

Short Answer Questions: Electrolysis of Water: Splitting Water with Electricity

Chemistry · Year 10

Name: _____ Date: _____



I am learning to: Explain and investigate the electrolysis of water, including the role of electricity, the products formed at each electrode, and how to test for those products

Answer each question in 1 to 4 sentences. Use complete sentences and scientific vocabulary where you can. Show your thinking, not just a single word. You may draw or label a diagram if it helps explain your answer.

1. Explain what electrolysis means using the correct scientific vocabulary.
2. During the electrolysis of water, which gas forms at the cathode and which gas forms at the anode?
3. Write the chemical equation for the decomposition of water during electrolysis. What do the numbers in the equation tell you?
4. Describe how you would test for hydrogen gas in the laboratory. What observation would tell you that hydrogen is present?
5. Describe how you would test for oxygen gas in the laboratory. What observation would tell you that oxygen is present?
6. Water looks like a single pure substance, but electrolysis proves that water is a compound. Explain what this experiment shows about the composition of water.