

## Activation Energy Quiz PDF

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**What happens to the activation energy when a catalyst is used?**

- It increases
- It decreases
- It remains the same
- It doubles

**What is activation energy?**

- The energy released during a reaction
- The minimum energy required to start a reaction
- The energy absorbed by the products
- The energy stored in reactants

**Which factor does NOT directly affect activation energy?**

- Temperature
- Catalyst
- Concentration of reactants
- Pressure

**Which part of a potential energy diagram represents activation energy?**

- The energy of reactants
- The energy of products
- The peak energy point
- The baseline energy level

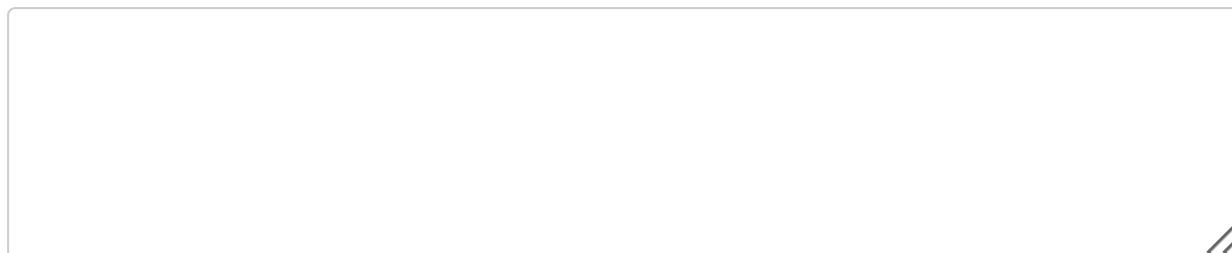
**Discuss the impact of temperature on the activation energy and rate of a chemical reaction.**

**Explain how activation energy affects the rate of a chemical reaction.**

**What information can be obtained from a potential energy diagram regarding activation energy?**

**How can the Arrhenius equation be used to determine the activation energy of a reaction?**

**Describe the role of a catalyst in a chemical reaction and how it affects activation energy.**



**What does a potential energy diagram illustrate?**

- The concentration of reactants over time
- The energy changes during a reaction
- The speed of a reaction
- The color change in a reaction

**What are the effects of increasing temperature on a chemical reaction?**

- Increases the kinetic energy of molecules
- Decreases the activation energy
- Increases the reaction rate
- Changes the chemical equilibrium

**Which of the following are characteristics of a catalyst?**

- It is consumed in the reaction.
- It lowers the activation energy.
- It speeds up the reaction.
- It alters the equilibrium position.

**In the Arrhenius equation, which parameters are involved?**

- Activation energy
- Rate constant
- Temperature
- Concentration of products

**Which of the following are true about potential energy diagrams?**

- They show the energy of reactants and products.
- They illustrate the activation energy.
- They indicate the reaction rate.

- They depict the transition state.

**What is the role of a catalyst in a chemical reaction?**

- Increases the activation energy  
 Decreases the activation energy  
 Consumes reactants  
 Increases the temperature

**In which units is activation energy typically measured?**

- Joules  
 Kilowatts  
 Kilojoules per mole  
 Moles per liter

**Which of the following factors can influence the rate of a chemical reaction?**

- Temperature  
 Catalyst  
 Activation energy  
 Surface area of reactants

**Provide an example of an industrial application where controlling activation energy is crucial and explain why.**

**Which of the following best describes the Arrhenius equation?**

- It relates pressure and volume.  
 It describes the energy change in a reaction.  
 It relates the rate constant to activation energy and temperature.  
 It calculates the concentration of reactants.

**Which statements about activation energy are true?**

- It is the energy required to break bonds in reactants.
- It can be lowered by increasing the temperature.
- It is unaffected by the presence of a catalyst.
- It determines the speed of a reaction.