Unit 5
Wombats

Notes

- Wombats are marsupials, like kangaroos and koalas. A wombat's pouch faces backwards. Wombats are born the size of a jelly bean (2 cm). They stay in their mother's pouch for 6-7 months. Adult wombats are 1 meter long and weigh 20-35 kilograms (44-77 pounds).
- Wombats are native to Australia. Most of them are protected species. The two main types of wombats are the common wombat, or bare-nosed wombat, and the hairy-nosed wombat. A group of wombats is called a "wisdom."
- Wombats are mostly nocturnal. They live in forests, mountains, and heathlands and they eat grass, shrubs, roots, and tree bark for several hours each night. Their slow digestive systems are extremely efficient compared to other animals, which enables them to require less food overall and to survive droughts better.
- Wombats' tough rumps are their best defenses: they are made of cartilage, so they are difficult for predators to bite into, and their tails are too short for an enemy to hold onto. This is why blocking their tunnel with their rump is so effective. A wombat may also allow the enemy to force its head over the wombat's back, and then use its powerful rump to crush the enemy's skull against the ceiling of the tunnel! Wombats' main predators are dingoes and Tasmanian devils. Wombats don't often attack, but when they do, their teeth and claws can deliver deep cuts.
- Wombats can use their powerful front teeth and claws to chew or dig through nearly anything except solid rock. They are quite intelligent, but very stubborn. They are known for choosing to dig or chew through obstacles instead of simply going around them.

Pre-Reading

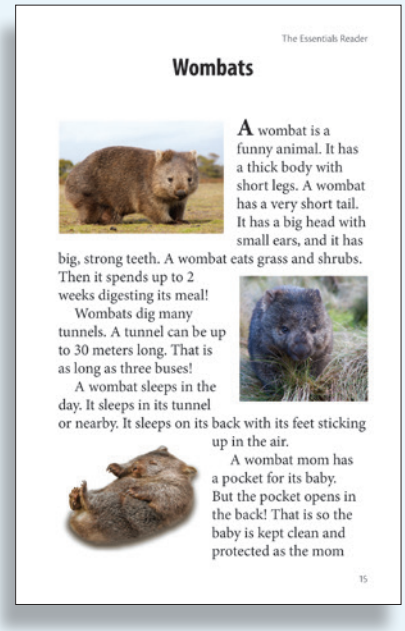
- Read the title. Look at the pictures. What do you think a wombat is?
- Discuss the difference between fiction and nonfiction. Will this text be fiction or nonfiction?

- **Pre-Reading 5 – page 21** Practice reading each word. Ask the students to underline the multi-letter phonograms and mark where the syllables divide.

wombat	wom bat	away	ā way
animal	an i mal	meters	mē ters[2]
ears	ears[2]	seconds	sec onds[2]
digesting	dī gest ing[2]	Olympic	Ō lym pic
tunnels	tun nels[2]	sprinter	sprin ter
protected	prō tec ted	brutal	brū tal
enemy	en em y[4]	remember	rē mem ber

Post-Reading

- **Comprehend:** What is a wombat?
- **Comprehend:** Why do wombats dig tunnels?
- **Apply:** A marsupial is an animal with a pouch. Is a wombat a marsupial?
- **Apply:** All the other marsupials have a pouch that opens from the top. Why do wombats' pouches face the opposite direction?
- **Understand, Apply:** Explain to the students that an adaptation is a way that an animal species changed to become better suited to its environment. What adaptations help wombats to survive? (sharp claws, speed, backwards pouches, tough rumps, nocturnal so they can sleep during the day and avoid predators…)
- **Summarize, Note Taking:** Re-read the text. Takes notes about habitat, behavior, and interesting facts using **Notes 5 – page 22**.


The Essentials Reader

Wombats

A wombat is a funny animal. It has a thick body with short legs. A wombat has a very short tail. It has a big head with small ears, and it has big, strong teeth. A wombat eats grass and shrubs. Then it spends up to 2 weeks digesting its meal!

Wombats dig many tunnels. A tunnel can be up to 30 meters long. That is as long as three buses!

