

Teaching Activity Guide

Tornado Tamer

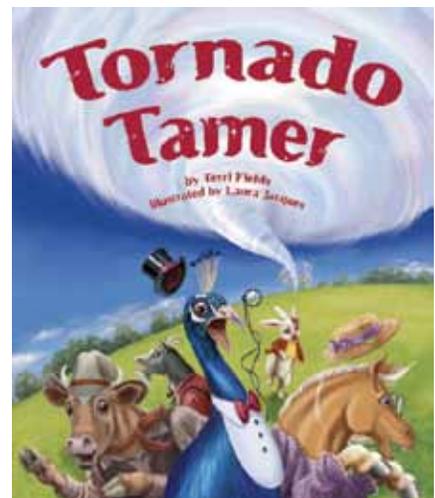


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How to Use This Activity Guide (General)

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.

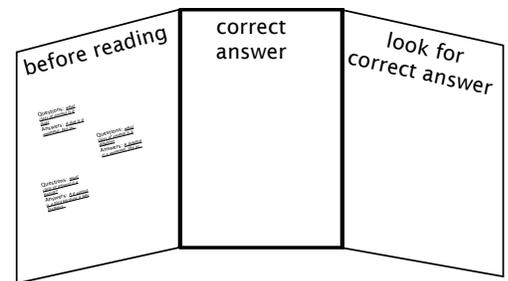
What Do Children Already Know?

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

1. What is a tornado?
2. What do tornadoes look like?
3. Can you stop a tornado?
4. What should you do if there is a tornado nearby?
5. Is there any such thing as a “Tornado Tamer”?
6. How fast is the wind in a tornado?
7. How long do tornadoes last?
8. How do scientists rank a tornado’s strength?

Comprehension Questions & Writing Prompts

1. Who promised to save the town from any more tornadoes?
2. Who is the Tornado Tamer?
3. Who did not trust the Tornado Tamer?
4. Why did Mouse not trust the Tornado Tamer?
5. What questions did Mouse ask the Tornado Tamer?
6. If you lived in this town, how would you have reacted to the Tornado Tamer?
7. How do you think the townspeople felt after the tornado destroyed their town? Use “feeling” words or draw a picture to show what you would feel in that situation.
8. Why do you think Travis said he could protect the town from tornadoes?
9. Did Travis help the townsfolk?
10. Do you think Travis showed good character? Why or why not?

Language Arts: Sequence Sentence Strips

Cut into sentence strips, laminate if desired, and place in a “center.” Have children put the events in order. Children may work alone or in small groups. Cards are in order but should be mixed up when cut apart.

Objective Core Language Arts:

Use temporal words and phrases to signal event order.

Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.

Mayor Peacock promised to save the town from any more tornadoes.

Weeks passed. No tornado tamer came. It was getting closer to tornado season. The terrible twisters might come soon.

Then a weasel arrived. “I am Travis the Tornado Tamer. I can make a very special cover. It will be big enough to protect your whole town.”

Then Mouse piped up. “Wait! Does this weasel even know how long tornadoes last?”

“Hush, Mouse,” the mayor interrupted. “We need Travis to start working!”



Travis said, “There is one more thing. Only those who are smart and special will see my cover. Otherwise, it will seem invisible. Do you think you will be smart and special enough?”

The mayor gave Travis a lot of money. Then Travis said, “I will bring out the cover. It is amazing. I hope you are all special enough to see and touch it.”

Travis handed the mayor the first corner. Mayor Peacock did not see or feel any cover.

Soon, everyone was walking along holding their part of the cover—except Mouse. He couldn’t see anything to hold.

Then a storm of moist air from the Gulf of Mexico clashed with cold, dry air out of the west from over the Rockies. It twisted with warm, dry air from the desert southwest. Rabbit spotted a funnel coming closer and closer. Everyone dove into a shelter.

The funnel touched the ground and turned into a tornado right in the center of town.

After it ended, the animals came out and looked at the awful mess. “That cover didn’t work one bit,” Rabbit said angrily.

“Baaad,” the sheep said. “We should have listened to Mouse.”

Then one by one, they admitted they had pretended to see and feel the cover because they wanted to be special.

“Why that weasel!” cried the mayor. “Travis the Tornado Tamer tricked us!”

