

Directed Reading B *continued*

ISOTOPES

- _____ 12. Two different isotopes of the same atom have
- the same number of protons.
 - the same number of neutrons.
 - a different atomic number.
 - the same mass.
- _____ 13. Which of the following is NOT true about unstable atoms?
- They are radioactive.
 - They have a nucleus that always remains the same.
 - They give off energy as they fall apart.
 - They give off smaller particles as they fall apart.
- _____ 14. What is the mass number of an isotope that has 5 protons, 6 neutrons, and 5 electrons?
- 1
 - 11
 - 10
 - 16
- _____ 15. If carbon has an atomic number of 6, how many neutrons does carbon-12 have?
- 12
 - 8
 - 6
 - 18
16. Most elements contain a mixture of two or more _____.
17. The weighted average of the masses of all the naturally occurring isotopes of an element is the _____.

FORCES IN ATOMS

Match the correct definition with the correct term. Write the letter in the space provided.

- | | |
|--|---------------------------------|
| _____ 18. helps protons stay together in the nucleus | a. gravitational force |
| _____ 19. pulls objects toward one another | b. electromagnetic force |
| _____ 20. an important force in radioactive atoms | c. strong force |
| _____ 21. holds the electrons around the nucleus | d. weak force |

Vocabulary and Section Summary B

Development of the Atomic Theory

VOCABULARY

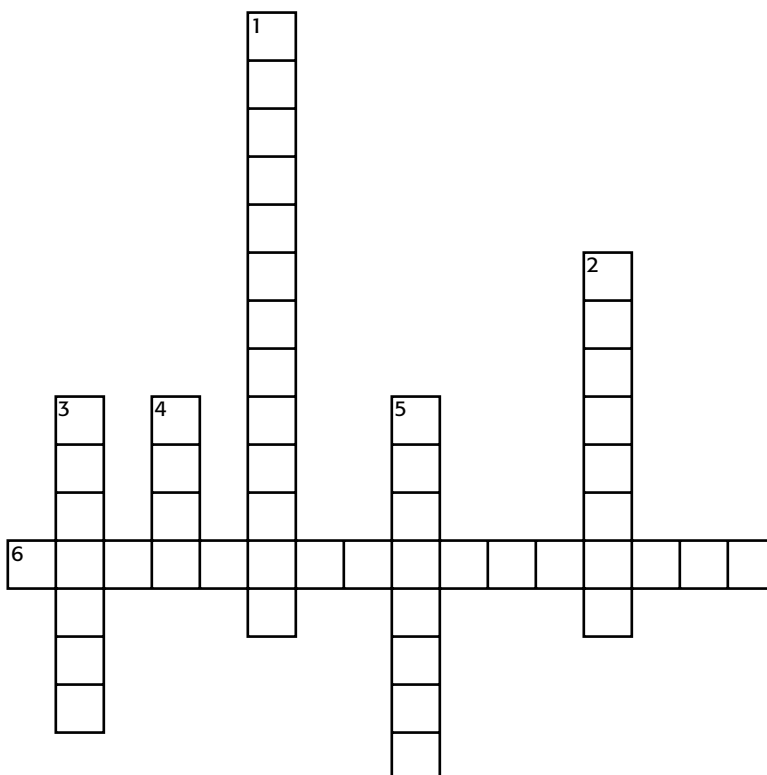
After you finish reading the section, try this puzzle! Use the clues below to solve the crossword puzzle.

ACROSS

6. name for Thomson's model of the atom

DOWN

1. a region around the nucleus of an atom where electrons are likely to be found
2. a subatomic particle that has a negative charge
3. an atom's central region, which is made up of protons and neutrons
4. the smallest unit of an element that maintains the properties of that element
5. another name for electron clouds



Skills Worksheet

Vocabulary and Section Summary B

The Atom

VOCABULARY

After you finish reading the section, try this puzzle! Use the definitions below to unscramble the vocabulary words.

1. weighted average of the mass of all naturally occurring isotopes of the same element: MICTOA SAMS

2. positively charged particle in the atom: TORPNO

3. particle in the atom that has no charge: TRONUNE

4. atoms with the same number of protons but different numbers of neutrons
SOOTPIES

5. number of protons in the nucleus of an atom: MICOTA BRUMEN

6. SI unit used to express the mass of atomic particles: TMCOAI SASM NTUI

7. sum of protons and neutrons in the nucleus of an atom: SAMS BRUNEM