A wombat sleeps in the day. It sleeps in its tunnel or nearby. It sleeps on its back with its feet sticking up in the air.

A wombat mom has a pocket for its baby. But the pocket opens in the back! That is so the baby is kept clean and protected as the mom

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Handwriting & Composition

- Practice handwriting with **Cursive 5 – page 23** or **Manuscript 5 – page 24**.
- Ask students to retell what they learned about wombats orally.
- **Key Words, Main Ideas & Summarizing:** Ask the students to read the first sentence of *Wombats* and then pick up to three key words from the first sentence. The students should then write the key words on line one of **Key Words 5 – page 25**. For example for the first sentence, "A wombat is a funny animal," students might write: funny, animal. Continue with sentence two, and so forth. Once the students have chosen key words for each sentence, ask the students to put away the original text. Using the key word outline as notes, ask the students to form a sentence for each group of three words and retell the text aloud. Advanced students may want to write a composition using the key words. Advanced students may also opt to replace some key words with synonyms.

Extension & Cross-Curricular Activities

- Locate Australia on a map. Research the areas in Australia where wombats live. Describe the ecosystem.
- Draw a wombat. Label the major adaptations that help a wombat to survive.
- Research wombats further using books and the internet. A good starting place is: http://www.wombania.com/wombats/. This website also includes fun videos about wombats.
- Learn about endangered species. Discover the reasons that wombats are endangered. Create a plan to help protect wombats.
- Create a display board about wombats.
- Learn the definition of marsupial. Learn about other marsupials.
- Measure out 100 meters. Time how long it takes the student to run 100 meters. Compare it to how long it takes a wombat to run 100 meters. Compare how long it takes a wombat to run 100 meters to the current world records for men and women in the 100 meter dash.

Unit 13

The Toothpick Fighters

Notes

again – This is a say-to-spell word. The students will likely read it as /ā gān/. The first sound is an unstressed schwa sound. In some dialects of English, /ə gān/ is the normal pronunciation. In other dialects, the standard pronunciation is /ə gĕn/, which is the only word where AI says /ĕ/.

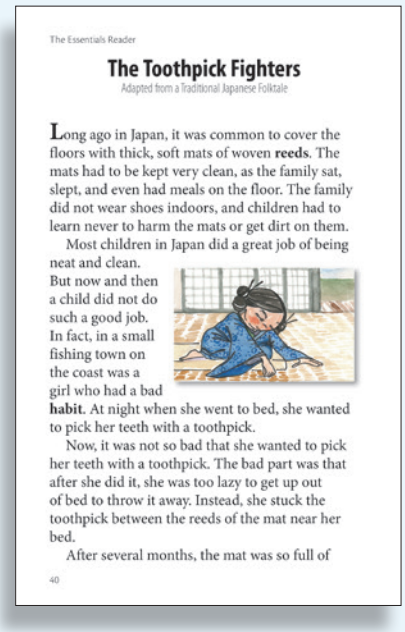
very – The E and R are working as separate phonograms, not as the multi-letter phonogram ER. The E says its short sound, /ĕ/.

Pre-Reading

- Find Japan on a map. Introduce the text as a folktale from Japan. Discuss how folktales are traditional tales from a particular culture. These tales were usually passed on by word of mouth. Many folktales, including this one, are used to teach children a lesson.
- Show students a woven mat. Discuss how a mat is woven with reeds. Let the students touch the mat and even try to stick toothpicks in it. How are the toothpicks similar to the woven mat? How are they different? Talk about what woven mats are used for in your culture. Explain that in Japan it is common to cover the floor with woven mats. Look at pictures online of Japanese Tatami floor mats.
- **Pre-Reading 13 – page 79** Practice reading each word. Ask the students to underline the multi-letter phonograms and mark where the syllables divide.

very	vĕr y[4]	clamor	clam or
family	fam i ly[4]	swords	swords[2]
lazy	lā zy[4]	enough	ē nough[5]
several	sev er al	laugh	laugh[2]
every	ev er y[4]	sorry	sor ry[4]
disgusting	dis gust ing	tormented	tor ment ed
soundly	sound ly[4]		

Post-Reading


The Essentials Reader

The Toothpick Fighters

Adapted from a Traditional Japanese Folktale

Long ago in Japan, it was common to cover the floors with thick, soft mats of woven **reeds**. The mats had to be kept very clean, as the family sat, slept, and even had meals on the floor. The family did not wear shoes indoors, and children had to learn never to harm the mats or get dirt on them.

