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Standards Correlation Chart

Each lesson in this book meets at least one of the following standards and benchmarks, which are used with permission from McREL.

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Standards and Benchmarks	Pages
<p>Math</p> <p>Standard 2. Understands and applies basic and advanced properties of the concepts of numbers</p> <ul style="list-style-type: none"> • Benchmark 2. Understands equivalent forms of basic percents, fractions, and decimal, and when one form of a number might be more useful than another • Benchmark 5. Understands the relative magnitude and relationships among whole numbers, fractions, decimals, and mixed numbers <p>Standard 3. Uses basic and advanced procedures while performing the processes of computation</p> <ul style="list-style-type: none"> • Benchmark 5. Uses proportional reasoning to solve mathematical and real-world problems (e.g., involving equivalent fractions, decimals, percents) <p>Standard 9. Understands the general nature and uses of mathematics</p> <ul style="list-style-type: none"> • Benchmark 2. Understands that numbers and the operations performed on them can be used to describe things in the real world and predict what might occur 	<p>14–16</p> <p>14–16</p> <p>11–13</p> <p>8–10</p>
<p>Science</p> <p>Standard 2. Understands Earth’s composition and structure</p> <ul style="list-style-type: none"> • Benchmark 5. Knows that fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time <p>Standard 4. Understands the principles of heredity and related concepts</p> <ul style="list-style-type: none"> • Benchmark 1. Knows that many characteristics of an organism are inherited from its parents and other characteristics result from an individual’s interactions with the environment <p>Standard 7. Understands biological evolution and the diversity of life</p> <ul style="list-style-type: none"> • Benchmark 1. Knows that fossils can be compared to one another and to living organisms to observe their similarities and differences <p>Standard 10. Understand forces and motion</p> <ul style="list-style-type: none"> • Benchmark 5. Knows that when a force is applied to an object, the object either speeds up, slows down, or goes in a different direction • Benchmark 6. Knows the relationship between the strength of a force and its effect on an object <p>Standard 13. Understands the scientific enterprise</p> <ul style="list-style-type: none"> • Benchmark 2. Knows that although people using scientific inquiry have learned much about the objects, events, and phenomena in nature, science is an ongoing process and will never be finished 	<p>17–20</p> <p>21–24</p> <p>17–20</p> <p>25–32</p> <p>25–32</p> <p>53–56</p>

Standards Correlation Chart *(cont.)*

Standards and Benchmarks	Pages
<p>World History</p> <p>Standard 26. Understands how the transoceanic interlinking of all major regions of the world between 1450 and 1600 led to global transformations</p> <ul style="list-style-type: none"> • Benchmark 4. Understands features of Spanish exploration and conquest <p>Standard 29. Understands the economic, political, and cultural interrelations among peoples of Africa, Europe, and the Americas between 1500 and 1750</p> <ul style="list-style-type: none"> • Benchmark 1. Understands European influence in the Americas between the 16th and 18th centuries • Benchmark 2. Understands features of the labor system and economy in the Americas • Benchmark 3. Understands elements of the trans-Atlantic African slave trade <p>Standard 31. Understands major global trends from 1450 to 1770</p> <ul style="list-style-type: none"> • Benchmark 3. Understands how the acceleration of scientific and technological innovations in this era affected social, economic, and cultural life in various parts of the world <p>Standard 36. Understands patterns of global change in the era of Western military and economic dominance from 1800 to 1914</p> <ul style="list-style-type: none"> • Benchmark 1. Understands the impact of new inventions and technological developments in various regions of the world (e.g., significant inventions and inventors in 19th-century Europe and America) 	<p>37–40</p> <p>37–40</p> <p>37–40</p> <p>37–40</p> <p>33–36</p> <p>93–96</p>
<p>American History</p> <p>Standard 14. Understands the course and character of the Civil War and its effects on the American people</p> <ul style="list-style-type: none"> • Benchmark 1. Understands the technological, social, and strategic aspects of the Civil War <p>Standard 16. Understand how the rise of corporations, heavy industry, and mechanized farming transformed American society</p> <ul style="list-style-type: none"> • Benchmark 1. Understands the impact of significant achievements and individuals of the late 19th century (e.g., the effects of major transportation changes that occurred after 1870) 	<p>41–44</p> <p>45–48 93–96</p>
<p>Geography</p> <p>Standard 2. Knows the location of places, geographic features, and patterns of the environment</p> <ul style="list-style-type: none"> • Benchmark 1. Knows major physical and human features of places as they are represented on maps and globes (e.g., rivers, lakes, land forms, locations of places discussed in history, etc.) <p>Standard 4. Understands the physical and human characteristics of place</p> <ul style="list-style-type: none"> • Benchmark 1. Knows how the characteristics of places are shaped by physical and human processes (e.g., relationship of population distribution to land forms, climate, vegetation, and resources) 	<p>57–65</p> <p>57–65</p>

