

Phonics *PLUS* C

Lesson 55

Science Words
Compound Science Words

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EDUCATORS PUBLISHING SERVICE

UNIT 3 LESSON 55a

Science Words

Objectives

- To understand the meaning of words frequently used in science
- To use context to complete sentences

DIRECT INSTRUCTION

Teacher Note: *Science has technical and specialized words that are frequently used in textbooks and other reading material. Understanding the meaning of these words will boost a child's comprehension of science reading material.*




- Write the word *science* on the board and have the children read it. Have the children identify the orthographic features of the word: how many syllables it has, where the accent is, which syllable is open, what the vowel sounds are, and so on. Write the word *scientist* and *scientific*. Have the children read these words and discuss how the suffixes change the meaning of these words. Once again, note the orthographic features of the word, including the *-ist* suffix in *scientist* and the accent on the third syllable in *scientific*.
- Remind the children that science is the subject in which we learn about the world around us and have the children suggest some of the information/ideas they have learned by studying science.
- Write words from the activity on the board: *atmosphere, dissolve, electricity, environment, evaporate, fossil, mineral, planet, pollute*. Have the children read the words and discuss the meaning of each. Discuss the scientific concepts related to each of the words.
- Help the children find page 118 in their books. **Directions (top of page):** Read the words in the box. Circle the number of syllables in each word.
- Read the words as a class. Clap the syllables in the first few as a group, then have the children work independently to complete the activity.
- When the children have completed the first part of the activity, move on to the exercise at the bottom of the page. **Directions (bottom of page):** Write the best word from the box in each sentence.
- Review the words in the box. Have children complete the activity independently.

Science Words

▶ Read the words in the box. Circle the number of syllables in each word.

atmosphere 1 2 (3) 4	environment 1 2 3 (4)	minerals 1 2 (3) 4
dissolve 1 (2) 3 4	evaporates 1 2 3 (4)	planet 1 (2) 3 4
electric 1 2 (3) 4	fossils 1 (2) 3 4	pollute 1 (2) 3 4

▶ Write the best word from the box above in each sentence.

- When water evaporates it forms clouds. 
- Smoke and smog pollute the air. 
- The atmosphere is the air that surrounds the earth.
- Thomas Edison invented the electric light.
- People should take care of the environment in which they live.
- Venus is the planet closest to Earth. 
- Sugar will dissolve in warm water.
- Fossils help scientists learn about dinosaurs.
- Iron and zinc are minerals that come from the earth.

DIFFERENTIATED INSTRUCTION

- Reteach and Practice, p. 58
- Learning Differences, p. 88
- English Language Learners, p. 67

CENTERS

Reading

Provide a collection of books and magazines that have information about a variety of scientific topics, such as electricity, weather, and plants. Allow

LESSON 55b

Compound Science Words

Objectives

To recognize compound words frequently used in science

To use context to complete sentences

DIRECT INSTRUCTION

- Remind the children that compound words are words made up of two independent word parts, each of which can stand alone.
- Have the children suggest compound words with which they are familiar and write their words on the board. Divide the class into teams of three and challenge them to think of as many compound words as they can with the following words:
rain: *raindrop, raincoat, rainbow, rainfall, rainstorm*
air: *airplane, airport, aircraft, airline, airwaves, airmail*
book: *bookcase, bookend, bookshelf, bookstore, cookbook, textbook, bookworm, bookmark, scrapbook*
- Remind the children that the more science words they know, the better they will be able to understand the scientific material that they read.
- Help the children find page 119 in their books.
Directions (top of page): Draw lines to make three compound words in each box. Write the words that you make on the lines.
- Explain that the words in the box are independent parts of compound words, all of which are related to science. Model drawing lines connecting word parts in the first box, then have the children complete the activity independently.
- When the children have completed the first part of the activity, move on to the exercise at the bottom of the page.
Directions (bottom of page): Write the best word from the exercise above in each sentence.
- Have the children work independently to complete the sentences.