Most children in Japan did a great job of being neat and clean. But now and then a child did not do such a good job. In fact, in a small fishing town on the coast was a girl who had a bad **habit**. At night when she went to bed, she wanted to pick her teeth with a toothpick.

Now, it was not so bad that she wanted to pick her teeth with a toothpick. The bad part was that after she did it, she was too lazy to get up out of bed to throw it away. Instead, she stuck the toothpick between the reeds of the mat near her bed.

After several months, the mat was so full of

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- **Recall, Compare & Contrast, Analyze, Infer, Fact Check:** What is on the floor in Japanese homes in the story? Do you have mats on your floors? Do you sleep on them? Do people in the story wear shoes indoors? Why not? Do you wear shoes in your home?
- **Understand, Explain:** According to the story, how was this girl different from most Japanese children? How did the toothpicks get into the mat?
- **Analyze:** In a story, the main character often changes somehow by experiencing a problem. Who is the main character? How does she change throughout the story? Why? What lesson does she learn?
- **Apply, Evaluate:** What lesson does this story teach? What value in Japanese culture does it demonstrate?
- **Vocabulary:** Have students choose three words that are new to them and look up the definitions in the dictionary. Students should write the word and definition on one side of an index card, and just the word, or the word with an illustration, on the other side of the index card.
- **Compare & Contrast:** Using the Venn diagram on **Venn Diagram 13 – page 80** compare and contrast the Japanese home in the story with your home.

Handwriting & Composition

- Practice handwriting with **Cursive 13 – page 81** or **Manuscript 13 – page 82**.
- Make up a story about how tiny people might use things that get left around your home. This story may be told orally or written, depending upon the ability and confidence level of the student.
- **Challenge:** Using LEGO® people and toothpicks, reenact the story. Take pictures. Combine the pictures into a book. Write a sentence describing what is happening in each scene.
- **Elements of a Folktale, Outline, Analyze, & Summarize:** Ask the students to identify the characters and setting and write them on **Elements of a Folktale – page 83**. Explain that sometimes stories are written around a small problem that keeps growing bigger and bigger until there is a solution. What is the first, small problem in this story? (The girl doesn't clean up her toothpicks.) How does this problem grow? (Small men appear and frighten her.) How does this problem grow? (She cannot sleep and becomes sick.) What brings an end to problem? (She tells her father, who frightens the men away. The girl cleans her room.) What is the lesson? (Cleanliness is important for a restful, peaceful life.) Ask the students to summarize *The Toothpick Fighters* orally or in writing, using their notes.

Extension & Cross-Curricular Activities

- Read other books about Japan.
- Research Japanese Tatami and Goza mats online. Look at pictures. Research rules of etiquette in Tatami rooms. Pretend you want to purchase a mat as a gift. Which one would you choose and why?
- Watch a travel documentary about visiting Japan.
- Research toothpicks around the world. You might be surprised about what you can learn!
- Read another folktale or listen an audio recording of one. Compare and contrast it with *The Toothpick Fighters*.
- Have students research folktales from around the world. Ask each student to bring a copy of a folktale and an illustration that goes with it in order to create a classroom book of folktales.
- **Challenge:** Have students design a travel brochure for going to Japan. The brochure should include images as well as descriptive language. This is a good opportunity to discuss the different purposes of writing.
- Have students research major historical events from Japan. Then have the class create a timeline to include the events.

Unit 15
Geothermal Energy

Notes

This text is a science text which includes concepts that are likely unfamiliar to the student. Encourage students to read, re-read, and possibly jot down notes as they read. Discuss how academic reading sometimes takes repetition to fully understand the text. In this text the illustrations may provide the student with valuable information to further understand the text. Students may need to study the diagrams a bit before fully understanding the concepts.

