

Teaching Activity Guide for

The Fort on Fourth Street

A Story about the Six Simple Machines

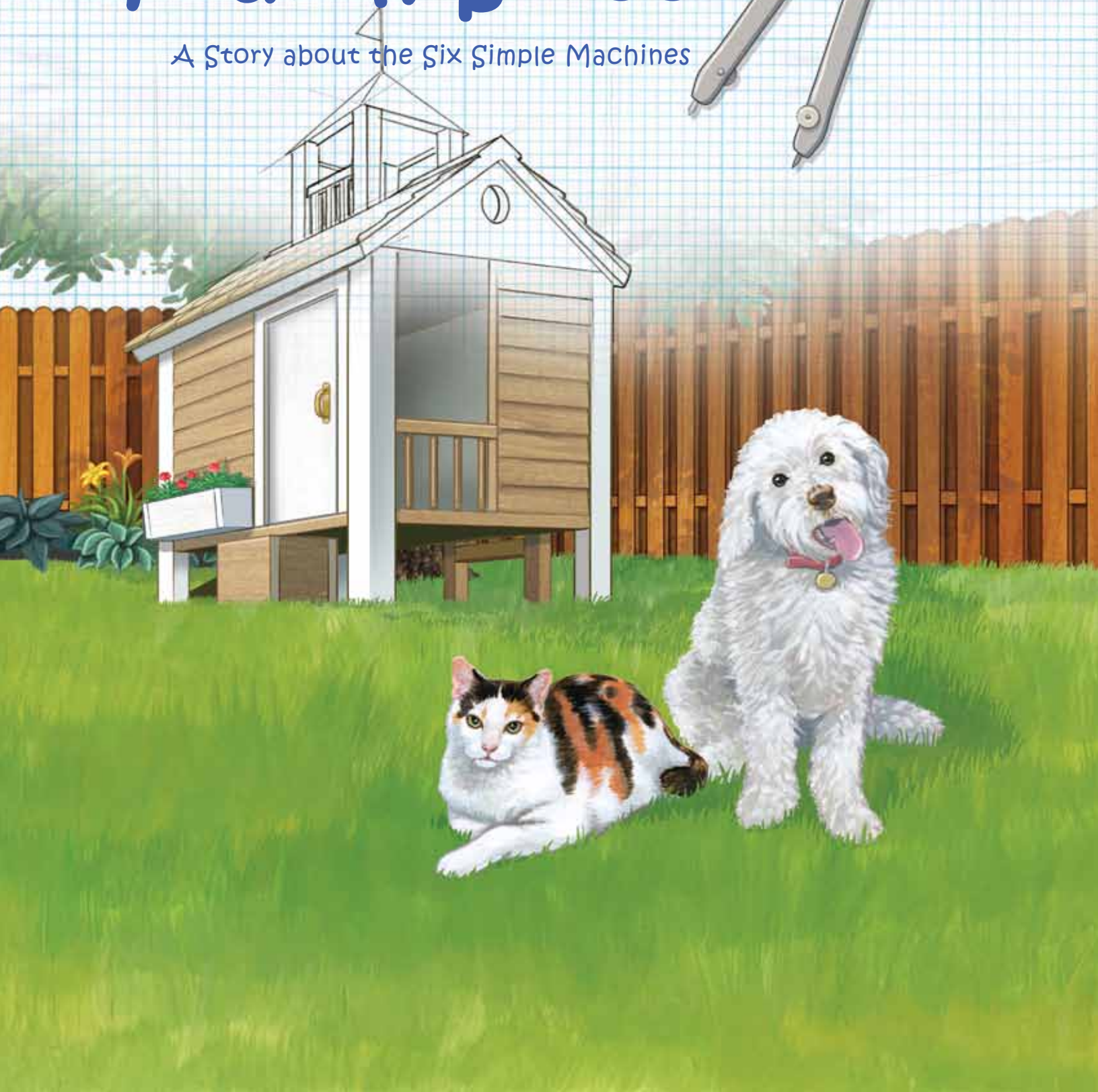
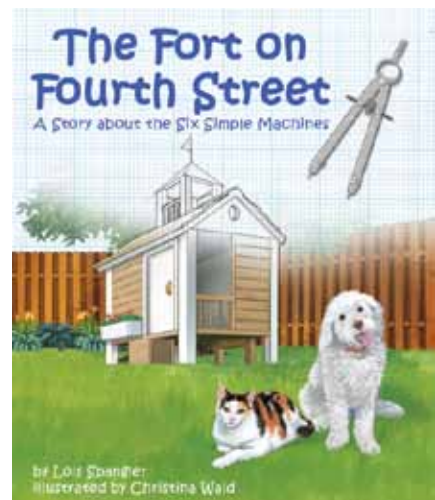


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How to Use This Activity Guide (General)

There are a wide variety of activities that teach or supplement all curricular areas. The activities are easily adapted up or down depending on the age and abilities of the children involved. And, it is easy to pick and choose what is appropriate for your setting and the time involved. Most activities can be done with an individual child or a group of children.