Language Arts: Comparing Stories

Objective Core Language Arts, Reading Standards for Literature, Integration of Knowledge and Ideas (9): Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.

This story is an adaptation of *The Emperor's New Clothes*.

Read the original version of the story and compare and contrast the different versions by answering the following questions.

1. Describe the setting for *The Emperor's New Clothes*.
2. Describe the setting for *Tornado Tamer*.
3. In a few sentences, describe the plot of *The Emperor's New Clothes*.
4. In a few sentences, describe the plot of *Tornado Tamer*.
5. Who promised to make an invisible suit in *The Emperor's New Clothes*?
6. Who promised to make an invisible cover in *Tornado Tamer*?
7. In *The Emperor's New Clothes*, how did the people in the city react when they saw their emperor parading through the streets naked?
8. How did the townsfolk in *Tornado Tamer* react when they carried the cover to place over their town?
9. Who spoke up and said that the emperor was naked in *The Emperor's New Clothes*?
10. Who questioned Travis in *Tornado Tamer*?
11. Which character in the *Tornado Tamer* is similar to the weavers in *The Emperor's New Clothes*?
12. How are these two stories similar?
13. How is *Tornado Tamer* different from *The Emperor's New Clothes*?

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

TORNADO
CLOUD
MOUSE
TRAVIS
MAYOR
SUPERCCELL

Animal Sorting Cards

Objective: Classify organisms according to one selected feature, such as body covering, and identify other similarities shared by organisms within each group formed.

Describe several external features and behaviors of animals that can be used to classify them (e.g., size, color, shape of body parts).

Identify observable similarities and differences (e.g., number of legs, body coverings, size) between/among different groups of animals.

Animal Card Games:

Sorting: Depending on the age of the children, have them sort cards by:

where the animals live (habitat)	tail, no tail
number of legs (if the animals have legs)	colors or skin patterns
how they move (walk, swim, jump, or fly)	animal class
type of skin covering (hair/fur, feathers, scales, moist skin)	
what they eat (plant eaters/herbivores, meat eaters/carnivores, both/omnivores)	

Memory Card Game: Make two copies of each of the sorting card pages and cut out the cards. Mix them up and place them face down on a table. Taking turns, each player should turn over two cards so that everyone can see. If the cards match, he or she keeps the pair and takes another turn. If they do not match, the player should turn the cards back over and it is another player's turn. The player with the most pairs at the end of the game wins.

Who Am I? Copy and cut out the cards. Poke a hole through each one and tie onto a piece of yarn. Have each child put on a "card necklace" without looking at it so the card hangs down the back. The children get to ask each person one "yes/no" question to try to guess "what they are." If a child answering the question does not know the answer, he/she should say, "I don't know." This is a great group activity and a great "ice-breaker" for children who don't really know each other.

Charades: One child selects a card and must act out what the animal is so that the other children can guess. The actor may not speak but can move like the animal and imitate body parts or behaviors. For very young children, you might let them make the animal sound. The child who guesses the animal becomes the next actor.





Science Journal (Vocabulary)

tornado

my definition

my drawing

supercell

my definition

my drawing

thunderstorm

my definition

my drawing

funnel cloud

my definition

my drawing

rainstorm

my definition

my drawing

Tornado Ally

my definition

my drawing

tornado watch

my definition

my drawing

tornado warning

my definition

my drawing

True or False?

Objective: Critical thinking skills

Decide whether each statement is true or false. Answers are in the back, along with explanations for the false statements.

1. Tornado intensity based on funnel size.
2. A tornado is a violent, rotating column of air that extends from the base of a thunderstorm to the earth's surface.
3. The average tornado will have a wind speed that is less than 110 miles per hour, be about 250 feet wide and only travel about 2 to 3 miles before dissipating.
4. Tornadoes only occur in North America.
5. A waterspout is a tornado that is over a body of water. Waterspouts are very common in the Florida Keys.
6. Tornado must touchdown to cause damage.
7. No direct measurement of wind speeds has ever been made in the eye of a tornado. This is because no instrument that can measure wind can survive long enough inside the eye!
8. Pulse-Doppler radar technology can be used detect tornadoes before or as they are forming.
9. The most common appearance for a tornado is a narrow funnel that is 250 to 300 feet wide with a debris cloud near ground, however tornadoes can appear in many different sizes and shapes.
10. Tornadoes don't form during the winter.