Metric Measurements: The metric equivalents of the measurements in this text are:
12,600°F = 7000°C (temperature at the center of the Earth),
700°F = 371°C (high temperature of geothermal water underground),
55°F = 12.8°C (temperature of the ground about six meters or 20 feet deep).

Pre-Reading

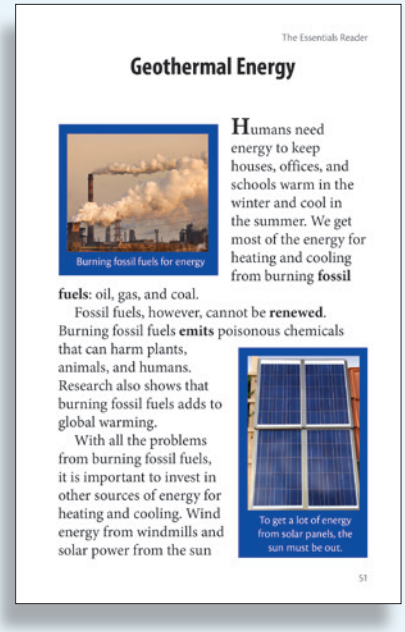
- Brainstorm ideas about how houses and other buildings are kept warm (and cool) today. Lead the students in a discussion about how a furnace needs to burn fuel (or an air conditioner uses electricity). Discuss how electricity is made. (Burning coal, solar panels, windmills, etc.) Draw a diagram as you discuss this to help the students see how heating (and cooling) trace back to other sources of energy.
- Ask the students to read the title. What do you think this text is about? (energy) Look at the word *geothermal* on **Morphemes – page 93**. Do you recognize parts of this word in other words? (geo, therm) What other words include *geo*? *Geo* is in geography, geology, geometry, geocache. What do you think *geo* means? (earth) Write *earth* on the line under *geo*. What other words include *therm*? *Therm* is in thermos, thermostat, thermometer, thermal. What do you think *therm* means? (heat) Write *heat* on the line under *therm*. What do you think geothermal means? (heat from the earth) Can you think of any places heat escapes from the earth? (volcanoes, geyser) Only discuss examples the student brings up.
- Explain that sometimes when reading a text that is about a new topic, it is helpful to pre-read the headings, look at the pictures, and read the captions to try to understand a bit more about what the text will be about. Ask the students to read the headings and captions and look at the images and then ask, "What do you think you will learn about in this text?"

- **Pre-Reading 15 – page 94** Practice reading each word. Ask the students to underline the multi-letter phonograms and mark where the syllables divide.

geothermal	^{2}gē ō ther mal	continuous	con tin ū ^{4}ous
energy	en er $^{2\,4}$gy	supply	sup plȳ
offices	of fi ^{2}ces ^{2}	absorbs	ab ^{2}sorbs ^{2}
fossil fuels	fos sil fū ^{2}els	process	^{2}proc ess
poisonous	poi ^{2}son ^{4}ous	system	sȳs tem
chemicals	^{2}chem i ^{2}cals	costly	cost ^{4}ly
sources	^{2}sour ^{2}ces ^{2}	develop	dē vel op

Post-Reading

- **Vocabulary :** Ask the student to choose one word from the text that is new to the student. Using the steps in **New Term Discovery – page 95**, guide the student in discovering the meaning. First write the term in the top box. Does the word have any prefixes, suffixes, or morphemes that you recognize? If so, highlight them. Write the morphemes that you think are in the word in the "Morphemes" box. What do you think each morpheme means? Write the sentence in which the term is used in the "Context" box. Read the sentence before and after. Do they provide hints to the meaning of the term? Do the illustrations provide hints about the definition? Write them in the "Illustration hints" box. Using these clues, what do you think the term means? Write it in the gray box "I think it means." Look up the word in the dictionary. Write the dictionary definition. Were you right? Use the term in a sentence.


The Essentials Reader

Geothermal Energy

Burning fossil fuels for energy

Humans need energy to keep houses, offices, and schools warm in the winter and cool in the summer. We get most of the energy for heating and cooling from burning **fossil fuels**: oil, gas, and coal.

