



# Lesson 4

Sample Quiz & Research Questions

## Sample Quiz: Lesson 4

*Students answer quiz questions online where they are automatically graded. The quizzes are designed to help the student test their own knowledge of the material. They should use the weekly comprehension quizzes as an opportunity to see where there are weakness in understanding so they can go back and study these areas.*

*There will be four quarterly exams. These will be longer and more comprehensive tests, but the course contains study guides to help students remember all the important material. The exam grades are final —grades cannot be reset.*

*As a parent, you can log in to your own parent dashboard and click on “Student Management” to see the grades for each quiz.*

1. Which scientist was a friend of Einstein’s and discovered the currently accepted atomic model?
  - a. Democritus
  - b. Sir Ernest Rutherford
  - c. Sir J. J. Thomson
  - d. Niehls Bohr
2. Which scientist developed the “plum pudding” atomic model?
  - a. Sir J.J. Thomson
  - b. Niels Bohr
  - c. Sir Thomas Rutherford
  - d. Albert Einstein
3. Who was the Greek philosopher who named the atom?
  - a. Socrates
  - b. Democritus
  - c. Aristotle
  - d. Heracles

4. Who developed the first atomic theory in the late 1700s and early 1800s?
  - a. James Dalton
  - b. Niels Bohr
  - c. Sir Ernest Rutherford
  - d. Albert Einstein
  
5. The subatomic particle of the atom that is neutral and is responsible for nuclear fission is the \_\_\_\_\_.
  - a. proton
  - b. electron
  - c. neutron
  - d. nucleus
  
6. According to Bohr's model, which negative subatomic particle is located in orbitals surrounding the nucleus?
  - a. Electrons
  - b. Protons
  - c. Neutrons
  - d. Orbit particles
  
7. When water melts from a solid to a liquid this is an example of a chemical change.
  - a. True
  - b. False
  
8. Chemical changes are irreversible and result in new products.
  - a. True
  - b. False
  
9. Which of the following is NOT an example of a physical property?
  - a. Malleability
  - b. Oxidation
  - c. Ductility
  - d. Density

10. Which of the following is NOT an example of a chemical property?
- a. Combustibility
  - b. Flammability
  - c. Malleability
  - d. Color

## Sample Research Questions: Lesson 4

*Students will typically be assigned 1-3 research questions to answer each week. These questions are designed to help students go beyond the lecture material, prepare them for upcoming material, or review and reinforce difficult lecture topics. Your students can use their textbook, other books, or online resources available to them to answer these questions.*

*The parent is responsible for grading these assignments. You can download an answer key in your parent dashboard that will help you with grading. For each question, we recommend assigning a grade between 0-3. Give your student 3 points if the answer looks accurate, 2 points if the work lacks important details, 1 point if it looks largely inaccurate, and 0 points if the work was incomplete or was hastily completed.*

1. Research developments in quantum physics have recently discovered even smaller subatomic particles such as the quark. Do you think the currently accepted atomic model will change in the future? Why or why not?