For teachers in the classroom: We understand that time is at a premium and that, especially in the early grades, much time is spent teaching language arts. All Arbordale titles are specifically selected and developed to get children excited about learning other subjects (science, geography, social studies, math, etc.) while reading (or being read to). These activities are designed to be as comprehensive and cross-curricular as possible. If you are teaching sentence structure in writing, why not use sentences that teach science or social studies? We also know and understand that you must account for all activities done in the classroom. While each title is aligned to all of the state standards (both the text and the For Creative Minds), it would be nearly impossible to align all of these activities to each state's standards at each grade level. However, we do include some of the general wording of the CORE language arts and math standards, as well as some of the very general science or social studies standards. You'll find them listed as "objectives" in italics. You should be able to match these objectives with your state standards fairly easily.

For homeschooling parents and teachers in private schools: Use as above. Aren't you glad you don't have to worry about state standards?

For parents/caregivers: Two of the most important gifts you can give your child are the love of reading and the desire to learn. Those passions are instilled in your child long before he or she steps into a classroom. Many adults enjoy reading historical fiction novels . . . fun to read but also to learn (or remember) about historical events. Not only does Arbordale publish stories that are fun to read and that can be used as bedtime books or quiet "lap" reading books, but each story has non-fiction facts woven through the story or has some underlying educational component to sneak in "learning." Use the "For Creative Minds" section in the book itself and these activities to expand on your child's interest or curiosity in the subject. They are designed to introduce a subject so you don't need to be an expert (but you will probably look like one to your child!). Pick and choose the activities to help make learning fun!

For librarians and bookstore employees; after-school program leaders; and zoo, aquarium, nature center, park & museum educators: Whether reading a book for story time or using the book to supplement an educational program, feel free to use the activities in your programs. We have done the "hard part" for you.

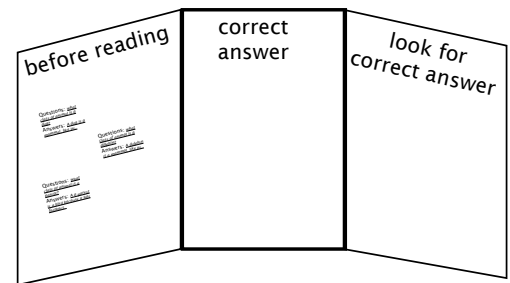
What Do Children Already Know?

Young children are naturally inquisitive and are sponges for information. The whole purpose of this activity is to help children verify the information they know (or think they know) and to get them thinking “beyond the box” about a particular subject.

Before reading the book, ask the children what they know about the subject. A list of suggested questions is below. The children should write down their “answers” (or adults for them if the children are not yet writing) on the chart found in Appendix A, index cards, or post-it notes.

Their answers should be placed on a “before reading” panel. If doing this as a group, you could use a bulletin board or even a blackboard. If doing this with individual children, you can use a plain manila folder with the front cover the “before reading” panel. Either way, you will need two more panels or sections—one called “correct answer” and the other “look for correct answer.”

Do the children have any more questions about the subject? If so, write them down to see if they are answered in the book.



After reading the book, go back to the questions and answers and determine whether the children’s answers were correct or not.

If the answer was correct, move that card to the “correct answer” panel. If the answer was incorrect, go back to the book to find the correct information.

If the children have more questions that were not answered, they should look them up.

When an answer has been found and corrected, the card can be moved to the “correct answer” panel.

Pre-Reading Questions

What is a machine?

What are different kinds of machines that you use every day?

What is a simple machine?

What kinds of tools would you use to build a fort?

What is a pulley? How can a pulley be used in building something?

What is a wedge? Can you think of any wedges you use every day?

What is a screw? What does it do?

Comprehension Questions & Writing Prompts

Objective Core Language Arts, Speaking and Listening: Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.

Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

Retell stories, including key details, and demonstrate understanding of their central message or lesson.

Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

What adult helped build the fort?

Whose fort is it?

What kind of simple machine is a saw?

If you had a fort, what would you use it for?

Where would you build your fort?

What would your fort have in it?

Fort on Fourth Street: A Story About the Six Simple Machines



1. Where would you build a fort?
2. What special feature would you want your fort to have?
3. How many people could fit inside your dream fort?
4. What would you use your fort for?
5. Who would help you build it?
6. What are some examples of the six simple machines?
7. What would you name your fort?



Observation Skills: Art Scavenger Hunt

Objective Core Language Arts Integration of Knowledge and Ideas: Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

Use illustrations and details in a story to describe its characters, setting, or events.

1. How many flowers are blooming in the yard on Fourth Street?
2. Describe where the squirrel is in relation to the rocks?
3. How many inches are there on a ruler?
4. How many wrenches does Grandpa have hanging on the wall?
5. What color is the dog's collar?
6. What color is the cat (for older children, what kind of cat is it)?
7. Which hand is Kathleen using to hold the boards steady as she uses the screwdriver?
8. What kind of fruit is in the basket lifted by the pulley?
9. What is the dog carrying in her mouth while Grandpa moves the rocks?
10. When the dog is going up the ramp and into the fort, where is the squirrel?
11. How many rungs are on the ladder that stands next to the Fort on Fourth Street?
12. After the fort is build and all the tools are piled in the wagon to be put away, which simple machine can you see in the wagon?
13. As Kathleen climbs the ladder, what kind of bird is on the tree branch above her?
14. How many planets are on the poster in the fort?
15. On the last page with the fort, how many kids are playing around the fort?

Cross-Curricular Vocabulary Activities

Objective Core Language Arts:

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade-level reading and content.

Identify new meanings for familiar words and apply them accurately (e.g., duck is a bird & the verb to duck). Use words & phrases acquired through conversations, reading/being read to, and responding to texts.

Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade-level topic or subject area.

Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.

Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

Use frequently occurring adjectives.

Vocabulary Game: This activity is a very general idea and is designed to get children thinking of vocabulary words that will then be used as the beginning vocabulary list for a science lesson.

Select an illustration from the book and give the children a specific length of time (five minutes?) to write down all the words they can think of about the particular subject. It is helpful to project an illustration on a whiteboard. Use eBook or book preview found at www.ArbordalePublishing.com.

The children's word list should include anything and everything that comes to mind, including nouns, verbs, and adjectives. At the end of the time, have each child take turns reading a word from his/her list. If anyone else has the word, the reader does nothing. However, if the reader is the only one with the word, he/she should circle it. While reading the list, one person should write the word on a flashcard or large index card and post it on a bulletin board or wall.

At the end, the child with the most words circled "wins." And you have a start to your science vocabulary list. Note: if a child uses an incorrect word, this is a good time to explain the proper word or the proper usage.

Glossary/Vocabulary Words: Word cards may be used (see Appendix) or have children write on index cards, a poster board, or on a chalkboard for a "word wall." If writing on poster board or chalkboard, you might want to sort words into nouns, verbs, etc. right away to save a step later if using for Silly Sentences (on the next page). Leaving the words posted (even on a refrigerator at home) allows the children to see and think about them frequently. The glossary has some high-level words. Feel free to use only those words as fit your situation.

Using the Words: The following activities may be done all at once or over a period of several days.

- Sort vocabulary words into nouns, verbs, adjectives, etc. and write what they are on the backs of the cards. When the cards are turned over, all you will see is "noun," etc. (these can then be used for the "silly sentences" on the next page).
- After the cards have been sorted, go over the categories to ensure that all cards have been placed correctly. (Mistakes are a great opportunity to teach!)
- Choose two words from each category and write a sentence for each word.
- Write a story that uses at least ten vocabulary words from the word sort.
- Have children create sentences using their vocabulary words. Each sentence could be written on a separate slip of paper. Have children (individually or in small groups) sort and put sentences into informative paragraphs or a story. Edit and re-write paragraphs into one informative paper or a story.

Silly Sentence Structure Activity: This "game" develops both an understanding of sentence structure and the science subject. Use words from the "word wall" to fill in the blanks. After completing silly sentences for fun, have children try to fill in the proper words by looking for the correct information in the book.