Standards Correlation Chart *(cont.)*

Standards and Benchmarks	Pages
<p>Geography</p> <p>Standard 9. Understands the nature, distribution, and migration of human populations on Earth’s surface</p> <ul style="list-style-type: none"> • Benchmark 3. Understands voluntary and involuntary migration • Benchmark 4. Knows the causes and effects of human migration <p>Standard 16. Understands the changes that occur in the meaning, use, distribution, and importance of resources</p> <ul style="list-style-type: none"> • Benchmark 1. Knows the characteristics, location, and use of renewable resources and nonrenewable resources 	<p>49–52</p> <p>49–52</p> <p>53–60</p>
<p>Language Arts</p> <p>Standard 1. Uses the general skills and strategies of the writing process</p> <ul style="list-style-type: none"> • Benchmark 1. Uses prewriting strategies to plan written work (e.g., uses graphic organizers, organizes information) • Benchmark 6. Uses strategies to write for a variety of purposes (e.g., to inform, entertain, explain, describe, record ideas) • Benchmark 8. Writes narrative accounts, such as poems and stories (e.g., establishes a context, develops characters, setting, and plot; sequences events, uses concrete sensory details) <p>Standard 2. Uses the stylistic and rhetorical aspects of writing</p> <ul style="list-style-type: none"> • Benchmark 2. Uses paragraph form in writing <p>Standard 4. Gathers and uses information for research purposes</p> <ul style="list-style-type: none"> • Benchmark 2. Uses encyclopedias to gather information for research topics • Benchmark 4. Uses electronic media to gather information • Benchmark 7. Writes expository compositions • Benchmark 9. Cites information sources <p>Standard 5. Uses the general skills and strategies of the reading process</p> <ul style="list-style-type: none"> • Benchmark 6. Uses word reference materials (e.g., thesaurus) to determine the meaning, pronunciation, and derivations of unknown words • Benchmark 7. Understands level-appropriate reading vocabulary (e.g., synonyms, antonyms, homophones, multi-meaning words) <p>Standard 6. Uses reading skills and strategies to understand and interpret a variety of literary texts</p> <ul style="list-style-type: none"> • Benchmark 1. Uses reading skills and strategies to understand a variety of literary passages and texts (e.g., fables, poems, fairy tales, etc.) • Benchmark 2. Knows the defining characteristics of a variety of literary forms and genres <p>Standard 7. Uses reading skills and strategies to understand and interpret a variety of informational texts</p> <ul style="list-style-type: none"> • Benchmark 5. Summarizes and paraphrases information in texts (e.g., includes the main idea and significant supporting details of a reading selection) • Benchmark 6. Uses prior knowledge and experience to understand and respond to new information 	<p>77–80</p> <p>73–76</p> <p>77–80</p> <p>69–76</p> <p>66–68</p> <p>66–68</p> <p>69–71</p> <p>66–68</p> <p>85–88</p> <p>85–88</p> <p>81–84</p> <p>89–92</p> <p>81–84</p> <p>93–96</p>

Day 1

1. Bring in an untied shoe. Choose a student scribe to work at the board. Ask another student to tie the shoe following the directions of the class.
2. Have student volunteers state each step (one per person). The scribe records them as the student demonstrator ties the shoe. The class will end up with something like this:

Take one lace and slide it under the other. Pull the two laces until they are tight. Make a loop with the left lace. Make a loop with the right lace. Put the right loop around the left loop. Pull it through. Pull on both loops with equal strength.

3. Have your students take their seats. Show your class how to add details to turn it into a process paragraph (the added information is boldfaced):

Tying a shoe is so easy that most children master it by the end of kindergarten. However, doing it quickly takes lots of practice. First, be sure the shoe is laced correctly. The laces should be roughly equal on both sides. Take one lace and slide it under the other. Pull the two laces until they are tight. Then, make a loop with the left lace, and another loop with the right lace. Put the right loop around the left loop. Pull it through. Make sure you pull on both loops with equal strength. Otherwise, you'll end up with a knot and shoelaces that are dangling on the ground. But if this happens, never pull the knot tighter. That can make it very difficult to unknot. Instead, unknot it and try again. You can do it!