Name _____

Compound Science Words

▶ Draw lines to make three compound words in each box. Write the words that you make on the lines.

back — worm earth — bone sun — dial _____ _____ _____	earth — berg ear — drum ice — quake _____ _____ _____	out — let rain — light day — drop _____ _____ _____
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▶ Write the best word from the exercise above in each sentence.

1. A large iceberg floated in the cold water.
2. Daylight begins at dawn.
3. Another word for backbone is spine.
4. The ground shakes during an earthquake.
5. A raindrop forms in the clouds and falls to the earth.
6. The eardrum moves back and forth when sound strikes it.
7. Long ago, people used a sundial to tell time.
8. We plugged the lamp into the outlet.
9. An earthworm lives underground.



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the children to select books or articles of interest to them. As they read, have them make a list of the technical and specialized words they find and then look up the definitions of unfamiliar words in a dictionary.

Writing

Have the children write short scripts that could be used on a segment of a children's science television show. Display a list of possible topic choices such as fossils, pollution, rocks and minerals, and planets. Have each child select a topic to research and then write two or three paragraphs about it. The children should highlight any science words they use.

Language

Have the children use science words in games of Guess That Word. Have one child choose a word and draw a line for each letter in a word. A partner asks questions, such as *Is there a p in the word?* If so, the child writes the letter on the correct line. The children should keep track of how many guesses it takes to get each word.

Science Words

▶ Read the words in the box. Circle the number of syllables in each word.

atmosphere

1 2 (3) 4

environment

1 2 3 (4)

minerals

1 2 (3) 4

dissolve

1 (2) 3 4

evaporates

1 2 3 (4)

planet

1 (2) 3 4

electric

1 2 (3) 4

fossils

1 (2) 3 4

pollute

1 (2) 3 4

▶ Write the best word from the box above in each sentence.

1. When water evaporates it forms clouds.



2. Smoke and smog pollute the air.

3. The atmosphere is the air that surrounds the earth.

4. Thomas Edison invented the electric light.

5. People should take care of the environment in which they live.

6. Venus is the planet closest to Earth.



7. Sugar will dissolve in warm water.

8. Fossils help scientists learn about dinosaurs.

9. Iron and zinc are minerals that come from the earth.

Name _____

Compound Science Words

▶ Draw lines to make three compound words in each box. Write the words that you make on the lines.

back ● worm
 earth ● bone
 sun ● dial

backbone
 earthworm
 sundial

earth ● berg
 ear ● drum
 ice ● quake



earthquake
 eardrum
 iceberg

out ● let
 rain ● light
 day ● drop

outlet
 raindrop
 daylight

▶ Write the best word from the exercise above in each sentence.

- A large **iceberg** floated in the cold water.
- Daylight** begins at dawn.
- Another word for **backbone** is spine.
- The ground shakes during an **earthquake**.
- A **raindrop** forms in the clouds and falls to the earth.
- The **eardrum** moves back and forth when sound strikes it.
- Long ago, people used a **sundial** to tell time.
- We plugged the lamp into the **outlet**.
- An **earthworm** lives underground.

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UNIT 3

LESSON 55

Science Words/Compound Words in Science

Student Edition pages 118-119

BLM 46

Objectives

- To review recognition of words commonly used in science
- To recognize affixed forms of words commonly used in science
- To review recognition of compound words commonly used in science

RETEACH AND REINFORCE

Write the words *evaporate*, *explore*, *solve*, and *pollute*, and have the children read them. Remind them that these are all science words. Have the children discuss word meanings.

Instruct the children that many of their science words can have suffixes. When the suffix *-tion* is added to verbs above, they become nouns that describe what happens when the actions take place (*evaporation*, *exploration*, *solution*, *pollution*).

Help the children recognize that the suffix *-tion* is pronounced /*shun*/. If a vowel precedes this suffix, it usually (but not always) has the long sound (open syllable) and is the accented syllable. Clap the words with the children and have them nod their heads for the primary accent. Have the children come to the board to separate the syllables and write the primary accented syllables in uppercase letters (*explor/A/tion*).