Word Bank

See Glossary for words in Spanish and the definition in English.

Adjective	Noun	Verb
big	basket	allow
bumpy	edge	create
fourth	force	fix
fun	fort	have
great	imagination	is
inclined	land	join
neat	lever	make
prickly	plane	move
rough	port	play
sharp	pulley	pull
simple	ramp	push
solid	rock	rest
squeaky	saw	rise
sweet	screw	roll
tight	space	stand
yummy	street	stay
	wagon	use
	wood	
	yard	

Cross-Curricular: Silly Sentences

1. This is the _____ on Fourth Street where I'm building a fort that will be very _____!
noun adjective
2. I'll use _____ to _____ fun spaces.
noun verb
3. These are the wheels and axles that _____ my _____ without hassles.
verb noun
4. This is Grandpa's _____, which is a wedge.
noun
5. These are the screws that I place in the wood, _____ and solid, so they'll _____ in for good.
adjective verb
6. A basket _____ with the _____ applied when Grandpa pulls the rope nearby.
verb noun
7. The rock _____ away and the _____ is clear, allowing me to stand quite near.
verb noun
8. Our _____ to the port is an _____ plane, getting us safely over _____ terrain.
noun adjective adjective
9. _____ machines, of which we used six, have few or no moving parts to _____.
adjective verb
10. Simple machines made work easier today, giving us a place to _____ and _____.
verb verb

Language Arts: Word Families & Rhyming Words

Language Arts, Reading Standards: Foundational Skills, Recognize and produce rhyming words.

Word families are groups of words that have some of the same combinations of letters in them that make them sound alike...or rhyme. For example ad, add, bad, brad (Brad), cad, Chad, clad, dad, fad, gad, glad, grad, had, lad, mad, pad, plaid (silent 'i'), sad, shad, and tad all have an "ad" letter combination and rhyme.

- Find and write down rhyming words in the poem.
- Are they in the same word family?
- If so, circle the combination of letters that are the same.
- Can you think of more words in the word family?

Rhyming words are:

Hand

and

Planned

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

Mound

and

Sound

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

Wedge

and

Edge

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

Wood

and

Good

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

Rock

and

Shock

They are / are not from the same
word family.

Other words that rhyme are:

Rhyming words are:

Plane

and

Terrain

They are / are not from the same
word family.

Other words that rhyme are:

Rhyming words are:

Stow

and

Go

They are / are not from the same
word family.

Other words that rhyme are:

Rhyming words are:

Clear

and

Near

They are / are not from the same
word family.

Other words that rhyme are:

Word Search

Find the hidden words. Even non-reading children can match letters to letters to find the words! Easy—words go up to down or left to right (no diagonals). For older children, identify the coordinates of the first letter in each word (number, letter).

	A	B	C	D	E	F	G	H	I	J
1	L	I	N	C	L	I	N	E	D	Q
2	E	P	L	A	N	E	W	E	R	T
3	V	Y	K	C	N	S	C	R	E	W
4	E	R	A	T	N	P	R	U	N	E
5	R	E	T	V	A	U	K	F	L	B
6	S	J	H	H	A	L	P	O	I	U
7	A	D	L	I	X	L	L	R	P	I
8	W	H	E	E	L	E	I	T	N	L
9	B	C	E	O	E	Y	R	E	E	D
10	L	A	N	D	W	E	D	G	E	E

Axle
Build
Fort
Inclined
Kathleen
Lever
Plane
Pulley
Screw
Wedge
Wheel

Science Journal (Vocabulary)

Wedge

my definition

my drawing

Screw

my definition

my drawing

Pulley

my definition

my drawing

Wheel and Axle

my definition

my drawing

Lever

my definition

my drawing

Inclined Plane

my definition

my drawing

Tools and Technology

Objective: Explain why people use science and technology and how scientists and engineers work. Identify examples of technology used to investigate Earth. Ex: sonar, radar, seismograph, weather balloons, satellites.

Explain how various technologies are used in the community technology, tools, community. Identify tools people have invented for everyday life and for scientific investigations.