Sources:

"General Tornado Facts." Tornado Facts. N.p., n.d. Web. 13 June 2016.

"Tornado Myths." Tornado Facts. N.p., n.d. Web. 13 June 2016.

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.

1



2



3



4



5



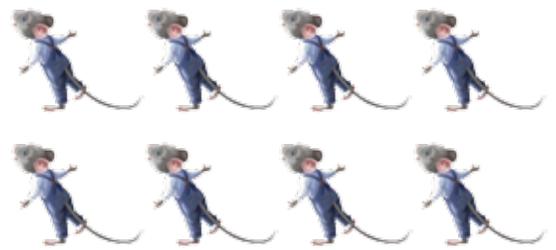
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7



8



9



Map Activity

Objective: reading maps, geography

Three out of every four tornadoes in the world happen in the United States. Most occur in a region called “Tornado Alley” that includes Nebraska, South Dakota, Oklahoma, Texas and Kansas.

On the blank map in the appendix, color in these states.

Some experts also include Iowa, Missouri, Louisiana, Arkansas, Mississippi, and Alabama in Tornado Alley. On your map, use a different color to show these states.

Do you live in Tornado Alley? Does your state border any states that are part of Tornado Alley?

Character

Objective Core Language Arts, Reading Standards for Literature, Key Ideas and Details (2): Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.

Identify some of their own personal responsibilities.

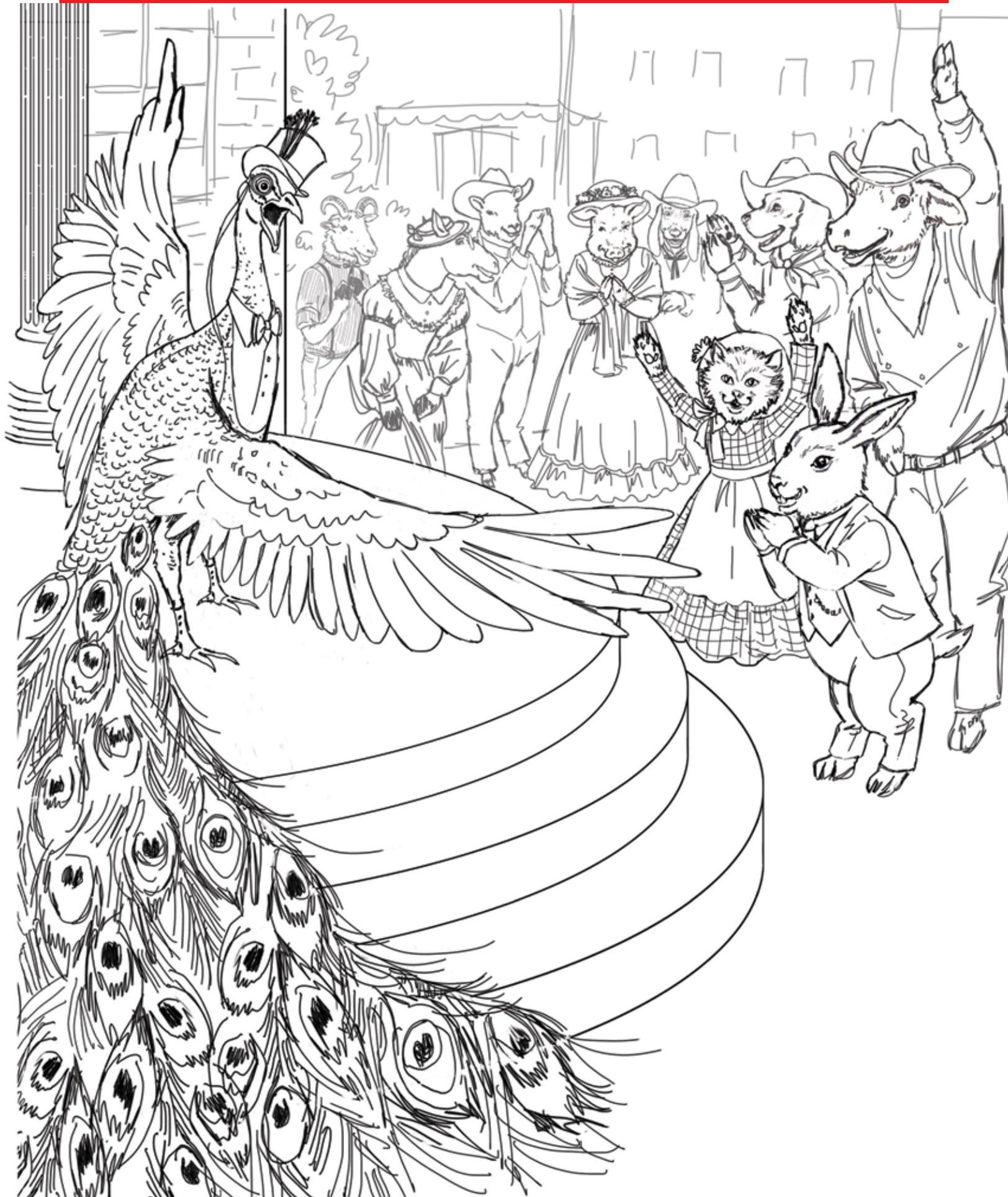
Understand that choices in behavior and action are related to consequences and have an impact upon the student himself/herself and others.

