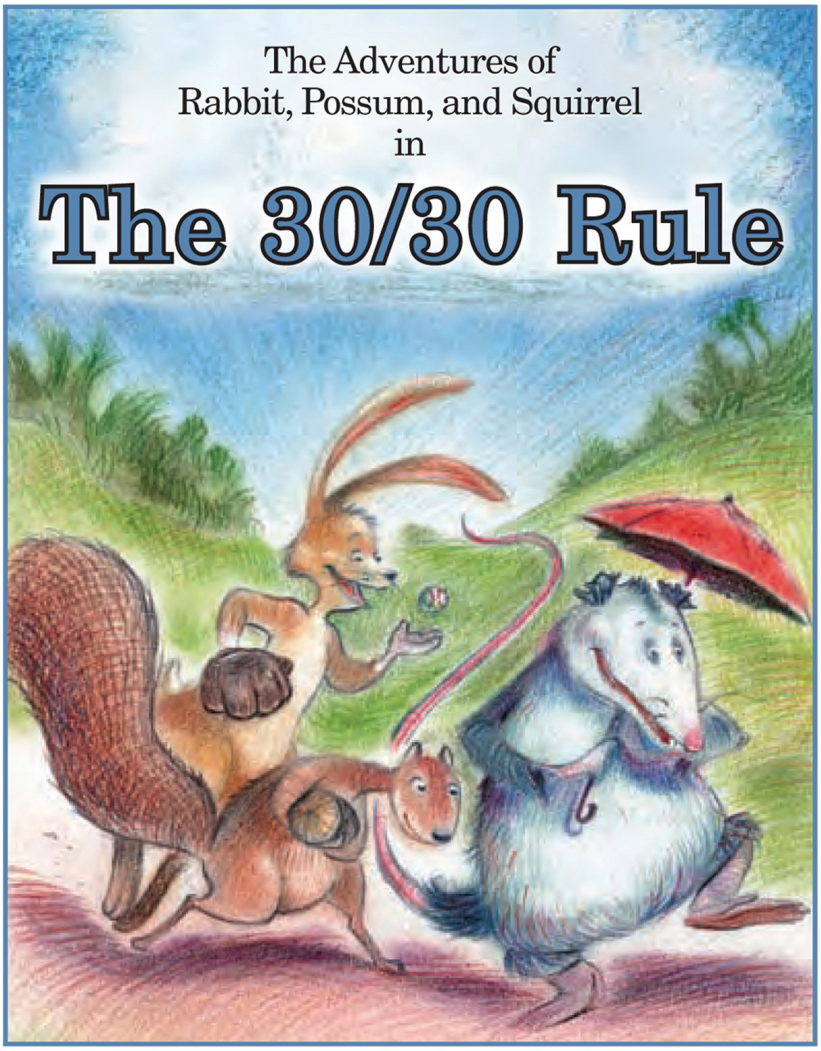
A Guide for Teachers and Parents for



Presented by the Florida Division of Emergency Management

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Dear Educators and Parents,

The mission of the Florida Division of Emergency Management is *"Working together to ensure that Florida is prepared to respond to emergencies, recover from them, and mitigate against their impacts."* We work with local governments to respond to all types of disasters. Many of these disasters are due to severe weather events such as lightning, tornadoes, and hurricanes, which in Florida, are common occurrences.

While we cannot prevent severe weather, there is much each of us can do to prevent injury to ourselves and damage to our property. Awareness begins with each individual, no matter how young. To that end, the Florida Division of Emergency Management has commissioned i.d.e.a.s. to create three storybooks and an interactive website located at ***www.KidsGetAPlan.com*** that are intended to be utilized by first, second, and third grade students as well as older students.

The storybook for first graders, The Adventures of Rabbit, Possum, and Squirrel in The 30/30 Rule, teaches young children how they can protect themselves from lightning strikes. Professor Tinkermeister and the Wacky, Whiz-Bang, Weather-Watching Wonder, allows the second grade reader a chance to learn about and protect themselves from the powerful nature of thunderstorms while traveling on a fantastic journey in a magical machine. In The Oak Tree Club, third graders will learn about how they can create a Disaster Supply Kit for their families to prepare for a hurricane. Each of these books was created at the appropriate reading level for each grade. The science is presented in a matter-of-fact and non-threatening manner so as not to create undo fears in our children.

Each of the books also comes with an accompanying guide for teachers and parents. Each guide explains some of the science presented in the books and answers questions that children are likely to have while reading the stories. The guides also explain how the books can be used to help our children to become better readers.