1. The classroom door keeps swinging shut when it should stay open, so you use a door-stopper to keep it in place. What kind of simple machine is a door stopper?
2. Every morning, the flag is raised on the flagpole in the school yard. Pulling down on the rope causes the flag to rise to the top. Which simple machine is being used?
3. Next to the stairs that go to the front of the school is a wheelchair ramp. What kind of simple machine is this?
4. When you bite into a burger, your teeth divide it to tear off a smaller piece. What kind of simple machine are your teeth?
5. When you twist to lock or unlock the lid of a jelly jar, what kind of simple machine is that?
6. When sometimes paint cans are hard to pop open, so you use a ruler or another long, stiff object to pry the lid up. What kind of simple machine would that be?
7. Roller skates let you zip around. What kind of simple machines are on your feet?

Math Cards

Objective Core Mathematics Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (up to 10)

Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Use numbers, up to 10, to place objects in order, such as first, second, and third, and to name them

For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

Math Card Games

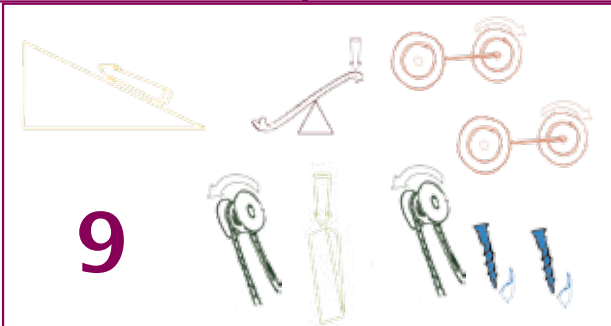
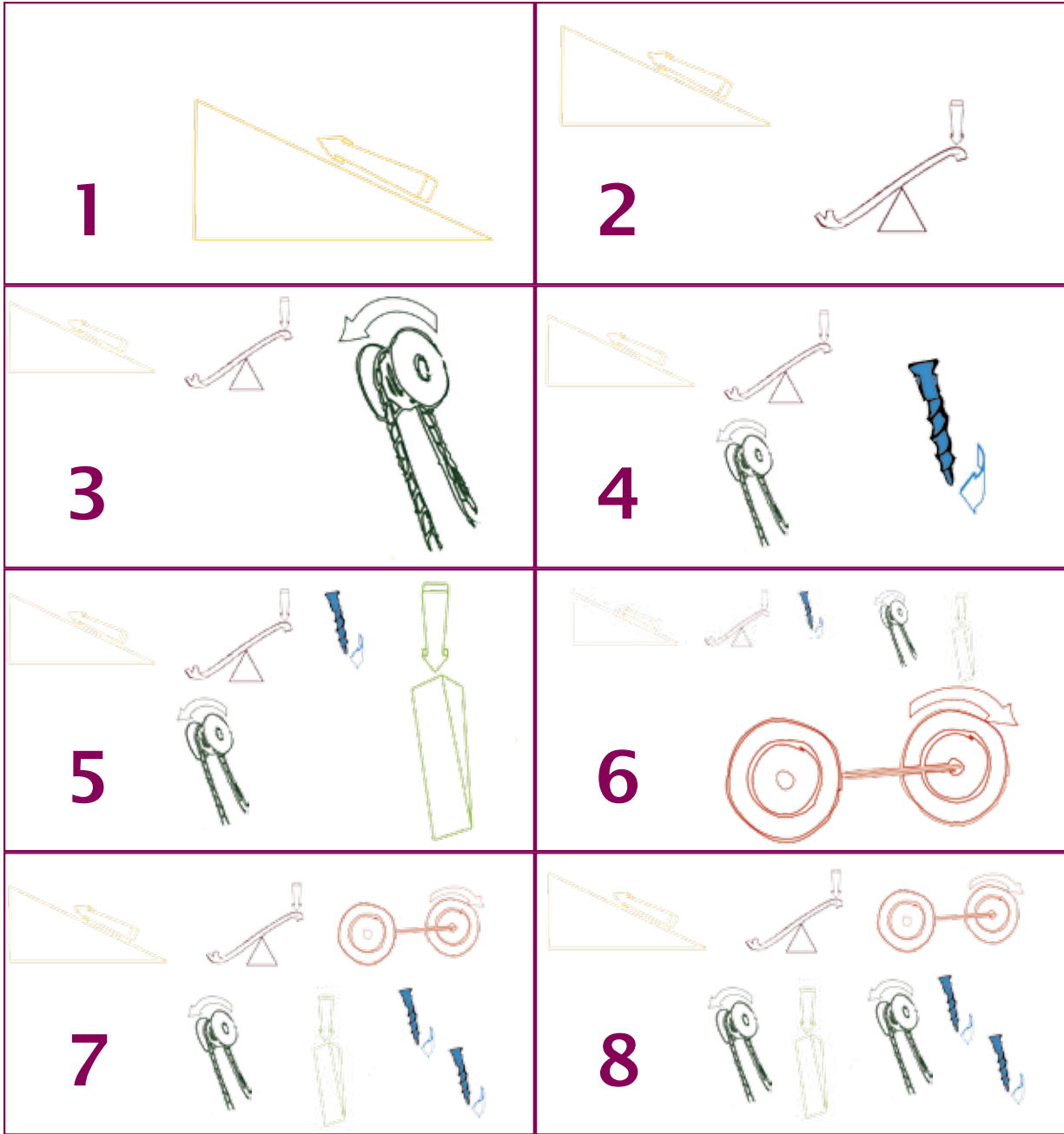
(Make four copies of the math cards to play these games):