Describe ways that individual actions can contribute to the common good of the community.

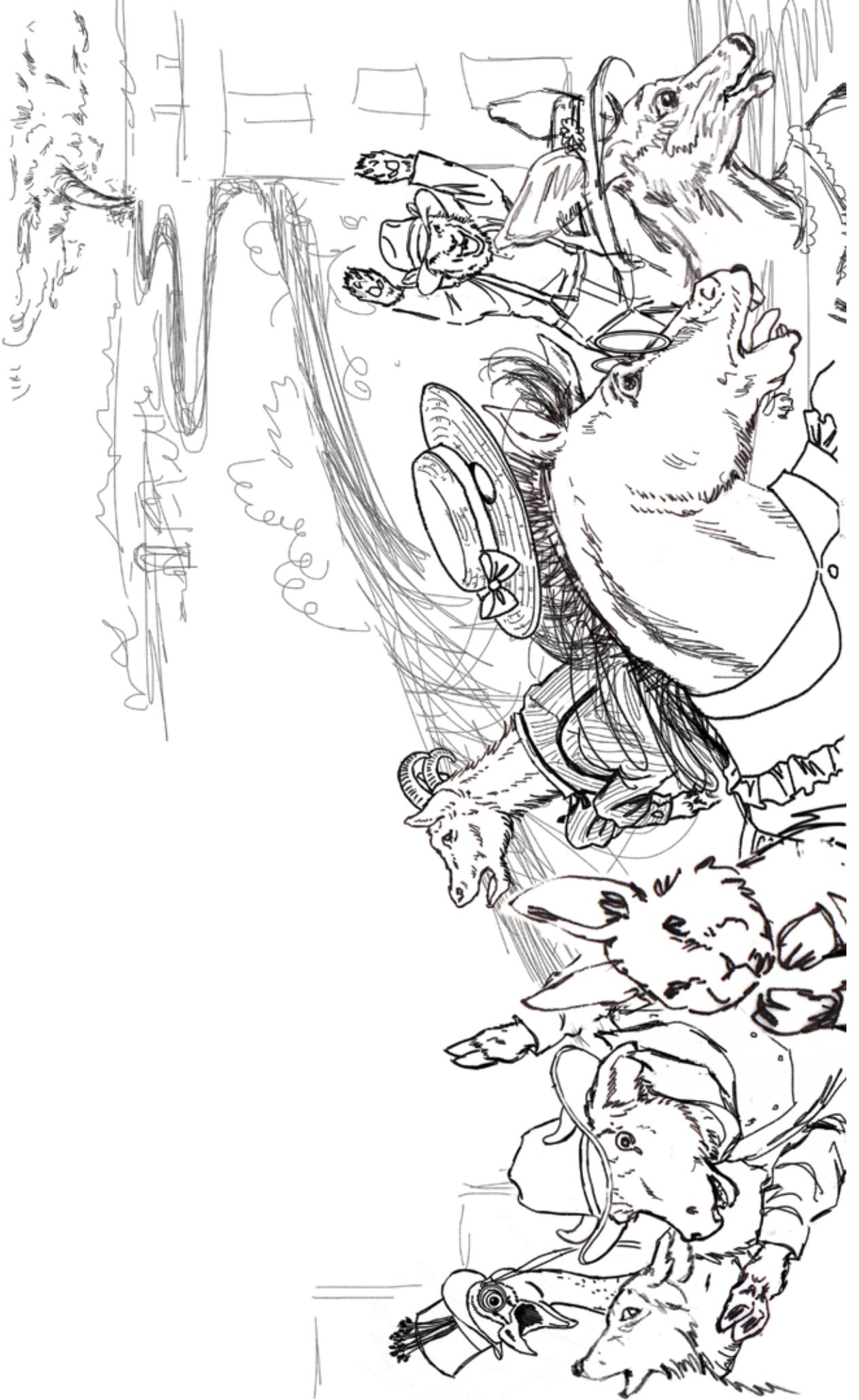
Predict consequences that may result from responsible and irresponsible actions.

