

gram
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chron
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phon(e)
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scope
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Connections to THINKING

Read the spelling words and sentences.

THE PERSON NAMED IN THE PE		
1. microscopic	microscopic	Scientists study microscopic bacteria.
2. telescope	telescope	We looked at stars through the telescope.
3. chronology	chronology	What was the chronology of the events?
4. diagram	diagram	I drew a diagram of the machine.
5. microphone	microphone	The mayor spoke into the microphone.
6. stethoscope	stethoscope	A nurse brought a stethoscope with him.
7. headphones	headphones	She listens with the headphones on.
8. telegram	telegram	Can you still send a telegram to someone?
9. chronic	chronic	She has a chronic need to tell jokes.
10. anagram	anagram	I can make an anagram with this word.
11. symphonic	symphonic	I enjoyed the symphonic performance.
12. grammatical	grammatical	Please correct any grammatical mistakes.
13. synchronize	synchronize	I synchronize my watch with the clock.
14. telephone	telephone	Did you get your telephone messages yet?
15. periscope	periscope	A tube and mirrors can make a periscope.
16. chronicle	chronicle	His diary is a chronicle of his life.
17. megaphone	megaphone	The coach yelled into a megaphone.
18. earphones	earphones	I cannot find the earphones for my radio.
19. microscope	microscope	The science lab needs a new microscope.
20. saxophone	saxophone	I practice my saxophone every day.

Think & Sort the spelling words.

- 1-4. Write the words that contain gram, from the Greek "letter."
- 5-8. Write the words that contain chron, from the Greek "time."
- 9-15. Write the words that contain phon(e), from the Greek "sound."
- 16-20. Write the words that contain scope, from the Greek "see."

Remember

The Greek word parts **gram**, **chron**, **phon(e)**, and **scope** combine with other word parts to form new words.





Connections to VOCABULARY

(Unit **26**

Word Meanings

Write spelling words to complete the sent	tences.
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- 1. What is the of events that led to World War I?
- 2. At the health fair, I used a _____ to listen to my heart.
- 3. My brother plays the ____ in a jazz band.
- 4. "Between you and I" is an example of a ____ error.
- **5.** The crew on the submarine used the _____ to scan the ocean surface from below the water.
- **6.** We looked through the _____ to see the tiny organisms swimming in the pond water.
- 7. The word **stop** is an ____ of **tops**.
- 8. In the past, a quick way to send a printed message was by
- 9. Things that are too tiny to see with the naked eye are _____.
- **10.** If you look through this _____, you can see the craters on the moon.
- **11–12.** When you listen to the radio, you can use ____ or ___ so you do not disturb others.
 - 13. I heard the ____ ringing, so I answered it.
 - **14.** The cheerleader yelled into the cone-shaped _____ so that the crowd could hear her.
 - **15.** The singer's ____ was not turned on, and the audience in the back row could not hear the song.
 - **16.** The choreographer will _____ the dance movements with the music.
 - 17. Many of Beethoven's musical works are _____.

Use the Thesaurus

Write a spelling word that is a synonym for each word below. Use the **Writing Thesaurus** if you need help.

- 18. habitual
- 19. chart
- 20. record

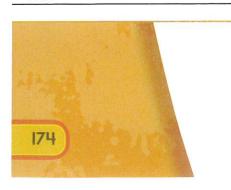
Word Mea	nings
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Use the T	hesaurus
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1. 2. 3. 5. 6. 7. 8. 9. 10. 11. **Use Context Clues** 12. 13. 14. 15. 16. 17. 18. 19. 20.



Connections to READING

microscopic telescope chronology microphone diagram stethoscope headphones telegram chronic anagram symphonic grammatical synchronize telephone periscope chronicle microscope megaphone earphones saxophone

Replace the Phrases

Write the spelling word that best replaces each underlined phrase.

- 1. A Sequence of Events of the History of Tools
- 2. 1590: Invention of the instrument for viewing tiny objects.
- 3. It gives an enlarged view of very tiny objects.
- **4.** 1668: Isaac Newton proposes design for the <u>instrument for</u> viewing faraway objects.
- **5.** 1816: R. T. H. Laënnec constructs the <u>instrument for listening to</u> sounds within the body.
- 6. 1844: First message sent by telegraph sent in Morse code.
- 7. 1846: Adolphe Sax patents the single-reed wind instrument.
- 8. 1854: E. H. Marie-Davy invents the first submarine sight tube.
- **9.** 1876: Invention of the <u>instrument that converts sound into</u> electric current.
- **10.** 1876: First successful use of the <u>instrument that transmits spoken</u> words over a distance.
- 11. 1912: First attempts to operate together sound on disks and action on film.

Use Context Clues

Write spelling words from the box to complete the paragraph.

