Answer Key: Spellbound Episode 1 Ahmed Zewail: Video Questions

Instructions
While watching the video, answer the following questions:

1. Where did Ahmed Zewail grow up?
   Disuq, Egypt on the Nile River

2. What did Ahmed’s family do to encourage his intellectual curiosity when he was in elementary school?
   They put a sign on his door where he studied that said “Dr. Ahmed.”

3. What is femtochemistry?
   The study of ultrafast chemical processes using special lasers.

4. How did Ahmed’s new technique allow him to study chemical reactions?
   It uses the world’s fastest camera to capture the motions of molecules and atoms as they undergo chemical changes to create a slow-motion replay of the reaction.

5. What materials did Ahmed use for his very first experiment as a child?
   Test tube, wood pieces, right angle glass arm, flame from coffee maker

6. How did Ahmed’s mother respond to his first experiment?
   She was concerned and not too happy.

7. Where did Ahmed study for his Ph.D.?
   The U.S.

8. What did Ahmed say was critical for success?
   Passion

After you watch the video, reflect on the following questions:

9. How would your family have reacted if you had done chemistry experiments in your house? Describe the possible reactions of at least two family members or friends.
   Answers will vary.
10. What are you passionate about? How would you like to use your passion to make a difference in the world?
   *Answers will vary.*

11. If you had the opportunity to ask Ahmed one question (about anything – his work, his life, etc.), what would it be?
   *Answers will vary.*