Rate of Reaction Webquest

**PART 1: Many factors affect rate of a chemical reaction, but we are going to focus on 4:**

**Rate of Reaction WebQuest:** Using the technology within your group, complete the notes for this lesson by following the WebQuest directions below. Go to <http://www.chem4kids.com/files/react_rates.html> to start!

1. The rate of reaction is the speed at which a reaction happens. Describe the difference between what is happening during a reaction with a low rate and a reaction with a high rate.

2. What is the collision theory?

3. **Concentration, Temperature & Pressure** can affect the rate of a reaction. Fill in the table below to describe how they affect the rate of reaction, and also how they relate to collision theory.

|  |  |  |
| --- | --- | --- |
| Concentration | Temperature | Pressure |
| How does it affect rate of reaction? | How does it affect rate of reaction? | How does it affect rate of reaction? |
| How does it relate to collision theory? | How does it relate to collision theory? | How does it relate to collision theory? |

**PART 2: SCROLL BACK UP TO THE TOP OF THE PAGE. ON THE MENU TO THE RIGHT, CLICK ON CATALYSTS AND INHIBITORS**

4. Chemical reactions need **energy** to occur. Describe what a catalyst and inhibitor do to a chemical reaction and how they each relate to energy.

|  |  |
| --- | --- |
| Catalyst - | Inhibitor – |
| How does it relate to energy? | How does it relate to energy? |

**PART 3: Go to** [**http://www.chemguide.co.uk/physical/basicratesmenu.html#top**](http://www.chemguide.co.uk/physical/basicratesmenu.html#top) **to learn about surface area…you can click on the others to double check your answer to the previous questions as well.**

What about surface area?

5. Increasing the surface area will \_\_\_\_\_\_\_\_\_\_\_\_\_ the reaction rate.

6. How do you increase something’s surface area?

**Draw a picture to demonstrate this concept:**

**PART 4: Making predictions**

* Pretend you are dissolving Alka-Seltzer in water and changing factors to make the Alka-Seltzer dissolve factor.
* Determine which factor is affecting the reaction rate and predict what will cause the reaction to occur the fastest.

|  |  |  |
| --- | --- | --- |
| Independent Variable | What is affecting the reaction rate? | Prediction of which tablet of Alka=Seltzer will dissolve fastest and **why** |
| Powdered Alka Seltzer Tablet |  |  |
| Broken Alka Seltzer Tablet |  |
| Whole Alka Seltzer Tablet |  |
| Room Temperature Water |  |  |
| Cold Water |  |
| Hot Water |  |
| More Iodine |  |  |
| Less Iodine |  |