

# Periodic Table Study Guide

(Chapter 4, section 2)

Name \_\_\_\_\_

Period \_\_\_\_\_

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1. a) How did Mendeleev arrange the elements in his periodic table?

.....  
b) What pattern did he discover when he arranged the elements in this way?

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2. What are two ways the modern periodic table has changed from Mendeleev's periodic table?

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3. Complete this sentence:

The \_\_\_\_\_ of an \_\_\_\_\_ can be \_\_\_\_\_  
from its \_\_\_\_\_ in the \_\_\_\_\_.

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4. What is a period in the periodic table? How many periods are there?

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5. What pattern is found as you go across each period from left to right?

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6. What is a group in the periodic table? What are groups also known as? How many are there?

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7. What do the elements in each group have in common? Give an example.

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8. Draw the square from the periodic table for the element iron (look at Figure 16).

.....  
a) What is the number 26? (underline this term) What information does this number tell you about iron?

.....  
b) What are the letters Fe called? (underline this term) Why are the letters so different from the word iron?

.....  
c) What is the number 55.847? (underline this term) Why is this number an average?

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9. What element makes up most of the sun? What state of matter does it exist as? (underline this term) Describe this state of matter.

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10. What is nuclear fusion? How does nuclear fusion produce other elements?

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11. How do scientists think elements heavier than iron are produced?