Sarah, our foreign exchange student from Poland, uses <u>12.</u> or <u>13.</u> to listen to English recordings at school. Her English has improved tremendously. She never makes <u>14.</u> mistakes. She even uses the <u>15.</u> at soccer games and helps the pep squad. Sarah loves music. She wants to conduct <u>16.</u> music someday. Sarah is also a <u>17.</u> puzzle maker who is always rearranging the letters in words. For example, she told me that **Chopin's** is almost an <u>18.</u> for **phonics**. She is writing a <u>19.</u> of her visit. She even drew a <u>20.</u> of our neighborhood to show to her family back in Warsaw.

symphonic anagram earphones diagram megaphone headphones chronicle chronic grammatical

Connections to WRITING

Proofread an Outline

Proofread the outline below for ten misspelled words. Then rewrite it. Write the spelling words correctly and make the corrections indicated by the proofreading marks.

A Chronical of the Telaphone [Note to myself: be careful of gramatical errors when writing this essay.]

- I. Brief description [Note to myself: include a diogram o]
 - A. Handsets
 - 1. Speech converted to electrical signals by micraphone
 - 2. Signals converted back into sound through earphoans
- II. history and Development
 - A. Early telecommunications cronology
 - 1. Telegraph invented, 1837; first Morse code tellegram, 1844
 - B. Modern advances
 - 1. Digital phone lines and modems; the internet
 - 2. Accessories (headfones, rechargers, hands-free devices)
 - 3. New technologies syncranize transmission of sound data

Proofreading Marks

- Make Uppercase
- Make Lowercase
- Add
- Delete
- Add a Period
- Indent

Informative/Explanatory Writing

Write an Outline

Research a communications device named in the spelling word list. Write an outline of your findings.

- Divide your outline into major topics, subtopics, and details.
- Use as many spelling words as you can.
- Proofread for capitalization and spelling.
- Circle three words you are unsure about. Check their spelling in a print or online dictionary.

Transfer

Select one of the Greek forms from the unit and brainstorm words with that root; for example, chronic, chronicle, chronology, chronological, synchronize, synchronicity. Write the words in your Spelling Journal.



Word Building 2. 3. 5. 6. 7. 8. 9. 10. 11. Meaning Mastery 12. 13. 14. 15. 16. 17. 18. 19.

Word Study

grammar saxophone earphones phonics phonetic microscopic telescopic symphonious headphones diagram
cacophony
anagram
stethoscope
chronological
periscope
grammatical
anachronism
megaphone

telephone gramophone gyroscope microscope parallelogram polyphonic chronology telescope epigram

chronic
microphone
kaleidoscope
symphonic
telegram
cardiogram
chronicle
synchronize
synchronization

Word Building

Combine the roots and form a spelling word.

- 1. phon(e) meaning "sound" and kakos meaning "bad"
- 2-3. tele meaning "far" and scope meaning "see"
- 4-5. scope meaning "see" and micro meaning "small"
 - 6. phon(e) meaning "sound" and megas meaning "great"
 - 7. phon(e) meaning "sound" and poly meaning "many"
 - 8. scope meaning "see" and peri meaning "around"
 - 9. gram meaning "letter" and epi meaning "upon"
- 10-11. sym meaning "together" and phon(e) meaning "sound"

Meaning Mastery

Write the word from the box that best completes each sentence.
12. The word purse is a(n) of the word super.
13. She has bronchitis. She is always coughing.
14. The clarinet and are woodwind instruments.
15. A doctor uses a(n) to hear our heartbeat.
16. A square, rectangle, rhombus, and are all quadrilaterals.
17. "He don't like potato chips" is an example of poor
18. Practicing, or letter sounds, is a first step toward literacy.
19. Saying that computers existed before typewriters is a(n)
20. A(n) has mirrors and bits of colored glass.

20.

Math Word Hunt

Read the paragraphs below. Look for words with the Greek form **gram, chron,** phon(e), or scope.

People usually think of numbers and formulas when they think of mathematics, but our everyday lives are full of math. Look around you. The things you see are a chronology of inventions based on math. Certainly adding, subtracting, multiplying, and dividing are useful operations, but math is also spatial. This means it's concerned with size, shape, and distance. The periscope on a submarine is based on simple principles of math. Similarly, astronomers are able to see far into the universe with the telescope, and scientists can see unbelievably tiny things with microscopes. All of these devices use angles.

Math also helps us understand how things move. Sound moves across a room in a curvy pattern like ocean waves, not in a straight line. Our study of math in the physical world of sound, light, and motion—generally referred to as *physics*—has helped us invent countless things. Before the microphone was invented, for example, people had to shout or sing very loudly to be heard by an audience. Finally, someone figured out how to "aim" sound waves in the same way that we cup our hands around our mouth when shouting. The result was the megaphone, but it didn't stop there. Your doctor uses a stethoscope to focus the waves of sound from your heart to make it louder.

When people began to understand the math that made it possible to generate waves of electricity and send it through wires, we soon sent messages by telegram. Before long we had the telephone, the electric light, and even the mp3 player with tiny earphones. None of these would have been possible without math!

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- 3.
 - 4.
- 5.
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- 9.
- 10.



- 1. Write one word with the Greek form gram.
- 2. Write one word with the Greek form chron.
- 3-6. Write four words with the Greek form phon(e).
- 7-10. Write four words with the Greek form scope.

