AcadeMir Middle School Summer Science Project

Greetings Parents and Students!
Welcome to the eighth grade! As you prepare for the transition from 7th grade to 8th grade science, please view the activities to be completed and submit during the first week of the school year. These activities are required for every 8th grade student and all grades will be recorded into the grade book as a project grade. These activities are designed to expose you and prepare you for the concepts that will be taught and master during the year. Students please create a cover page (Last name, First Name centered on page) and place all assignments in a report folder to be turned in to your science teacher.

Choose one option in the first lesson and complete all of lessons 2 and 3.

Lesson 1: ENERGY on the Move

Use the links below to read and review information about energy.
What is Energy: http://www.eia.gov/kids/energy.cfm?page=1
Energy Sources: http://www.eia.gov/kids/energy.cfm?page=2
Using and Saving Energy: http://www.eia.gov/kids/energy.cfm?page=3
History of Energy: http://www.eia.gov/kids/energy.cfm?page=4

After you have completed reading and taking notes on these links complete one of the following activities:

- Create a floor plan of your home (Use Color With A Purpose)
  http://office.microsoft.com/en-us/visio-help/create-a-floor-plan-HP001208559.aspx
  http://www.ezblueprint.com/examples.html
- Use what you have learned about energy and label energy use in each area of your home. Use the energy calculator to calculate your home energy use for one billing period. Calculate electricity or natural gas, if your home uses both calculate each.

Lesson 2: Energy Exploration

- **Web quest**

Follow the links below to a website where you will find the answers to most of the following questions.
http://www.energyquest.ca.gov/story/chapter05.html
How much does energy really cost?
http://www.glencoe.com/sec/science/internet_lab/olc.php?olcChapter=625

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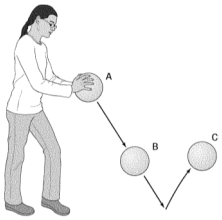
Lesson 3: Short Answer Questions

The information in lesson two will help you complete the following questions.

1. When you say something has a lot of energy, what do you mean?
2. How could you increase the kinetic energy of a wagon without increasing its mass?
3. Name two ways you could increase the potential energy of a bucket of water sitting on a bench.



4. In the above figure, a rubber ball is dropped and bounces back up. What kind of energy does the ball have at points A, B, and C?
5. List two advantages and two disadvantages of fossil fuels.
6. Explain how energy from fossil fuels gets to your car, starting with the Sun.
7. Why do we need to find an alternative to fossil fuels?
8. Give two reasons why people say that we have an energy crisis.
9. Write a list of four renewable energy resources
10. Write a list of four nonrenewable energy resources.
11. Make a list of the different types of energy that you know.
12. Where does the energy come from that you use to run your refrigerator at home?

Students, you will submit each section of your final project to the individual teachers.
Make you're your name is on all of the submissions.
Parents, please check your students work before they submit.

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Lesson 1: ENERGY on the Move Floor Plan

4 Student's project has exceeded assignment expectations; project has a professional quality	3 Student's project is above expectations with a few minor errors	2 Student's project meets expectations with a few minor errors and omissions	1 Student's project needs improvements as project has several errors and omissions
• Shows complete understanding of content • Labels all parts of the floor plan accurately and realistically • Extremely creative, effective, organized, and detailed design • Pictures and graphics support content and are relevant • Correct spelling, grammar, and punctuation	• Shows complete understanding of content • Labels all parts of the floor plan with minimal error • Creative and organized • Pictures and graphics support content and are relevant • Few spelling, grammar, and punctuation	• Shows basic understanding of content • Labels all parts of the floor plan with many errors • Some creativity and organization • Pictures and graphics do not support content • Many spelling, grammar, and punctuation	• Shows minimal understanding of content • Little consistency in creativity and design • Not creative and unorganized • Many spelling, grammar, and punctuation

Lesson 2: Energy Exploration

Score	Description
4	Response correctly identifies and fully explains. The explanation includes specific supporting information.
3	Response correctly identifies and explains. The explanation includes supportive information from the passage but lacks specificity or development.
2	Response provides a partial answer with limited, incomplete, or partially correct information.
1	Response provided is minimal or is a vague.

Lesson 3: Short Answer Questions

1 point of each correct answer: 1. __ 2. __ 3. __ 4. __ 5. __ 6. __ 7. __ 8. __ 9. __ 10. __ 11. __ 12. __=

Total Number of Points : Lesson 1 ___ Lesson 2 ___ Lesson 3 ___ Final ___/20