**Black Magic Current Event Questions**

(find the article online by searching: <http://www.wired.com/2014/03/clean-coal/>)

Use the current event, along with your prior knowledge, to answer the following questions.

The Steps of Carbon Dioxide Storage

1. In the clean coal burning technique, describe how the carbon dioxide is actually captured and stored (rather than released into the atmosphere).
2. What percentage of CO2 is able to be recaptured using this technique?
3. Why does the author believe carbon storage is the answer rather than turning to renewable energy?
4. What is a natural way in which CO2 is captured from the atmosphere?
5. After the CO2 is stored underground, what prevents the CO2 from reemerging back into the atmosphere?

Part I

1. Why do you think this part of the article focuses on China, and its carbon storage?
2. According to the article, how did China grow as a nation? How was this paradigm shift possible?
3. Describe the emissions of China, nationwide, and why the author believes this is happening.
4. What other nations, other than China, are dependent on coal?
5. What are the obstacles in the way of setting up carbon capture and storage (CCS) plants?
6. According to the pie chart, which is the most prominently used renewable resource for electricity globally?

Part II

1. On a good day, what is the visibility of the Beijing-adjacent city of Tangshan?
2. According to the article, what is PM2.5, and what effects does it appear to have on the residents?
3. According to a major research project conducted, how do air pollutants affect the quality of life in China?
4. How would the quality of life in China be if PM2.5 levels were reduced to what is seen in the US?
5. How does black carbon, a byproduct of coal, negatively alter climates where it is emitted?
6. Why is banning coal burning virtually impossible at this time?
7. Identify and describe TWO reasons why China is dependent on coal.

Part III

1. According to this article, how else is coal now being able to be used for (in certain areas of Beijing)?
2. How do the emissions of coal (both CO2 and others) compare to those of natural gas, as well as nuclear/solar?
3. Currently, how much CO2 is able to be stored using the CCS method? How does this differ from the projected results of 2020 CCS efforts?
4. Describe the CCS process called amine scrubbing, and the negatives of this technique.
5. Identify and describe one economic and one environmental setback amine scrubbing will produce.
6. How much would CCS for ALL coal power plants cost (approximately), every year?
7. This CCS process will seemingly make coal a renewable resource. Do you think this is a good idea? Why or why not?
8. What do skeptical organizations like the Sierra Club and Greenpeace say about CCS?
9. Why does former US Secretary of Energy Chu believe completely switching over the wind and solar is not feasible?
10. What do you think will be the biggest hurdle for CCS becoming more prominent? Why do you think so?