Fossil fuels, however, cannot be **renewed**. Burning fossil fuels **emits** poisonous chemicals that can harm plants, animals, and humans. Research also shows that burning fossil fuels adds to global warming.

With all the problems from burning fossil fuels, it is important to invest in other sources of energy for heating and cooling. Wind energy from windmills and solar power from the sun

To get a lot of energy from solar panels, the sun must be out.

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- **Vocabulary & Identify:** Find the words *fossil fuels*. Find the definition in the text.
- **Vocabulary:** Find the word *renewed*. Highlight the prefix, root, and suffix in different colors. What is the root? (new) What does *re-* mean? (do it again) What does *-ed* mean? (past tense) Based upon the parts of the word, what does *renewed* mean? (made new again)
- **Vocabulary & Inferencing:** Find the word *emits*. From the context, what does *emits* probably mean?
- **Vocabulary & Inferencing:** Find the word *retains*. Try to guess the meaning of *retains*. If you cannot guess it, look it up in a dictionary. Find the word *obtained*. How is this word related to *retains*?
- **Vocabulary:** Find the word *groundwater*. What two words make up *groundwater*? (ground, water) Based upon the two words, what do you think groundwater is?

- **Vocabulary & Inferencing:** Find the words *geothermal water*. Based upon what you know about the words *geothermal* and *water*, using the context, tell me, what is geothermal water?
- **Vocabulary:** Find the word *duct*. From the context, what is a duct?
- **Vocabulary & Explaining:** Find the words *geothermal heat pump*. From the context and images, what is a geothermal heat pump?
- **Vocabulary & Inferencing:** Find the word *absorbs*. From the context, what does *absorbs* mean? If you still do not know, look it up in a dictionary.
- **Vocabulary & Explaining:** Find the words *ground loop system*. What is the ground? What is a loop? What is a system? What is a ground loop system?
- **Recall:** List three things you learned from this passage.
- **Analyze, Evaluate, Compare & Contrast:** What are the advantages of geothermal energy? What are the disadvantages? What are fossil fuels, and what are their disadvantages? How is geothermal energy similar to or different from other forms of renewable energy?
- **Critique:** Do you think using geothermal energy is a good idea? Why or why not?
- **Apply & Understand:** Draw a picture of a house with a geothermal ground loop system. Use arrows to show where the heat moves.

Handwriting & Composition

- Practice handwriting with **Cursive 15 – page 97** or **Manuscript 15 – page 98**.
- **Summarize, Understand, Analyze, Create:** Provide students with a flat poster board (not a three-panel board). Explain that they will create a poster about Geothermal Energy.
    - Ask the students to look at the text and identify the four main sections (Introduction, What is Geothermal Energy? Geothermal Water, Geothermal Heat Pumps). Ask the students to re-read each section, then to summarize the main purpose of the section. For example: Introduction: Geothermal energy is one of many sources of energy. What is Geothermal Energy? Geothermal energy is from the earth. Geothermal Water: Water heated by the earth can be used to heat buildings. Geothermal Heat Pumps: Geothermal energy can be used to heat liquid that is pumped through buildings to heat them.
    - Ask the students to choose one subtopic about geothermal energy. Direct the students to find the key words in that section and to write a key word outline. The students should then use this to write their own text. This is a good project for students who know how to type on the computer.
    - Once students have written the text, they should find images for their poster. These may be printed from the computer or hand drawn. The students should attach their text and images to their poster.

Extension & Cross-Curricular Activities

- Read about hot springs. Research how hot springs have been used throughout history.
- Watch a travel video about hot springs or geysers.
- **Create:** Create a model of the layers of the earth and the temperatures at the various levels.
- Read about other types of energy: solar, wind, water, coal, natural gas, oil, nuclear… Compare and contrast the advantages and disadvantages of each one.
- **Evaluate:** Lead a discussion with the students on what type of energy they think is best and their reasons why.
- **Create:** Conduct experiments to explore how geothermal energy works. Choose one or more of the project ideas at https://www.energy.gov/sites/prod/files/2014/06/f16/geothermal_energy.pdf

Unit 28
Sepak Takraw

Notes

Soccer – This word is a true exception to Spelling Rule 1. It is very unusual that the C does not soften to /s/ before an E.

culture – The T assimilates with the U that comes after it.

