Open House Handout! Welcome to 8th grade Science!

Elaine Gillum 858-549-5400 x 2136
MrsG9064@aol.com or egillum@sandi.net
Web Page address: http://mrsgillumscience.com (please note there is NO www.)

PowerPoint Presentation Notes:

My e-mail: MrsG9064@aol.com

Please e-mail me tonight/tomorrow if you did not get an email last Saturday! I want you in the loop!!! Please put your student's name/period in the subject line. I send an e-mail EVERY Friday night/Saturday morning with what we did in class and what we will be doing the next week.

My Web Page : http://mrsgillumscience.com

8th Grade Science (Index) Web Page:
http://www.mrsgillumscience.com/16_8th/16_8_dir.htm

2016 Photo Directory: http://www.mrsgillumscience.com/16_8th/photos/16_Photo_Directory.html

Homework/Grade Printouts

I do not post my grades in Parent Connect, however, grades will be handed out as a progress notice about every 3-4 weeks. If you have ANY concerns, please email me and I can get you a printout. I have all assignments posted on my web page, plus the kids will have a hard copy syllabus. If you have any concerns, please feel free to email me. I will reply very quickly. (unless it's after 8 at night!)

Curriculum:

This year the focus is on : Chemistry: Inorganic and Organic, Physics: Force & Motion, KE, PE, Waves, Space Science & Engineering, Life Skills, Sex Ed. Additional Engineering work includes: The Flying Car competition & Jr Solar Sprint /Solar Cars

Communication:

I communicate with my students A LOT.They should be checking their e-mail EVERY NIGHT by 8pm. If they don't have their own email account, PLEASE consider getting them one- so I'm not bugging you ☺

Classroom Hours & Extra Help!

I'm in my classroom every morning by 5:30am, (open my doors at 6:30) AND am open at lunch. PLEASE feel free to have your student come in before school, or at lunch if they want extra help, need computer time, or simply need a quiet place to study. Just have them contact me for a pass. They are more than welcome!

Homework & Grading:

Science grades are based on a point system. This year their graded assignments will vary in point count. Little Books (the daily homework) will simply be recorded as a +, - or 0.
While they hold no grade point value, they ARE a type of study guide and cheat sheet that the students may use on their final exams.
Little Books done poorly, or not at all, will leave the student HOPING they know the test information by memory, because they will have no other aids on the final exams.
PLEASE encourage your student to do these booklets well.

Homework & Grading: (continued)

Lab/Lecture notebooks and projects will be weighted with high point values as will Final Exams.
It is the goal of our department that the students understand the standards and are prepared for high school. All due dates will be listed on the syllabus. Notebooks/projects earn up to 50% if under 3 days late and 0% after 3 days. Grading: A= 90-100% B=80-89% C= 70-79% D= 59-69% F=58% or below. Usually about 20 minutes a night, occasionally it may be longer, but all students will receive a 4-5 week syllabus and they can get ahead or double up if they have activities. If you have concerns about the time it is taking your student to complete the work PLEASE email me. I want them to learn & love science- but not drown in it!

Late Work & Grading:

Notebooks/projects earn up to 50% if under 3 days late and 0% after 3 days late during the 1st semester.
Late work 2nd semester receives a zero.

Absences:

If your student is absent, it is THEIR responsibility to see me and find out what they missed (they can also EMAIL me!)
PLEASE have them see me on the first day they return to school. This can be done before / after school, during lunch (whichever is the easiest) If your student is absent, it is THEIR responsibility to see me and find out what they missed (they can also EMAIL me!)
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Project Due Dates:

There are a few large projects that are due on the due date, whether the student is in school or not. This is to prevent the "homework flu". Those projects will be noted in the syllabus & plenty of notice will be given.

Long absences:

Please feel free to contact me if your student will be out an extended period of time. I will copy lecture notes, burn cds and provide as much work as I can for their absences. You can also check my web site. It has my lectures (power points & movies) with "student notes" , "teacher notes" and handouts available for downloading.

Make Up Work:

If your student is absent 1 day, their work/test make up is to take place THE FIRST DAY they return to school, SO have them see me before school! After 3 days of non-completion, or failure to turn in an assignment, the assignment will be recorded as a zero.

Questions?