We hope you find the books, interactive website, and accompanying guides for teachers and parents helpful. Thank you for your continued support in helping Florida's children protect themselves from the hazards of severe weather.

Sincerely,

Craig Fugate, Director
Florida Division of Emergency Management

Be Smart! Be Safe! Be a Survivor!

Table of Contents

Before you read together…

The Adventures of Rabbit, Possum, and Squirrel in THE 30/30 RULE is a book about lightning safety. Although technically written at a grade one *reading* level, a child of this age will benefit from discussion of some of the *science* concepts and vocabulary before reading the book. Using the "big book" and reading together as a class will allow you to guide the children in their approach to reading this story before they read their own book alone. The pre-reading suggestions below will help a new reader to comprehend the story better.

Introduce New Concepts and New Vocabulary

Beginning readers benefit by the introduction of new concepts and new vocabulary words before starting to read a book. In order to understand the story, and grasp the meaning of the science concepts introduced in it, it is important that the readers know and understand the following words and concepts that will be found in this book.

- **Lightning** – Lightning is a flash of light that is produced by the discharge of electricity between a cloud and the ground or between two clouds in the sky.
  - Help the readers relate by asking if they have ever been shocked on a dry, cool day when walking across a carpet and then touching a doorknob. Why does this happen? Your body, and everything else around it, is actually made of atoms. Those atoms are made of electrical particles called protons and electrons. Protons carry a positive charge, and electrons carry a negative charge. They are usually in equal balance, but when two surfaces touch each other, opposite charges can become separated from one another. This bit of rubbing of two surfaces together can cause some of the electrons and protons to become dislodged and they transfer to the other surface. When one surface carries an imbalance of these particles, it causes static electricity to build up on that surface. This is what happens when the soles of your feet rub across that rug. You actually carry a "net electric charge" in your body. That little shock that zaps your hand when you touch the doorknob is from static electricity being discharged which restores the electrical balance. Lightning is the same phenomenon; only the static electricity released in lightning is much, much stronger. When the columns of air inside a cloud move up and down, they "rub together," too. This causes that same kind of static electricity build up inside a cloud. When the buildup releases, it causes the lightning flash. Lightning can be very dangerous, especially if you are outside and lightning is nearby.
  - On a cool, dry day, you can create static electricity at home or in your classroom. Using a latex balloon, rub it on the head of a student for about 15 seconds. Be sure to rub around the whole balloon. (Generally, a student with chin-length, fine hair without oils or hair spray works best.) Rub the balloon in just one direction, for instance, stroke the balloon "down" the hair. Then, hold the balloon a small distance away from the ends of the child's hair. The

balloon will attract the hair showing the presence of static electricity. Then let the child touch another child. It will be a shocking experience!

- **Thunder** – Thunder is the sound that is produced by lightning. When the lightning travels through the air releasing static electricity, it heats up the air around it very quickly. When heated this rapidly, the air expands and then contracts very fast. This expansion and contraction causes the loud sound called *thunder*. Lightning and thunder really happen at about the same time. But, since light travels much faster than sound, you usually don't hear the thunder until *after* you see the lightning flash. Sometimes, especially at night, you may see lightning, but not hear the thunder because it is too far away.
  - Help the readers relate by reminding them of the little snapping sound they hear when they are shocked by the static electricity in the carpet example above. Thunder is the same principle; only, because the charge is much stronger, the sound is much louder!

- **The 30/30 Rule – There are two parts to the 30/30 rule:**
  - **You need to go inside if you hear thunder within 30 seconds of a lightning flash.**
    - Light travels at 186,000 *miles* per second, but sound travels much slower than light…only about 1,087 *feet* per second. So when you see lightning flash, even if it is many miles away, you see it at almost the same instant that it occurs. It takes the sound of thunder much longer to reach your ears.
    - You can use this principle to estimate how far away the lightning is by counting the seconds between when you *see the lightning*, and when you *hear the thunder*. Every five seconds is approximately a mile. (That is, 1,087 ft./sec. X 5 sec. = 5,435 ft. One mile equals 5,280 ft. So, if the time between lightning and thunder is 5 seconds, that means the lightning strike is approximately one mile away.)
    - When you see the lightning, you should begin to count the seconds. If you hear the thunder within 30 seconds, then the lightning is less than six miles away…close enough to put you in danger! You should go inside!
  - **You need to wait at least 30 minutes after the thunder before going back outside.**
    - Even when it is not raining anymore, storm clouds might still be close enough to create a lightning strike that could cause you harm. Therefore, you should wait at least 30 minutes after you hear the last thunder before going back outside.