Other science words with the *-tion* suffix include: *observation*, *illustration*, *hibernation*, *nutrition*, *condensation*, *extinction*, *precipitation*, *collection*, *evolution*, *constellation*. Remind the children that if they come across words that are long and look difficult, they should look for prefixes and/or suffixes. Have the children decode the words above by first covering the suffix *-tion* to find the base words. Ask the children to break the syllables, indicate the accented syllable, and discuss word meanings.

PRACTICE

For extra practice, make two packs of word cards: one with the base words (*evaporate*, *solve*, *observe*, *extinct*, etc.) and one with the affixed words above. Have the children play **Remembering**, shuffling pairs of cards and placing them face down. The children take turns turning over two cards each. If the cards match, the child keeps them and turns over two more. If they do not match, the cards are turned back and the next child turns over two cards, trying to find a pair. As the children turn cards, they should say the words aloud. You may even require that when a pair is found, the child must use the words in sentences.

The children will also meet compound words in their science units. Review with the children that when they come across a long word that looks difficult, the first thing they should do is look to see if the word is a compound word, a word that consists of two smaller words that have been put together.

The activity sheet they completed included several common science compound words. Review those with the children. Others include *shoreline*, *coastline*, *seacoast*, *seashore*, *dragonfly*, *sunspot*, *starlight*, *hailstone*, *cloudburst*, *sandstone*, *waterfall*. Ask the children to relate their experiences with these words as a way of revealing meaning.

UNIT 3

Write the compound words on cards and cut between the words. Pass out the cards with the first words to the children. Hold up one card at a time from the pack with the second words and have the child who can make a compound word claim the card and use the word in a sentence.

APPLY

Distribute **BLM 46**. Before having the children independently attempt the BLM, review the *-tion* words and their meanings.

Directions:

Write the correct *-tion* word for each definition. Next to each word you write, fill in the number of syllables it has. At the bottom of the page write the two words that make each compound word. If the word is not a compound word, leave the lines blank.

BLM 46

Name _____

Science Words/Compound Words in Science

Write the correct *-tion* word for each definition. Next to each word you write, **fill in** the number of syllables it has.

constellation illustration nutrition

observation precipitation

1. healthy food: _____

2. stars in a pattern: _____

3. study: _____

4. picture: _____

5. rain: _____

Write the two words that make each compound word. If the word is not a compound word, leave the line blank.

6. seashore _____

7. hailstone _____

8. cloudburst _____

9. environment _____

10. telescope _____

11. waterfall _____

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UNIT 3

LESSON 55a

Science Words

Student Edition page 118

No BLMs

Objectives

To understand the meanings of words frequently used in science reading material
To use context to complete sentences

PREPARE

Collect a variety of science texts on topics such as weather, the solar system, rocks and minerals, biology, energy, etc. Allow the children to browse through the books before beginning this lesson.

TEACH

Write the word *science* in the center of the board. Ask the children to brainstorm words related to science. Create a web using their words and ideas. Guide children to include words from their science texts and curriculum.

Say: When we study science, we learn about the world around us. Scientists make new discoveries about animals, health, the earth, and many other things every day. You can learn about science from books like these (point to the books in the classroom). We need to know “science words” so that when we read about science, we understand what our books are telling us.

APPLY

Give each student a blank piece of paper. Assign them a science word and ask them to write the word on the back of the paper. Ask them to fold the paper in half lengthwise. On the left side of the paper, have the children write *What does it look like?* Ask them to draw a picture that illustrates the word. On the other half, have them write *What does it sound like?* Ask them to write a description of what the word sounds like. For example, *dissolve* could look like a cup of tea with a spoonful of sugar being stirred in. *Dissolve* may sound like the clinking of the spoon against the cup.

When the children are finished, collect the cards and redistribute them. Ask each student to guess which word is shown on their card. After the activity, post the cards in the classroom.

Ask the children to find and complete page 118 in their books. Read the directions aloud.

UNIT 3

LESSON 55b

Compound Science Words

Student Edition page 119

No BLMs

Objectives

To recognize compound words frequently used in science reading material
To use context to complete sentences

PREPARE

Review the definition of compound words. Remind the children that compound words are made up of smaller words that can stand alone.