2016-17 8th Grade Science Syllabus : CA State Standards & NGSS standards

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8th Grade CA State Science Standards: Sept- Nov 30, 2016

Investigation & Experimentation:

Scientific progress is made by asking meaningful questions and conducting careful investigations.
As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
1. Plan and conduct a scientific investigation to test a hypothesis.
2. Evaluate the accuracy and reproducibility of data.
3. Distinguish between variable and controlled parameters in a test.
4. Recognize the slope of the linear graph as the constant in the relationship y=kx and apply this principle in interpreting graphs constructed from data.
5. Construct appropriate graphs from data and develop quantitative statements about the relationships between variables.
6. Apply simple mathematic relationships to determine a missing quantity in a mathematic expression, given the two remaining terms: including speed= distance/time, density=mass/volume, force= pressure × area, volume=area ×height
7. Distinguish between linear and nonlinear relationships on a graph of data

Structure of Matter:

Each of the more than 100 elements of matter has distinct properties and a distinct atomic structure. All forms of matter are composed of one or more of the elements. As a basis for understanding this concept:
1. Students know the structure of the atom and know it is composed of protons, neutrons, and electrons.
2. Students know that compounds are formed by combining two or more different elements and that compounds have properties that are different from their constituent elements.
3. Students know atoms and molecules form solids by building up repeating patterns, such as the crystal structure of NaCl or long-chain polymers.
4. Students know the states of matter (solid, liquid, gas) depend on molecular motion.
5. Students know that in solids the atoms are closely locked in position and can only vibrate; in liquids the atoms and molecules are more loosely connected and can collide with and move past one another; and in gases the atoms and molecules are free to move independently, colliding frequently.
6. Students know how to use the periodic table to identify elements in simple compounds.

The Periodic Table:

The organization of the periodic table is based on the properties of the elements and reflects the structure of atoms.
1. Students know how to identify regions corresponding to metals, nonmetals, and inert gases.
2. Students know each element has a specific number of protons in the nucleus (the atomic number) and each isotope of the element has a different but specific number of neutrons in the nucleus.
3. Students know substances can be classified by their properties, including their melting temperature, density, hardness, and thermal and electrical conductivity

Chemical Reactions

Chemical reactions are processes in which atoms are rearranged into different combinations of molecules.
1. Students know: Reactant atoms and molecules interact to form products with different chemical properties.
2. Students know: The idea of atoms explains the conservation of matter: In chemical reactions the number of atoms stays the same no matter how they are arranged, so their total mass stays the same.
3. Students know: Chemical reactions usually liberate heat or absorb heat.
4. Students know: Physical processes include freezing and boiling, in which a material changes form with no chemical reaction.
5. Students know how to determine whether a solution is acidic, basic, or neutral

Chemistry of Living Systems (Life Sciences) Organic Chemistry

Principles of chemistry underlie the functioning of biological systems. As a basis for understanding this concept:
a. Students know that carbon, because of its ability to combine in many ways with itself and other elements, has a central role in the chemistry of living organisms.
b. Students know that living organisms are made of molecules consisting largely of carbon, hydrogen, nitrogen, oxygen, phosphorus, and sulfur.
c. Students know that living organisms have many different kinds of molecules, including small ones, such as water and salt, and very large ones, such as carbohydrates, fats, proteins, and DNA.

8th Grade CA State Science Standards: Dec 1, 2016 – June 2017

Earth in the Solar System-Earth/Space Sciences/Engineering:

The structure and composition of the universe can be learned from studying stars and galaxies and their evolution..
a. Galaxies are clusters of billions of stars and may have different shapes.
b. The Sun is one of many stars in the Milky Way galaxy and that stars may differ in size, temperature, and color.
c. Know how to use astronomical units and light years as measures of distances between the Sun, stars, and Earth.
d. Stars are the source of light for all bright objects in outer space and that the Moon and planets shine by reflected sunlight, not by their own light.
e. Know the appearance, general composition, relative position and size, and motion of objects in the solar system, including planets, planetary satellites, comets, and asteroids.

Physics: Forces & Motion: Kinetic/Potential/Wave Energy Motion (Flying Car Competition / Solar Cars)

The velocity of an object is the rate of change of its position.
As a basis for understanding this concept, students know:
a. Position is defined relative to some choice of standard reference point and a set of reference directions.
b. Average speed is the total distance traveled divided by the total time elapsed. The speed of an object along the path traveled can vary.
c. How to solve problems involving distance, time, and average speed.
d. To describe the velocity of an object one must specify both direction and speed.
e. Changes in velocity can be changes in speed, direction, or both.
f. How to interpret graphs of position versus time and speed versus time for motion in a single direction.

Forces

Unbalanced forces cause changes in velocity. Students know:
a. a force has both direction and magnitude.b. when an object is subject to two or more forces at once, the effect is the cumulative effect of all the forces.
c. when the forces on an object are balanced, the motion of the object does not change.
d. how to identify separately two or more forces acting on a single static object, including gravity, elastic forces due to tension or compression in matter, and friction.
e. when the forces on an object are unbalanced the object will change its motion (that is, it will speed up, slow down, or change direction).
f. the greater the mass of an object the more force is needed to achieve the same change in motion.
g. the role of gravity in forming and maintaining planets, stars and the solar system.

In addition: Sustaining Local and Global Biodiversity, Life's Unity and Diversity, Engineering, Transforming Energy / Junior Solar Car Sprint, Life Skills & Sex Ed

Grading: Notebooks/projects earn up to 50% if under 3 days late and 0% after 3 days late during the 1st semester.