



Guided Reading with

Simple Machines

Guided Reading Level: K
DRA Level: 20

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Overview: Look inside this book to learn about the six kinds of simple machines. .

About the Book

Page number: 16, Word Count: 247

Genre: Nonfiction

Focus:

Concepts of Print and Reading Strategies:

- blend letter sounds to read phonetically regular words, including content-specific vocabulary, relying on a wider variety of spelling patterns
- look at each part or syllable of a word to read it
- use context to confirm decoding of unknown words
- use known words as markers (high frequency or previously decoded)
- use background and vocabulary knowledge to understand words read

- read varied sentences fluently, with expression and stamina
- attend to commas and end punctuation to guide phrasing and support comprehension
- use text to visualize concepts presented
- refer to text evidence when discussing the book

Supportive Text Features:

- some details supported by illustrations
- most vocabulary is familiar, with some content-specific language
- varied sentence lengths and formats

Phonics:

- different sounds of ch (e.g., /ch/as in

each, chain, /sh/ as in machines, /k/ as in school, not in the text)

- spelling pattern -dge (e.g., edge, wedge)
- syllabication of multisyllable words with various syllable types, especially:
- Consonant-le syllable type (e.g., simple, people, axle, bicycle, possible)
- Words ending in -ate (e.g., separate, operate, rotate)

Common Core Standards:

- RF.2.3, RF.2.4
- RI.2.1, RI.2.2, RI.2.3, RI.2.4, RI.2.6, RI.2.7, RI.2.8

ELL/ESL: *La máquinas sencillas*

See last page

Getting Ready to Read

1. Introduce the concept and vocabulary by asking open-ended questions:

- What are machines? Give an example of a job made easier by a machine.
- What does "simple" mean? What might "simple machines" be?

2. Connect children's past experiences with the story and vocabulary:

- Hold the book. Call children's attention to the title. Read: "*Simple Machines.*"
- Ask children to use the title and picture on the cover to predict what the book will be about.
- Show the back cover and read the copy. Have children predict what some of the simple machines



discussed in the book will be. Talk about the photo on the back cover.

- Have children suggest some words they might read in the book.
- Give children the book and have them look at the pictures. Ask them to notice what each one shows. You might choose to introduce some content-specific vocabulary.

3. Remind children of the strategies they know and can use with unfamiliar words:

- Ask them, "What will you do if you come to a word you don't know?"
- Encourage children to look for chunks of words they know, or to blend the sounds from left to right, or syllable by syllable.
- If they stop to tackle a challenging word, remind them to re-read the sentence afterwards and think about the information shared.

4. Be aware of the following text features:

- The book contains a wide variety of high frequency words. You might introduce or review several of the words using an orthographic mapping routine and/or review a set of words with similar spellings or sounds.
- Content-specific and other useful vocabulary words and phrases include: simple machines, tools, easier, push, pull, lift, types, inclined plane, "wheel and axle," lever, pulley, screw, wedge, ramp, object, surface, escalator, circular, windmill, separate, effort, force, seesaw, hammer, groove, chain, rotates, flagpole, "window shade," operate, wrapped, cylinder, slanting, sharp, edge, ax, doorstep
- This informational text introduces the concept of simple machines and the six

types. Then each page spread explains one type of machine and gives examples. The conceptual and vocabulary demands are high; expect to offer students extra support.

Guided Reading Note: Level K is the benchmark for the middle of the second grade. Children reading at this level are moving into a fluent stage, and the focus emphasizes comprehension and independent reading. Most of the reading should be done silently. Children are also encouraged to: 1) independently apply their reading skills and strategies, 2) make connections between their own experiences and the story, and 3) "get" the author's message and be able to discuss it with other readers. Most importantly, children should feel confident and eager to read. This is a time to build fluency and independence as children read a variety of genres and develop a sense of reading for different purposes. Students are also likely still refining their grasp of phonics patterns. Support their growing knowledge explicitly and discourage guessing at words.

Reading the Book

1. Set a purpose by telling children to read the book to find out about the six types of simple machines. Encourage them to go slowly to make sure they understand the information presented.