Write the following words on index cards: *rain, drop, butter, fly, rain, bow, rain, fall, rain, storm, earth, worm, back, bone, sun, dial, ear, drum, day, light, earth, quake, out, let, land, slide, hail, stone, lime, stone, sand, stone, gem, stone, under, water, tube, worms, sun, light, snow, flake, snow, fall, thunder, bolt, wind, storm, in, let, sea, water, sea, weed.*

TEACH

Say: Often, the words that we read in science books are compound words. For example, we see the word *raindrop* when we study weather. We see the word *butterfly* when we learn how caterpillars turn into butterflies.

Spread the index cards out on a table. In pairs, ask the children to match the smaller words to create compound words. Review the words together.

Ask each student to choose one compound word from the index cards. Ask each student to try to find the word in one of the science books in the classroom. If the students can find their words, ask them to write a sentence using the word. If time allows, ask the students to find two more words and write sentences to correspond.

APPLY

Ask the children to find and complete page 119 in their books. Review the words at the top of the page.

UNIT 3

LESSONS 55a AND 55b**Science Words****Compound Science Words**

Student Edition pages 118–119

ASSESSMENT QUICK CHECK

Do the children understand the meaning of words frequently used in science reading material?

Do the children recognize compound words frequently used in science reading material?

Objectives

To understand the meaning of words frequently used in science reading material

To recognize compound words frequently used in science reading material

To use context to complete sentences

TEACHING POINTS

Content area words may be a source of difficulty for English language learners. They are often multisyllabic words that are difficult to understand through context. Rather than list science words out of context, which may prove difficult for the children, gather several low-level nonfiction books with science topics. Ask the children to look through them and identify words they know. Collect these words on the board. Ask the children to go through the books a second time to collect words they *don't* know. Make another list on the board. Go through both lists, asking for volunteers to tell what each word is. If the word is unfamiliar to everyone, try to obtain a picture of it, or draw a picture on the board. If you cannot, explain the word to the best of your ability.

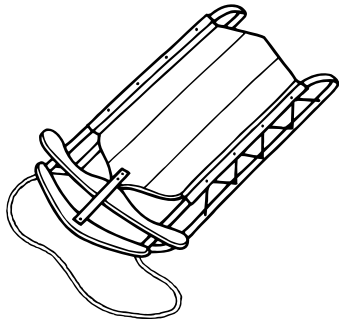
Draw attention to any compound words that come up in the children's reading. Write the compound word on another part of the board and ask for a volunteer to "split" the word into its two parts.

Have each child pick one word from the list of words they did not know and illustrate it. Post the pictures in the science classroom, if possible, or tie them together to make a book. Title the book *Science Words*.

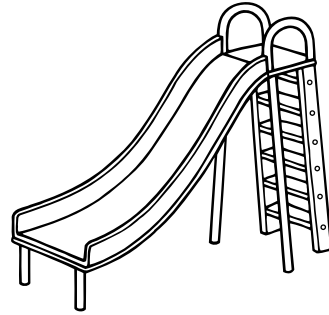
PICTURE GLOSSARY WORDS

smoke

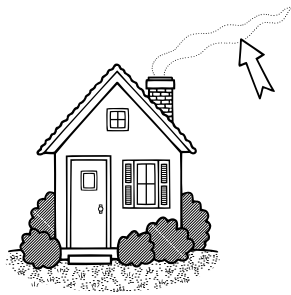
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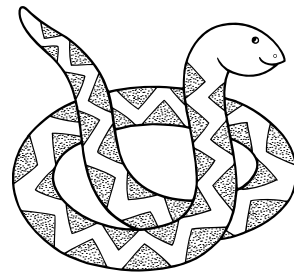
sled



slide



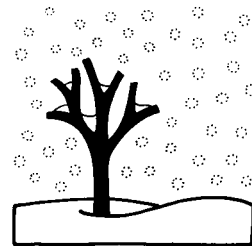
smoke



snake



sneeze



snow