- **Tallahassee** – Tallahassee is the capital city of Florida. Using a map, or drawing a simple map of Florida on the board, locate Tallahassee for your students. Then, locate the city or town nearest where you live. This introduces the vocabulary word in terms of *geography*. Then, you may wish to talk a bit about government

activities that take place in Tallahassee. (For instance, state laws are made there.) This will help the students to relate.

- In the story, Rabbit counts seconds by saying "One Tallahassee, Two Tallahassee, Three Tallahassee" etc. Help the children to know that counting seconds this way prevents them from counting too quickly.

Introduce the Characters

As you look at the book cover with the children, point out the three characters Rabbit, Possum, and Squirrel. Most children in Florida will recognize that rabbits, possums (sometimes spelled opossums), and squirrels roam wild in our state. Ask if they have ever seen animals like these before. Ask them what they know about these kinds of animals. Spend a few moments listening to any stories that they may have in their own experiences. Doing so will help them "get into" the book much more easily.

As you read together…

As you read with the children, pause every so often to ask probing questions about the story. (If you are using the interactive online books, you can click on the question mark at the top of each screen and the narrator will ask the questions for you!) Before reading a page, take a look at the picture. Ask the students about the things they see in each picture. Talk about what they see. Help them to begin to think about the story *before* they start to actually read the words on each page. If you model this kind of questioning with your students, you will help them build mental models of the story and increase their reading comprehension. Because children are great mimics, eventually, they will begin to create their own questions as they read on their own. There is no "exact right way" to do it. Use the suggestions below as a guide.

PAGE 1
Look at the picture and ask the students the following questions. What color is the sky? Do you see clouds? What do you think the weather is like today? What do you think the characters are getting ready to do? How can you tell? How do you think the characters feel? Point out how they can get cues from the pictures to help them read.

PAGES 2 and 3
What does the sky look like in this picture compared to the page before? How does each character feel now? Does it look like they all feel the same? What made their feelings change? Why is Squirrel running away? What do you think will happen next?

PAGE 4
What is Rabbit doing? Point out the "thought bubbles." What do you think he is thinking about?

PAGE 5
This is the 30/30 Rule. This was already covered in the pre-teach. If there are any questions from the students, answer them before going on.

PAGES 6 and 7
What is Rabbit doing? Does he look concerned about anything? How about Possum?

PAGES 8 and 9
What is Rabbit doing? Where is Squirrel? How is Squirrel feeling? Why?

PAGE 10
How has the sky changed now?

PAGE 11
Why is Rabbit counting? Predict what will happen next.

PAGES 12 and 13
Why is Rabbit running inside? What is Possum doing? How does Possum feel? What do you think will happen next? What makes you think that?

PAGE 14
How has the weather changed now?

PAGE 15
What made Possum get out of his hammock?

PAGES 16 and 17
What is Rabbit doing? Why do you think he looks so happy? How does Possum feel? How does Squirrel feel? What is the weather like outside?

PAGES 18 and 19
What are the three safety tips that Rabbit is sharing?

PAGE 20
What is happening with the weather now?

PAGE 21
What is Rabbit telling Possum? Point out that this is the second part of the 30/30 Rule. What time is it?

PAGES 22 and 23
What time is it now? What is the weather like outside? How do the three friends feel?

PAGE 24
What happened to Possum's umbrella and hammock? What lesson has Possum learned?

PAGE 25
What news is the radio broadcasting? What do you think will happen next?

PAGES 26 and 27
Where is Squirrel going? Why? How does Possum feel now?

PAGES 28 and 29
What is Rabbit doing? Why does he get to sit and enjoy the sunset?

BACK COVER
Review the 30/30 Rule with your students. Answer any questions they may have about it.

After you read together…

After reading the story, talk about it with your students. Suggested questions to discuss are:

- Where do you think this story took place? How can you tell?
- Which character in the story was so afraid that he didn't get to have much fun?
- Which character in the story was lazy and could have been injured because he ignored the 30/30 Rule for lightning safety?
- Which character knew the rule and obeyed it?
- Why is it important to pay attention to the weather when you are playing outside?
- How many different kinds of weather did the characters experience in one afternoon?
- Have you ever experienced a lightning storm? Tell us about it. Where you afraid?
- What is the 30/30 RULE for lightning safety?
- How can the 30/30 RULE for lightning safety help to keep you safe?