Quantum Mechanical Model Social Media

Name:_____

Chemistry

Date:_____Hour_____

Essential Question

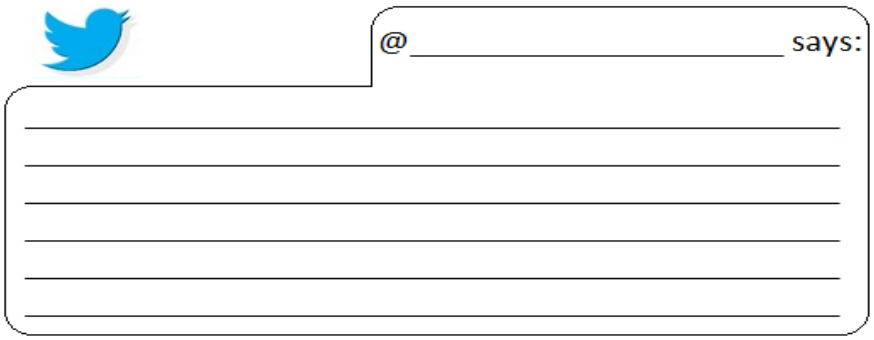
How have the models of the atom changed over the course of history?

Complete the notes below using textbook section 5.1 (tinyurl.com/QMMLemens) There is no need to use complete sentences as this is a summary of your reading. Each prompt will direct you to the appropriate paragraph(s) to use to help you answer your question.

1. In paragraph 1, it states that not all models are physical models. Some, like the model of the atom, are theoretical. What is a model and how is the newest model of the atom different from the ones we have covered in class?

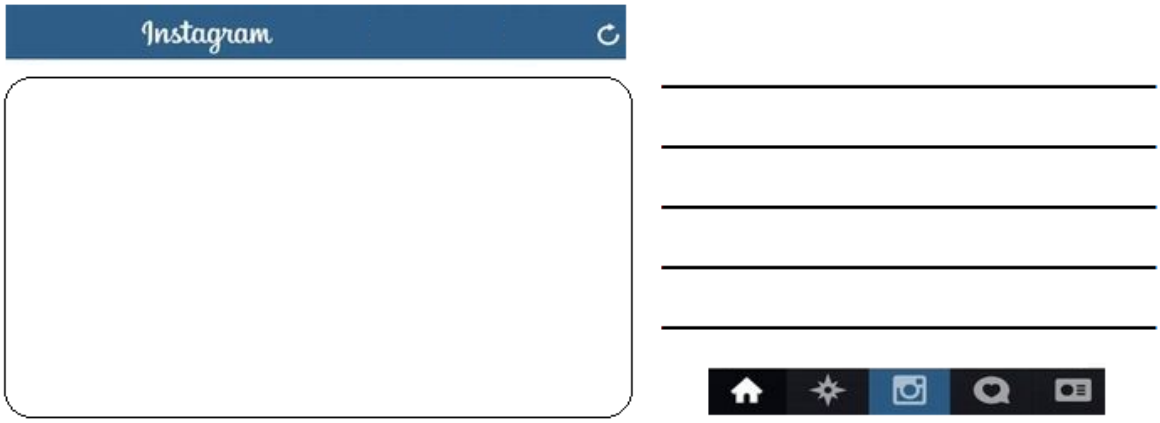
2. Rutherford's model of the atom is mentioned in paragraph 2. Using your "Models of the Atom" notes from last unit, draw and label an example of Rutherford's model and explain why it was inadequate (not good enough).