4. Ask your students to explain the difference between the first statements and a process paragraph.
5. Make an overhead transparency and student copies of the process essay on page 74.
6. Have your students read the process essay; it is written at a 3.5 reading level. Then have them reread and lightly underline in pencil the five main steps embedded in the essay.
7. For homework, have your students decide on something that they know how to do that they would like to explain to others (how to make a sandwich, how to skateboard, etc.) and make a list of five steps.

Day 2

1. Display the overhead transparency of “How to Ride a Roller Coaster.” Have students identify the five steps in the essay that they underlined yesterday.
2. Make an overhead transparency and student copies of the “Stepping Stone Sequence” graphic organizer on page 76, but don’t distribute them yet.
3. Ask student volunteers to transfer the five steps from “How to Ride a Roller Coaster” to the graphic organizer transparency while the class watches. (See page 75.)
4. Hand out the student copies of the graphic organizer. The students should use their list to write the five steps of their process in order on the graphic organizer.
5. Collect their graphic organizers and check for understanding.

Day 3

1. Return the graphic organizers and have the students use them to write a first draft of the process essay. Circulate to help students with introductions and conclusions. Be sure to have them follow the steps of the writing process.

How to Ride a Roller Coaster

If you've never ridden a roller coaster before, it's time you tried one. They're lots of fun, and they're the most popular rides at any amusement park. Follow this advice to have a great first run.

Decide what you think is scariest and whether you want to try a wooden or a steel coaster. Are you terrified of going upside down? Does high speed scare you? Avoid a coaster, no matter how mild, if it has that feature. The wooden ones almost never flip you upside down, but they shake and rattle a lot more. Steel coasters give a smoother ride. Wooden coasters follow the track because of the forces of gravity and motion; steel coasters are actually attached to the track.

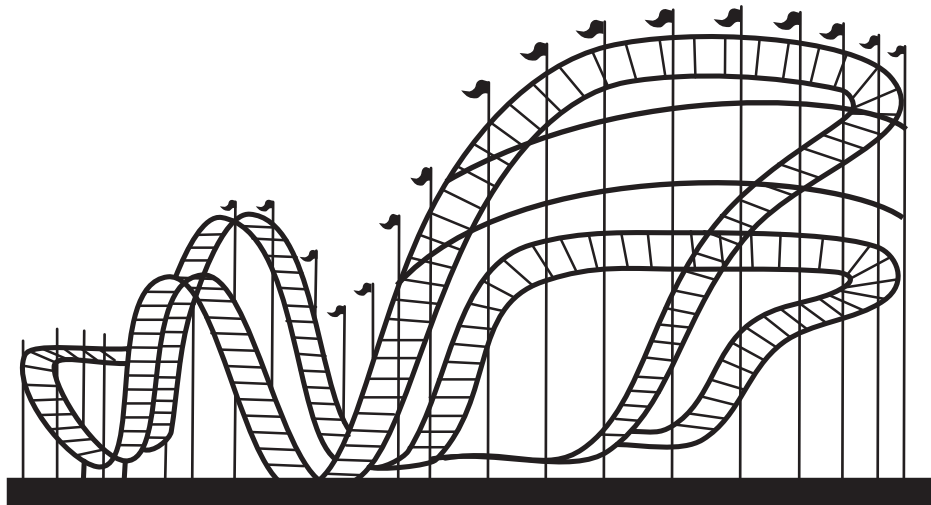
Choose the mildest coaster that you can. Don't go for the tallest, fastest, scariest one. It's best to work your way up to that. If you're still small enough, you can even try a kiddie coaster.

