on earth?
- How much water do we have access to on earth? What is water scarcity?
- Where does our water come from?
- What is ocean water composed of? What does that matter? What could be the consequences if this composition changed?
- What is an estuary? Why are they important for North Carolina?
- How do we determine the safety and potability of water in North Carolina? What different measurements can we use to collect data about water safety and potability?
- Why is safe water vital to human health? How do we treat water to ensure that it is safe for human consumption and use?
- How can we be good stewards of our water resources?

Populations and Ecosystems:

- What is the difference between a biotic and an abiotic factor in an ecosystem?
- How do biotic and abiotic factors affect populations within an ecosystem?

- What is the relationship between producers, consumers, and decomposers?
- How do symbiotic relationships define interactions within an ecosystem?
- How does energy flow through food chains and food webs?
- How does the flow of energy through an ecosystem relate to the cycling of matter in an ecosystem?
- How do we get energy from food?
- How does food give us the material to "rebuild" our bodies?
- Why are a healthy diet and exercise important to the health of body systems?

Evolution of Land and Life

- What makes a fossil?
- How do we determine the age of Earth, rock layers, and fossils?
- How do we use tools like fossils, ice cores, rock formations, and rock compositions as evidence of the historical record of Earth's past?
- How do we use evidence from geology, fossils, and comparative anatomy to form modern theories and classification systems?
- How does genetic variation relate to adaptation?

Using Natural Resources

- What does it mean to conserve energy?
- How can we define sustainability?
- What is the difference between a renewable and a nonrenewable resource?
- How do we obtain, transform, and distribute different forms of energy (solar, wind, hydroelectric, coal, etc.)?
- What are the environmental consequences or difficulties of different types of energy?
- Why is it important to continue investigating energy resources?