2. Have children read the book silently. Each child should be reading at his or her own pace. Listen to children as they read by leaning close or bending down beside each child. After the group has read a few pages, check for understanding with simple questions, such as: "What is the book about?" or "Tell me how the book begins." Then direct children to continue reading. As they read, watch for indications of



comprehension: changes in facial expression, giggles, audible comments, rereading, turning back a page. You may want to make notations about what you observe.

3. Look for these reading behaviors during the first reading:

- Do they rely on the print while reading?
- Do they have a strong sight vocabulary?
- Do they use known sound chunks to read unknown words? Do they sound out letter by letter of an unknown word if they need to?
- Are they monitoring meaning and rereading when they lose meaning?
- Do they easily move from page to page? Are they reading fluently?
- Are they using punctuation and any text features to gain meaning?
- Do they make accurate predictions?
- Are they connecting the text to their own experiences?
- Do they react to the text even though they are reading silently? Do they laugh? smile? frown?
- Are they drawing conclusions and making inferences?

4. As children read, note what they are doing. Help them build independence by being available, but not intervening too quickly.

- Watch for changes in children's facial expressions and use these signals to ask questions, such as: "What made you smile?" or "Where do you need some help?"
- Encourage children's attempts by making comments, such as: "I like how you are using a different strategy when the first one you tried didn't work."
- If children are struggling with deciding which

strategy to use, suggest a specific strategy that would help them get meaning in the most efficient way, such as, "Did you think about chunking the word?" or "Did you try sounding out letter by letter of the word?"

5. Possible teaching points to address based on your observations:

- Call attention to all the high-frequency words children have learned and used.
- Review how to find a known part or sound chunk in an unknown word.
- Show children how to use analogies to move from the known to the unknown when encountering new words.
- Work with suffixes and prefixes.
- Review using grammar (syntax) to unlock words by considering the sentence structure or parts of speech in the sentence.
- Explore the concepts presented by asking students to visualize or explain in their own words.
- Review how to determine what is important in a picture or sentence.
- Model asking questions or making "I wonder..." statements to extend comprehension.
- Review using punctuation marks to guide the meaning-making process. Discuss the use of question marks, exclamation points, and commas as clues to reading with a particular kind of expression or inflection.
- Call attention to the sequence of information presented in the text.
- Model how to revisit the text to find specific examples or ideas in the text.



After the First Reading

1. Have children confirm their predictions and talk about the six types of simple machines introduced in the book.

2. Ask questions like:

- According to the book, what are simple machines? How do they help people?
- What are the six types of simple machines?
- How does an inclined plane work? What's an example of one from the book? Can you think of another example of an inclined plane you've seen?
- How does a wheel and axle work? What's an example of one from the book? Can you think of another example of a wheel and axle you've seen?
- How does an inclined plane work? What's an example of one from the book? Can you think of another example of an inclined plane you've seen?
- How does a lever work? What does the text mean, "makes it possible to lift, separate, or move objects with less effort and force?" How is a hammer a lever? Can you use the photo to help understand?
- How does a pulley work? What's an example of one from the book? Can you think of another example of a pulley you've seen?
- How does a screw work? What does the book mean, "an inclined plane wrapped around a cylinder?" What's an example of a screw from the book? Can you think of another example of a screw you've seen?
- How does a wedge work? What does the sharp edge do? What's an example of a wedge from the book? Can you think of another example of a wedge you've seen?

- What do all the types of simple machines have in common? Why do you think some other machines (e.g., perhaps those mentioned by students in the opening discussion) are not considered simple machines?
- Why do you think the authors wanted to share this information with readers?
- Can you find examples of each machine in action at your school or neighborhood?
- Share how one simple machine has helped you.
- What would our lives be like if one of these simple machines, like the wheel and axle, didn't exist?

Second Reading

1. Have children reread the book silently or to a partner.

2. This is a time for assessment. Keeping notes on children's progress during a guided reading session will be a helpful resource for giving children on-going feedback about themselves as readers as well as helping you record how they develop over time.

- While they are reading, watch what children do and what they use from the teaching time.
- You might also take a running record on one child as an assessment of the child's reading behavior.
- You might also listen in on each individual reader, observing as children use appropriate or inappropriate strategies. This information will be valuable for any additional strategy discussions after the second reading.