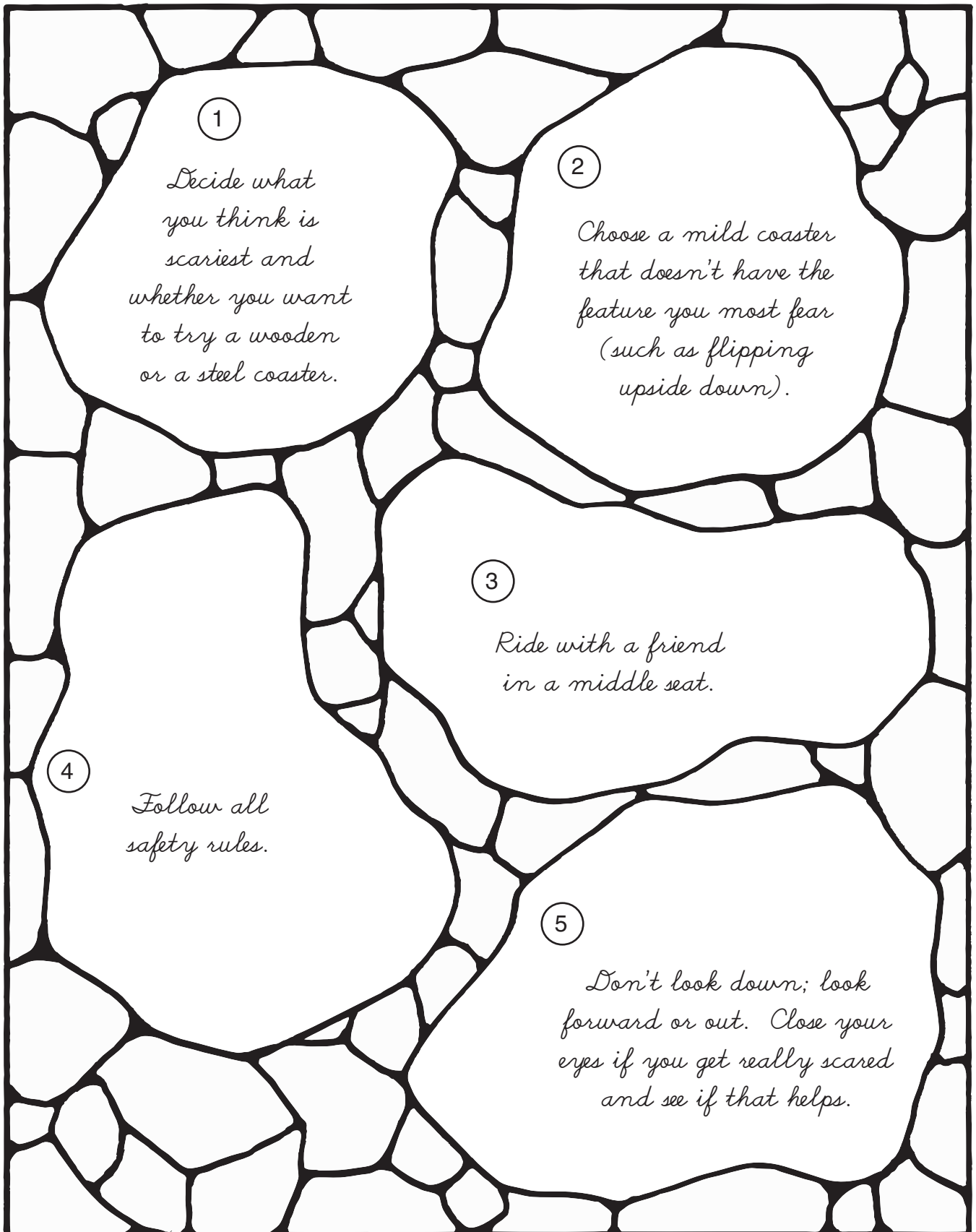
Ride with a friend. You will feel more confident if you go with a friend or family member, especially one who likes coasters. But don't let them talk you into sitting in the front or the back seat. These spots are considered the two "wildest" rides. You want a seat in the middle.

Follow all the safety rules. You will be strapped in and probably have a safety bar, as well. Once you've fastened all straps and bars, you're as safe as you can be on the ride. Relax knowing that the ride was tested just this morning for its safety.

If heights scare you, don't look down. Look forward or out over the landscape. Once you're an old hand at riding coasters, you can try looking down. If you get really scared on the ride, try closing your eyes. It may help you if you can't see what's coming.

You may find that riding coasters is great fun for you, or you may find that it's not. But you'll never know until you try. Good luck!





1

Decide what you think is scariest and whether you want to try a wooden or a steel coaster.

2

Choose a mild coaster that doesn't have the feature you most fear (such as flipping upside down).

3

Ride with a friend in a middle seat.

4

Follow all safety rules.

5

Don't look down; look forward or out. Close your eyes if you get really scared and see if that helps.