

Name _____ Block _____ Date _____

Mentos + Diet Coke Demo

1. What happens when you leave a Coke open?
2. Does this reaction happen quickly (in seconds) or slowly (in minutes or hours)?
3. What happens when a **catalyst** (Mentos) is added to the Coke?
4. Does this catalyzed reaction happen quickly (in seconds) or slowly (in minutes or hours)?
5. How does the reaction change when more **catalyst** (more Mentos) is added to the Coke?
6. In summary, how do **catalysts** affect chemical reactions?

Name _____ Block _____ Date _____

Mentos + Diet Coke Demo

1. What happens when you leave a Coke open?
2. Does this reaction happen quickly (in seconds) or slowly (in minutes or hours)?
3. What happens when a **catalyst** (Mentos) is added to the Coke?
4. Does this catalyzed reaction happen quickly (in seconds) or slowly (in minutes or hours)?
5. How does the reaction change when more **catalyst** (more Mentos) is added to the Coke?
6. In summary, how do **catalysts** affect chemical reactions?

Paperclip Polymerization Demo

1. Does the “reaction” of putting paperclips together happen quickly or slowly when using only one hand?
2. How does the “reaction rate” change when a person is able to use their other hand (the **catalyst**)?
3. In a reaction catalyzed by an enzyme, the **substrate** is the substance the enzyme acts on or attaches to. In this demo, what is the **substrate**?
4. In a reaction catalyzed by an enzyme, the **product** is the substance the enzyme makes or results in. In this demo, what is the **product**?
5. In this demo, the **enzyme** is the person’s second hand. Explain why using the enzyme speeds up the rate of the “reaction.”
6. Changing the shape of an enzyme is called **denaturation**. What happens to the effectiveness of the enzyme if it changes its shape, such as if the fingers of one hand were taped together?

Paperclip Polymerization Demo

1. Does the “reaction” of putting paperclips together happen quickly or slowly when using only one hand?
2. How does the “reaction rate” change when a person is able to use their other hand (the **catalyst**)?
3. In a reaction catalyzed by an enzyme, the **substrate** is the substance the enzyme acts on or attaches to. In this demo, what is the **substrate**?
4. In a reaction catalyzed by an enzyme, the **product** is the substance the enzyme makes or results in. In this demo, what is the **product**?
5. In this demo, the **enzyme** is the person’s second hand. Explain why using the enzyme speeds up the rate of the “reaction.”
6. Changing the shape of an enzyme is called **denaturation**. What happens to the effectiveness of the enzyme if it changes its shape, such as if the fingers of one hand were taped together?