

## Article-Based Observation, Q

**Directions:** Answer the following questions based on the *Science News* article "[The periodic table turns 150.](#)"

1. Before reading the article and based on your prior knowledge, what characteristics does the periodic table have? What is the periodic table's purpose?
2. Why, according to the article, is the anniversary of the periodic table a cause for celebration?
3. What patterns did 19th century scientists — including John Dalton, Johann Wolfgang Döbereiner, John Newlands and Dmitrii Mendeleev — identify in the elements?
4. Why did Dmitrii Mendeleev begin organizing elements? What other facts do you find interesting about Mendeleev's life?
5. Why does the author of the article call Dmitrii Mendeleev's original periodic table an "oracle"? Give an example to support your answer.

**6. Based on the text and the graphic on Page 15, name at least three differences between Mendeleev's original table and the table we use today.**

**7. What were the limitations of Mendeleev's original periodic table? How did these limitations affect Mendeleev's understanding of the patterns in his table?**

**8. How have atomic discoveries since Mendeleev's day informed our understanding the periodic table?**

**9. Why do you think this article is labeled an "essay," and not a "feature" or "news" article?**

**10. What lessons does the history and study of the periodic table offer to other fields of science, and the pursuit science more generally?**