Tens Make Friends Memory Game is a combination of a memory and adding game.

- Play like the memory game, above.
- If the animal numbers add up to 10, the child keeps the pair and takes another turn.
- If they do not add up to ten, the player should turn the cards back over and it is another player's turn.

Go Fish for Fact Families is a twist on "Go Fish."

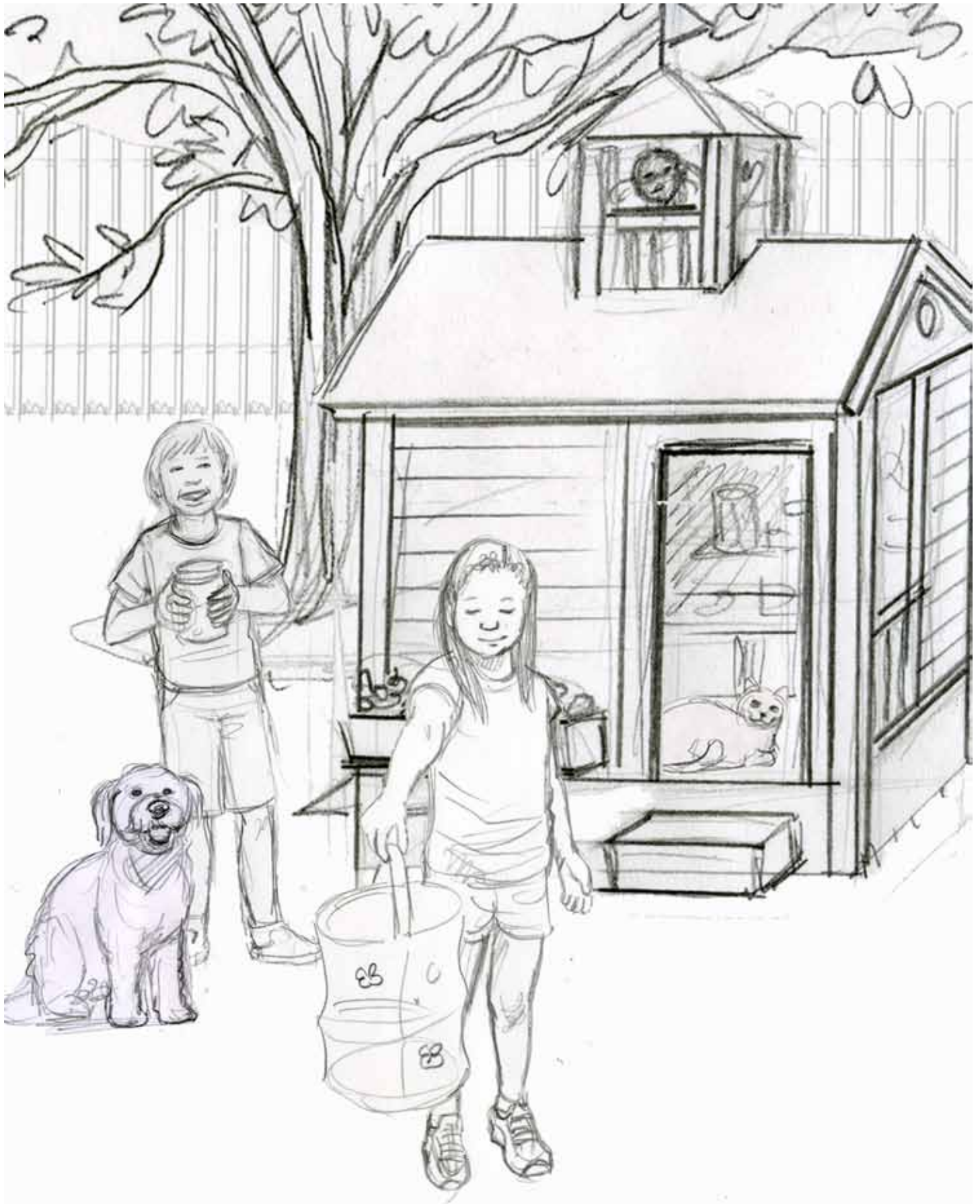
- Shuffle cards and deal five cards to each player. Put the remaining cards face down in a draw pile.
- If the player has three cards that make a fact family, he/she places them on the table and recites the four facts related to the family. For example, if someone has a 2, 3, and 5, the facts are: $2 + 3 = 5$, $3 + 2 = 5$, $5 - 2 = 3$, $5 - 3 = 2$.
- The player then asks another player for a specific card rank. For example: "Sue, please give me a 6."
- If the other player has the requested card, she must give the person her card.
- If the person asked doesn't have that card, he/she says, "Go fish."
- The player then draws the top card from the draw pile.
- If he/she happens to draw the requested card, he/she shows it to the other players and can put the fact family on the table. Otherwise, play goes to the next person.
- Play continues until either someone has no cards left in his/her hand or the draw pile runs out. The winner is the player who then has the most sets of fact families.