1. How would you describe Travis' character?
2. Do Travis' actions show respect and kindness for others?
3. How do you think the townsfolk feel as a result of Travis' actions?
4. Did Mouse contribute to the good of the community?
5. Did Travis contribute to the good of the community?
6. Did Travis' actions benefit himself? How? Did his actions benefit the community?
7. If Travis benefited from tricking everyone, while the rest of the town suffered for it, were his actions good or bad?
8. Mouse saw Travis trying to take advantage of the town and tried to stop it. If you see someone taking advantage of others, what should you do?
9. Did Travis face any consequences for his actions? Do you think he should?
10. How could you explain to Travis that what he is doing is wrong?
11. Do you think Travis would listen to you?
12. How can Travis work to improve his character and help those around him?

Coloring Pages







Answers

Word Search

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

True/False

1. Tornado intensity based on funnel size. **False.** A dangerous myth is the size (width) of a tornado's funnel is a way to assess its intensity. Over the past 6 decades there have been more than 100+ violent tornados (F4/EF4+) with just a maximum width of 300 feet. It's also common for a tornado to change sizes during its lifecycle, making size as an estimate for intensity an invalid method. Do not ignore a tornado because it's small or try to get a picture; seek shelter immediately.
2. A tornado is a violent, rotating column of air that extends from the base of a thunderstorm to the earth's surface. **True.**
3. The average tornado will have a wind speed that is less than 110 miles per hour, be about 250 feet wide and only travel about 2 to 3 miles before dissipating. **True.**
4. Tornadoes only occur in North America. **False.** It is a common belief that tornadoes only occur in North America; with concentration in tornado

alley. However, tornadoes have been witnessed on every continent with the exception of Antarctica. While the majority of tornados do occur in the United States they do regularly occur in other areas, such as Australia, Bangladesh, Philippines, United Kingdom and Western Russia.

5. A waterspout is a tornado that is over a body of water. Waterspouts are very common in the Florida Keys. **True.**
6. Tornado must touchdown to cause damage. **False.** There is a dangerous belief that a tornado needs to touchdown (reach the ground) to cause damage. This can be a deadly assumption because people may not seek shelter or thrill seek because they believe a tornado hasn't or won't touchdown. The violent winds and debris from a funnel cloud that hasn't touched down can be just as deadly.
7. No direct measurement of wind speeds has ever been made in the eye of a tornado. This is because no instrument that can measure wind can survive long enough inside the eye! **True.**
8. Pulse-Doppler radar technology can be used detect tornadoes before or as they are forming. **True.**
9. The most common appearance for a tornado is a narrow funnel that is 250 to 300 feet wide with a debris cloud near ground, however tornadoes can appear in many different sizes and shapes. **True.**
10. Tornadoes don't form during the winter. **False.** Because tornadoes require warm weather to form they are quite uncommon during the winter months. Just because they are uncommon doesn't mean they don't happen. In fact, tornadoes have been recorded traveling over areas with snow cover on the ground. Tornadoes in the winter (Dec thru Feb) tend to be more dangerous since they statistically move faster than they do during tornado season.

Sources:

"General Tornado Facts." Tornado Facts. N.p., n.d. Web. 13 June 2016.

"Tornado Myths." Tornado Facts. N.p., n.d. Web. 13 June 2016.

Appendix B—U.S. Map



Appendix C—Vocabulary Cards
