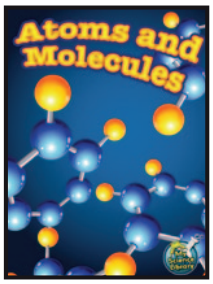
MY SCIENCE LIBRARY 4-5: ATOMS AND MOLECULES

TEACHER NOTES



Summary

This book explains the basic structure and qualities of atoms, molecules, and compounds. It introduces the periodic table and how the study of atoms has changed over time leading to nanoscience today.

Guided Reading Level	Lexile Level	100th word	Total Word Count
S	775	electrons pg. 6	600

Standards:

Common Core Language Arts
- Refer to details and examples in a text when explaining what the text says and when drawing inferences from the text
- Determine the meaning of general academic and domain-specific words or phrases
- Interpret information presented visually, orally, or quantitatively

Science
- Knows that matter is made up of tiny particles called atoms
- Knows the structure of an atom
- Knows that atoms can combine to form a molecule
- Knows that atoms from elements combine to form a compound

Lesson Focuses for Guided Reading (Select lesson focus based on Student's needs)

Writing Craft	Comprehension	Reading Strategies Decoding, & Phonics	Academic Vocabulary
Use specificity Use a variety of details to support main ideas Create and use informational text features	Summarizing Connecting text to self Using graphic features Asking questions	Self-monitoring and self-correcting Reading on for embedded definitions and supporting details Locating known and unknown words Reading text features	atomic number atomic weight bond chemical reactions compound electrons element molecules nanoscience neutrons nucleus orbit properties protons

Lesson

1. Warm up for reading – Students read familiar books.
2. Introduction of **Atoms and Molecules** – Introduce **Atoms and Molecules** by looking at the cover photo and starting a discussion about the picture and what they already know about atoms and molecules.
   Suggested questions to facilitate introductory conversation:
   - *Look at the title of the book. What facts do you already understand about atoms and molecules?*
   - *What questions do you have about atoms and molecules?*
   - *How does the picture on the cover relate to this topic?*
3. Skimming and Scanning **Atoms and Molecules** – Use this time to introduce or review your lesson focus strategies and/or skills.
   Suggested skimming and scanning prompts:
   - *Look at the Table of Contents. Think about the questions you might have about atoms and molecules. Which chapters would be a good place to look for answers?*
   - *Look at the model pictured in the lower corner. What do you think it has to do with atoms and molecules? Which chapter might explain this?*
   - *Look at the diagram that shows the structure of an atom on pg. 7. How does this help? This book has several diagrams, pictures, captions, charts, and fact boxes. How can these help you when you read? Spend time looking through the book at various graphic features.*
   - *Look at the words in bold print on pg.10. Do you know what they mean? Where can you find more information about the words in bold print? Turn to the glossary and ask students about words that may be new to them.*
   - *Sometimes when you come to a word you don't know you can read on and use clues from the rest of the sentence. This is called using context clues. You can also get additional information or embedded information that might help you with that word.*
4. Reading **Atoms and Molecules** – Students read independently or with a partner.
5. After reading **Atoms and Molecules** – Open the conversation with a question that relates to the comprehension strategy of summarizing. After a brief conversation about the contents of the book move to questions that support your lesson focus.
   Suggested after reading content connection questions:
   - *Explain the structure of an atom. Can you label its parts? How do electrons travel around the nucleus?*
   - *Summarize how the theories about atoms discussed in the book have changed over time.*
   - *What are elements? Explain what the atomic number is.*
   - *What is the periodic table and how is it organized? Have all elements been discovered?*
   - *What is a molecule? How do they relate to compounds? Give an example of a compound.*
   - *What is nanoscience? What technology opened the door for nanoscience? What is nanoscience being used for?*

   Suggested after reading lesson focus prompts:
   - *I noticed (student's name) using (reading strategy) while you were reading. Did it help you with your reading? (Repeat this question to highlight different reading strategies or skills used by students.)*
   - *Did you think about what you knew about this topic while you were reading? How did it help? Tell me about it.*
   - *Did you think about what questions you had before reading? How does this help?*
   - *Did you continue reading on for context clues or more information when you were stuck on a word? Tell me about it.*
6. After Reading Application for **Atoms and Molecules** – Have students complete the Draw, Label, and Share reproducible.

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EXTENSION ACTIVITY - Atoms and Molecule

Draw, Label, and Share Facts

Name:_____ Date:_____

Atoms and Molecule

Directions: Draw a picture of something you learned about in the book. Label all of its parts. Then write five "Did you know…" facts about your object.

Draw and label.

Did you know… _____

_____

_____

Did you know… _____

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_____

Did you know… _____

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Did you know… _____

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Did you know… _____

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