

Building our Future with Creative Thinking.
8th grade science assignment

assigned Tuesday 2/17/09
due on Thursday 3/5/09
point value: 150 points

After viewing the Car of the Future video in class, answer the questions below. You should write completely and clearly in paragraph form. Use blue or black ink or type your answers. You may want to review the online site for more information on this movie.
<http://www.pbs.org/wgbh/nova/car/> 50 points

1. Why haven't cars evolved past gasoline? Give 2 reasons.
2. What fuel is Iceland testing?

Why is this fuel a hope for the future?

How do they make this fuel?

What are Iceland's two unique sources of energy?
3. Why might it be easier for China to make the transition to "cars of the future" than it is for established countries like the United States and Europe?
4. What is Ethanol and how is it made?
5. How does friction slow a vehicle? Show three areas of friction on a typical car.
6. Describe the car invented by the Rocky Mountain Institute called the "hypercar".
What material did they use?
Why was this an innovation?
7. How do hybrid cars, such as the Prius, work?
8. What do all electric cars need (hint: they are very heavy) that are currently holding back our driving range? What elements are used in energy storage?
9. Why is it imperative that we design new vehicles? Give 3 reasons.

10. In President Obama's inaugural address on January 20th, 2009 he stated,
"For everywhere we look, there is work to be done. The state of the economy calls for action, bold and swift, and we will act — not only to create new jobs, but to lay a new foundation for growth. We will build the roads and bridges, the electric grids and digital lines that feed our commerce and bind us together. We will restore science to its rightful place, and wield technology's wonders to raise health care's quality and lower its cost. We will harness the sun and the winds and the soil to fuel our cars and run our factories. And we will transform our schools and colleges and universities to meet the demands of a new age. All this we can do. All this we will do."

As this is your future to benefit from, what new technologies would you like to see invented, pursued, and funded? Describe the technology or invention you think is interesting. Why do you think this is important, relevant and exciting? How might this technology improve your life or the lives of others? Read one magazine or newspaper article about a new discovery in science and technology. Bring in the article along with your answers to these questions. Due date 3/5/09

Your paper should be one page typed or neatly handwritten. 100 points