Coloring Pages







Answers

Observation Skills: Art Scavenger Hunt

1. How many flowers are blooming in the yard on Fourth Street? 5
2. Describe where the squirrel is in relation to the rocks? Above them
3. How many inches are there on a ruler? 12
4. How many wrenches does Grandpa have hanging on the wall? 3
5. What color is the dog's collar? Red
6. What color is the cat (for older children, what kind of cat is it)? White, brown, black - calico
7. Which hand is Kathleen using to hold the boards steady as she uses the screwdriver? Left
8. What kind of fruit is in the basket lifted by the pulley? An apple
9. What is the dog carrying in her mouth while Grandpa moves the rocks? A ball
10. When the dog is going up the ramp and into the fort, where is the squirrel? Behind the tree
11. How many rungs are on the ladder that stands next to the Fort on Fourth Street? 5
12. After the fort is build and all the tools are piled in the wagon to be put away, which simple machine can you see in the wagon? A wedge - the saw
13. As Kathleen climbs the ladder, what kind of bird is on the tree branch above her? A cardinal
14. How many planets are on the poster in the fort? 8
15. On the last page with the fort, how many kids are playing around the fort? 3

Silly Sentences

1. This is the yard on Fourth Street where I'm building a fort that will be very neat!
2. I'll use imagination to create fun spaces.
3. These are the wheels and axles that move my wagon without hassles.
4. This is Grandpa's saw, which is a wedge.
5. These are the screws that I place in the wood, tight and solid, so they'll stay in for good.
6. A basket rises with the force applied when Grandpa pulls the rope nearby.
7. The rock rolls away and the land is clear, allowing me to stand quite near.
8. Our ramp to the port is an inclined plane, getting us safely over bumpy terrain.
9. Simple machines, of which we used six, have few or no moving parts to fix.
10. Simple machines made work easier today, giving us a place to rest and play.

Word Search

	A	B	C	D	E	F	G	H	I	J
1	L	I	N	C	L	I	N	E	D	
2	E	P	L	A	N	E				
3	V		K			S	C	R	E	W
4	E		A			P				
5	R		T			U		F		B
6			H		A	L		O		U
7			L		X	L		R		I
8	W	H	E	E	L	E		T		L
9			E		E	Y				D
10			N		W	E	D	G	E	