Thailand – The TH says /t/ and the AI says /ī/. These are Advanced Phonogram sounds.

Pre-Reading

- Read the title. Does this provide a clue about what the text will be about?
- What are some options for how to pronounce Sepak Takraw? How does it change based upon where the syllable breaks? /sĕp ăk/, /sē päk/, /tā krä/, /tăk rä/, /tä krä/. Optional: do an online search for Sepak Takraw and listen to how it is pronounced on a variety of videos. Can you think of a reason why the pronunciation would vary?
- Look at the pictures and describe what you see. What is happening in the different images? Based upon the title and pictures, what will this text be about?
- What is your favorite sport? Why?
- **Pre-Reading 28 – page 179** Practice reading each word. Ask the students to underline the multi-letter phonograms and mark where the syllables divide.

sepak	sep ak	circumference	^{2}cir cum fer enc^{2}e
takraw	tā kraw	synthetic	sỹn thet ic
lunging	lun ^{2}ging	badminton	bad min ton
stadium	stā ^{3}di um	Malaysia	Mä lay ^{2}siä
gymnastics	^{2}gỹm nas tics	Philippines	Phil ip ^{4}pine^{2}s
martial arts	mar tiäl arts	cooperatively	cō ŏp er ā tive ^{4}ly
agility	ā ^{2}gil i ^{4}ty	renowned	rē nowned^{2}

Post-Reading

- **Explain, Analyze, Infer:** What is different about the first paragraph of this text? Why is it written in italics? Why do you think the author chose to begin the text with a narrative?
- **Explain:** Describe how to play sepak takraw.
- **Compare & Contrast:** How is sepak takraw like volleyball? How does it differ from volleyball? How is it like soccer? How does it differ from soccer?
- **Infer:** Why did the sport's creators combine two languages when they named the game?
- **Make Connections:** Can you think of other sports that are named after what you literally do to play the game?
- **Challenge:** How did different cultures influence sepak takraw?

The Essentials Reader

Sepak Takraw

Pal2tyawit / Shutterstock.com

She watches the small plastic ball bounce off her opponent's head and soar back over the net. In an instant, she leaps up, turns upside-down, spikes the ball with the side of her foot, finishes her mid-air flip, and lands on her feet again. As the ball slams down over the net, the opponent's lunging attempt to kick the ball fails. The stadium explodes with the roaring cheers of fans. With a scream of joy she realizes that her team has just won the King's Cup! They are the best women's sepak takraw team in the world!

Sepak takraw combines elements of soccer, volleyball, gymnastics, and martial arts. Like soccer, players are not allowed to touch the ball with their hands or arms. Like volleyball, players must keep the ball from touching the ground and

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Handwriting & Composition

- Practice handwriting with **Cursive 28 – page 181** or **Manuscript 28 – page 182**.
- Ask students to recall what they remember about the game of futnet. Re-read the text for Unit 6. Read **More About Futnet – page 183**. (Help the students pronounce difficult words, or read the text aloud to the students.) Ask the students to create a Venn diagram comparing and contrasting the two sports using **Venn Diagram 28 – page 184**.
- Using the Venn diagram, write a five paragraph paper comparing and contrasting futnet to sepak takraw. The first paragraph will be an introduction. The second paragraph should discuss what is unique about futnet. The third paragraph should discuss what is unique about sepak takraw. The fourth paragraph should discuss what is similar between the two sports. The fifth paragraph should state a conclusion. For emerging writers, this activity may be modeled on the board. Ask the student to supply ideas and sentences.

Extension & Cross-Curricular Activities

- View a video of a sepak takraw game on YouTube.
- Ask students to create a new sport by combining two sports. Using **Combining Sports – page 185**, choose two sports. Choose a name for the new sport. Decide on which elements of each sport you will use. Write a description of the new sport. Draw a picture of the field the new sport will be played on.
- Create a team name and sports logo for a sepak takraw team.
- Research the historical development and progression of different sports. Make a comparison chart for the original sport vs. how it is played today. Or make a timeline of the major changes of a sport throughout time.