3. Compose a tweet below that summarizes the first section of the article (paragraphs 1-2).

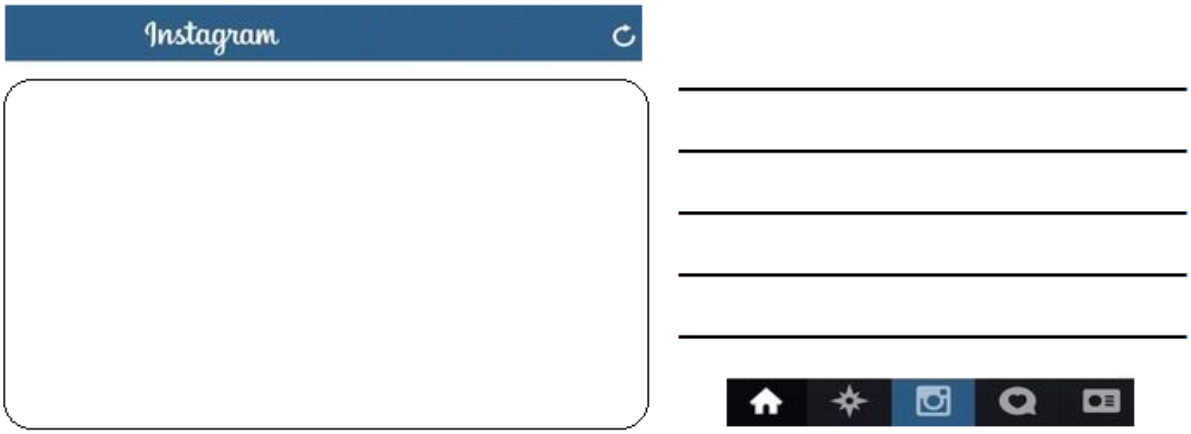


4. Bohr's model of the atom is mentioned in paragraph 3. Using your "Models of the Atom" notes from last unit, draw and label an example of Bohr's model and explain how it was different from Rutherford's.

5. In paragraph 4, the term **energy levels** is used. Compose an instagram post that includes a 3-8 word definition and a drawing that best depicts the vocabulary term above.

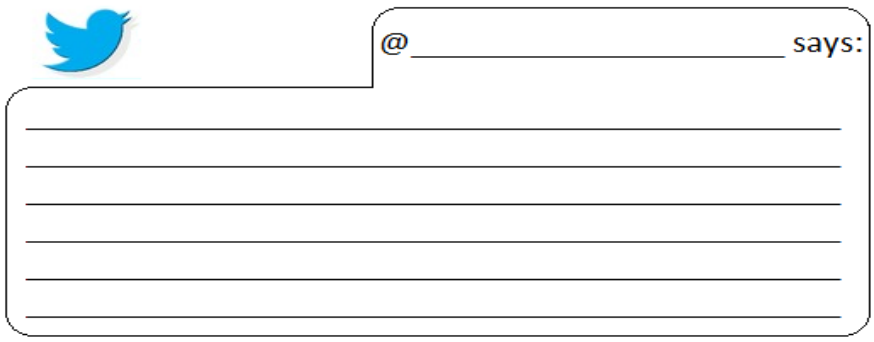


6. In paragraph 5, the term **quantum** is used. Compose an instagram post that includes a 3-8 word definition and a drawing that best depicts the vocabulary term above.

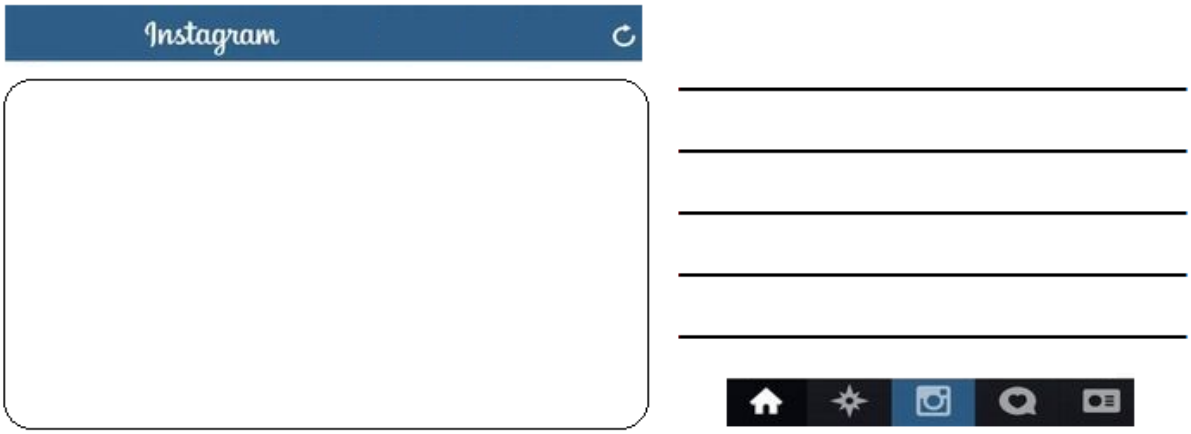


7. What are energy levels compared to AND why does this analogy work? Redraw the 2 images provided in figure 5.3 to help you answer (paragraph 6 and 7; caption 5.3).