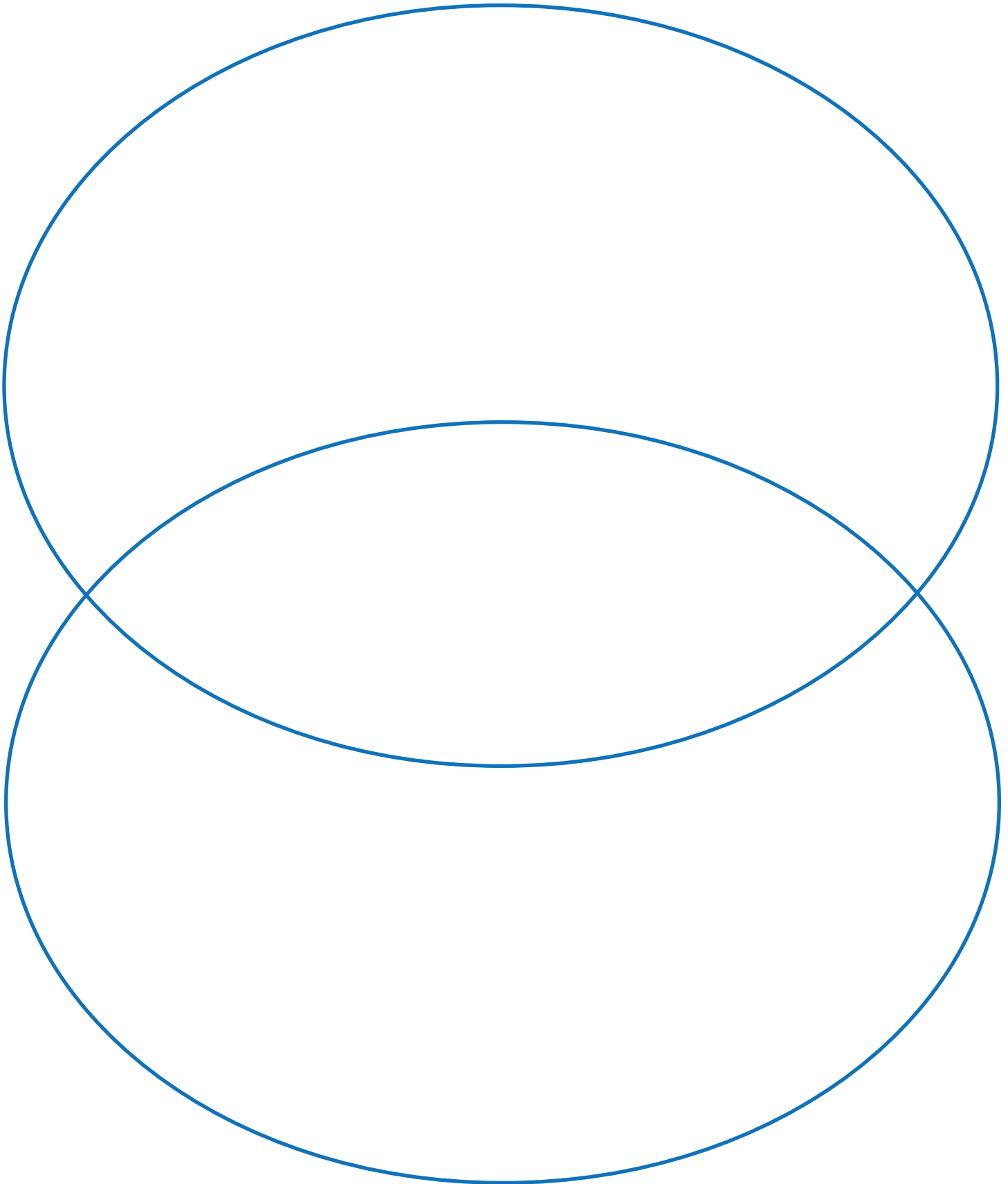
- 5,E Axle
- 5,J Build
- 5,H Fort
- 1,B Inclined
- 3,C Kathleen
- 1,A Lever
- 2,B Plane
- 4,F Pulley
- 3,F Screw
- 10,E Wedge
- 8,A Wheel

Tools and Technology

1. The classroom door keeps swinging shut when it should stay open, so you use a door-stopper to keep it in place. What kind of simple machine is a door stopper? A wedge
2. Every morning, the flag is raised on the flagpole in the school yard. Pulling down on the rope causes the flag to rise to the top. Which simple machine is being used? A pulley
3. Next to the stairs that go to the front of the school is a wheelchair ramp. What kind of simple machine is this? An inclined plane
4. When you bite into a burger, your teeth divide it to tear off a smaller piece. What kind of simple machine are your teeth? Wedges
5. When you twist to lock or unlock the lid of a jelly jar, what kind of simple machine is that? a screw
6. When sometimes paint cans are hard to pop open, so you use a ruler or another long, stiff object to pry the lid up. What kind of simple machine would that be? A lever
7. Roller skates let you zip around. What kind of simple machines are on your feet? Wheels and axles

Appendix B—Venn Diagram

Compare and contrast two machines in this book



Appendix F—Vocabulary Cards