Cross-Curricular Activities

Language: Have students summarize the information in the book by creating a chart together with the six types of simple machines, definitions, and examples.

Divide students into pairs and have each pair create a poster about one type of simple machine with an explanation and examples.

Have students choose one type of simple machine and create a comic strip about how that machine helps someone complete a task. (E.g., Someone can't lift something to a 2nd floor window, and then decides to use a pulley.)

Discuss the three different sounds of ch (e.g., /ch/as in each, chain, /sh/ as in machines, /k/ as in school, not in the text). Practice reading and spelling ch words from the book and others. Sort them by the sound of ch.

Discuss the spelling pattern -dge (e.g., edge, wedge). Talk about how -dge is typically used for the /j/ sound after a short vowel at the end of a one-syllable word (e.g., fudge, lodge, bridge) or at the end of a syllable with a short vowel (e.g., hedgehog)

Work together to divide words from the book into syllables to read them. Talk about different syllable types. You might focus especially on the consonant-le syllable type (e.g., simple, people, axle, bicycle, possible) or words ending in -ate (e.g., separate, operate, rotate.)

Science: Show students additional photos or real simple machines. Have them sort the photos/objects by type of machine and describe how they work.

Go on a simple machine hunt at school. Either give

students a list of items to find, or give them a blank chart with the six types of machines and see what they discover. Or, have students take photos or video clips of the simple machines they find and create a collage or compilation.

Set up hands-on experiences for students to use or create some of the types of simple machines explained in the book. For instance, use rope and a bucket to create a pulley over a tree branch on the playground. Create an inclined plane for toy cars or marbles, let students explore using screws and screwdrivers with scrap wood or by taking apart unwanted small items, or use wedge-shaped tools to cut clay or play dough.

Check out the video "Simple Machines" from IdahoPTV's Science Trek series on PBS showing examples of the six simple machines and how they make work easier: <https://ca.pbslearningmedia.org/resource/idptv11.sci.phys.maf.d4ksim/simple-machines/>.

Social Studies: Have students create interview questions for someone who works in a profession that requires various tools, such as a carpenter, warehouse employee or delivery person. If possible, interview that person about how they use simple machines at work.

Art: Have students create abstract paintings using paint tools with wheels and axles – e.g., a LEGO tire on an axle driven through a puddle of paint.

Physical Education: Explore simple machines that can move students' bodies, such as see-saws, wheeled toys, and slides. Set up a simple machine obstacle course for students. Take a video of a child completing the obstacle course and have students create a voice-over explaining how each simple machine helped the child complete the course.



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Noun Support

The following are the machines that are described in the story:
un plano inclinado, una rueda y un eje, una palanca, un polea, un tornillo, una cuña

The following are examples of each of the machines that are described in the story: resbaladera del patio de recreo, una escalera mecánica, una Bicicleta, un molino, un balancín, un martillo, el asta de una bandera, las persianas de la Ventana, una bombilla, las tapas de los frascos, una hacha, un tope de Puerta

Encourage students to write or share a sentence that describes an example of one of the machines that are described in the story. Students can use the example page for inspiration.

Print the names of the machines on individual index word cards. Cover the text from the story and have students match the nouns/items with their corresponding illustration.

Verb and Adjective Support

The following verbs are used to describe each of the machines: más, mover, empujue, jale, levante, gire, permite, separara, mover, fuerza, esfuerzo, mantiene, inclinado,

The following adjectives are used to describe each of the machines: alto, bajo, circular, cilindro, metal, madera, unidas, filoso, corta, separadas

Have students identify the sentences in the story that used these verbs to describe the machines.

Encourage students to write or share a sentence with a partner that describes the machines that they use in their day to day.

For students engaging with both English and Spanish texts, have students note that there is a question statement used in the story. In Spanish, the question marks come before the sentence in an upside-down orientation and after the sentence in the opposite orientation.

The book language used may differ from children’s oral language. Comparing any differences will help children read and understand the story. Also help children understand that we often speak differently than we write, and that both ways of using language are important.

Guided Reading Guided reading levels were assigned by literacy experts and certified Reading Recovery® teachers using the guidelines identified in Guided Reading and Matching Books to Readers by Irene C. Fountas and Gay Su Pinnell.

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