8. Compose a tweet that summarizes the second section of the article (paragraphs 3-7).

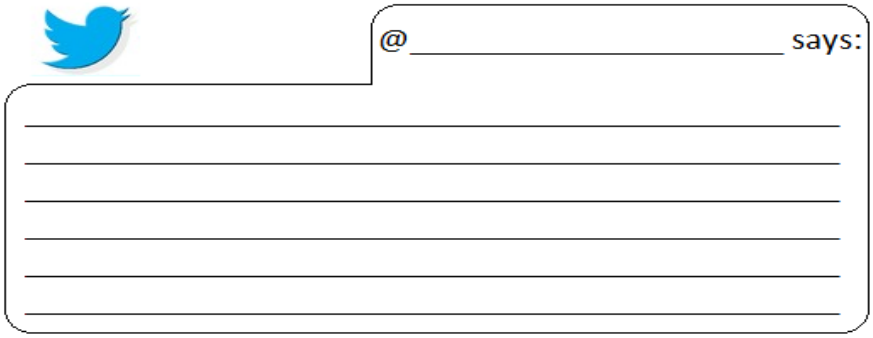


9. In paragraph 8, the term **quantum mechanical model** is used. Compose an instagram post that includes a 3-8 word definition and a drawing that best depicts the vocabulary term above (paragraphs 8 and 9).

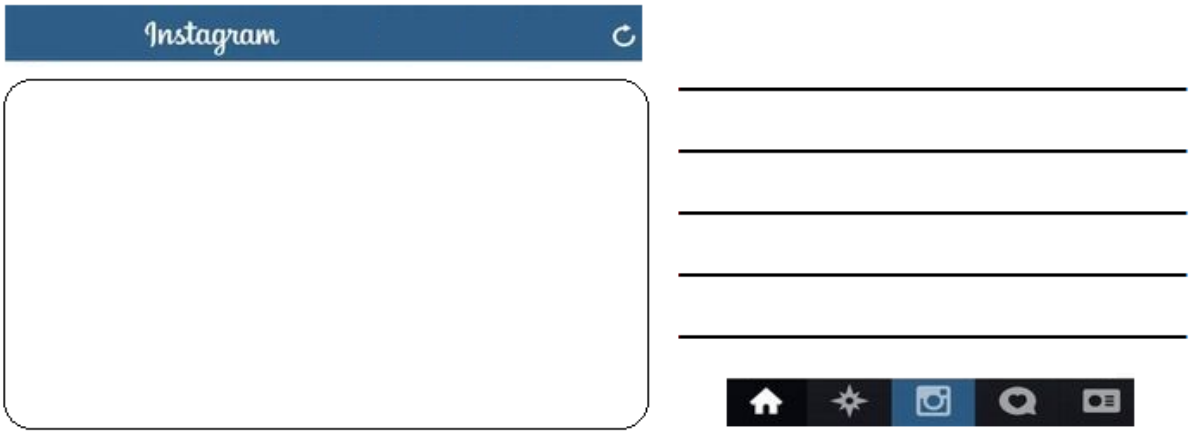


10. In Bohr's model of the atom, electrons raced around the nucleus in specific orbits, like planets around the sun. Look at image 5.4 and paragraph 11. Explain how the analogy of a plane propeller is a better description of electron movement.

11. Compose a tweet that summarizes the third section of the article (paragraphs 8-11).



12. In paragraph 12, the term **atomic orbital** is used. Compose an instagram post that includes a 3-8 word definition and a drawing that best depicts the vocabulary term above.



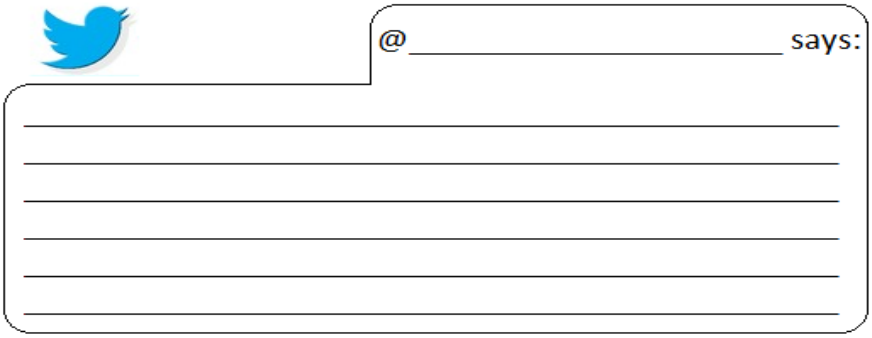
13. What is a sublevel (paragraph 13)?

14. What are the different types of atomic orbitals and what are their shapes (paragraphs 14 and 15; figures 5.5 and 5.6)?

15. How many orbitals are in the following sublevels (paragraphs 16-19)? Complete the table.

Principal Energy Level	Number of Sublevels	Names of Sublevel(s)	Number of Orbitals
n = 1			1 orbital
n = 2			
n = 3			
n = 4			

16. Compose a tweet that summarizes the fourth section of the article (paragraphs 12-20).



17. Use the tweeted summaries that you have previously composed to help you create a summary of the entire article.