



Want to learn more about disasters? Want to find out what disasters could happen in your state or if your community is part of Project Impact? Want to become a FEMA Disaster Action Kid? Then visit the FEMA for Kids Web site, at www.fema.gov/kids. To learn more about fire safety, visit www.usfa.fema.gov/kids.

Letter from the FEMA Director

Dear Young Friends:

I am pleased that the Federal Emergency Management Agency is able to bring you the adventures of Julia and Robbie, the Disaster Twins. These stories will teach you important actions to take in a natural disaster. These stories also include information about preparing for and mitigating against natural disasters. We all must take responsibility for making our communities safer. By reading these stories you are learning what to do — and that's the first step! The second is finding out more about FEMA's Project Impact through the FEMA for Kids Web site.



Best wishes,

James L. Witt

Julia and Robbie: The Disaster Twins

Robbie and Julia are twins. They live in Eenietown and attend Booksin School. They have many pals and a teacher named Mrs. Fletcher. (Robbie likes spelling. Julia likes history.) Their dog is named Skipper.

Robbie and Julia like playing at recess and riding their bikes. They like to wear jeans and get dirty and go to birthday parties. They are regular kids except for one thing. Everyone in Eenietown calls them the

Disaster Twins. Why? Because wherever Robbie and Julia go, natural disasters follow. Fortunately, the twins and their family are prepared!

By reading their stories, you can learn what to do during disasters and how to be ready. Then test your knowledge with the quizzes that follow each

chapter. So turn the page and join Robbie and Julia on their adventures as the Disaster Twins!



CHAPTER ONE

The January Blizzard

Julia stared out the window and shivered.

“It looks so cold out there,” she said.

“That’s because it *is* cold out there,” her mother answered.

The sky outside their window was gray and the limbs of the bare trees shook in the wind. Icicles hung from the eaves of the house. About a foot of snow was already on the ground.





The radio had announced a winter storm warning because weathercasters were predicting severe winter conditions. Now the twins and their

mother were just waiting for the blizzard.

“I hope Dad gets home soon,” said Robbie, Julia’s twin brother. “He could get stuck in the blizzard!”

School had been cancelled, but their father had gone to work any way. The children look worried and even when Skipper wagged his tail, they still looked glum.

So far that day, Julia and Robbie had finished their homework, watched television, cleaned their rooms and had soup and sandwiches for lunch.

Julia was now setting up the checkerboard, separating the black and red checkers. But she didn’t really want to play a game. She looked through the window again.

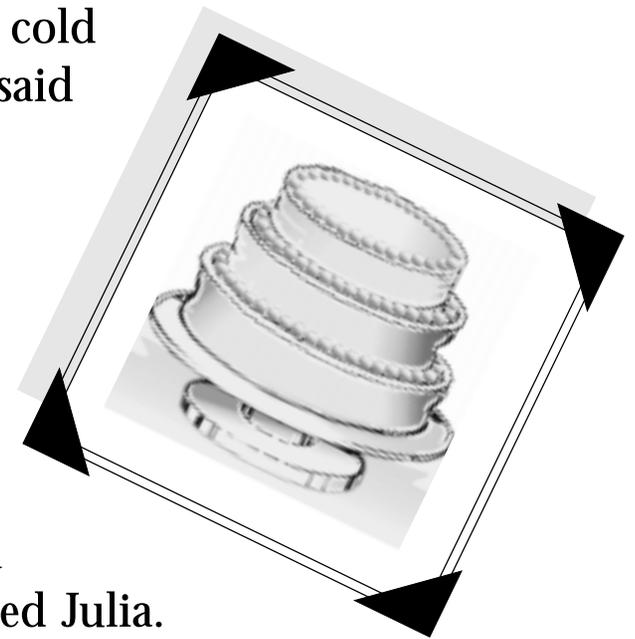
“Why don’t you two go outside and watch for your father?” asked their mother.

“I don’t know. It looks too cold out there,” said Julia.

“You just need to dress in layers,” said their mother.

“Like a cake?” giggled Julia.

What their mother meant was that they could stay warm by wearing several layers of clothing.



For example, the twins could wear a sweater on top of a T-shirt and then put on a vest and then a jacket. Mittens are also warmer than gloves, their mother said, and they need to wear a hat.

“If it’s really cold, a scarf to cover your mouth is good to protect your lungs from the cold air,” their mother added.

“Let’s go,” shouted Robbie. Julia agreed.

Once outside, it didn’t seem like such a good idea. Even with all their layers – it was cold! It had started to snow, too.

“Let’s just walk down the driveway to the street and back to warm up,” Julia suggested.



“Maybe we’ll see Dad’s car,” said Robbie.

Their boots made crunching sounds against the snow. Their breath came out in clouds. The snow fell on them, thicker all the time.

Robbie pretended he was a great explorer, searching for the North Pole.

“I know it’s around here somewhere,” he teased.

Julia didn’t think he was funny. Even when he *was* funny, she tried not to show it.

“My nose is cold,” complained Julia. “Do I have frostbite?”

Robbie knew that frostbite happens when skin is exposed to very cold temperatures.

“You just need to put your scarf across

your nose to stay warm,” he said.

They got to end of the driveway and looked down the street. It was empty.

“Where is Dad?” asked Robbie. He slapped his hands together to stay warm. The snow was falling faster. “I’m worried.”

“What happens if Dad’s stuck in the snow?” Julia asked.

She looked down the street again, hoping to see his blue car turn the corner. But the street was empty. All the parked cars were being covered in a blanket of white.

“I know that if you get stuck in a blizzard, you’re supposed to stay with the car,” Robbie said proudly.



Robbie had learned that in school.

“You wait for help. You set the lights flashing and hang a distress cloth,” he added.

Julia huffed. She knew all this. “Yeah, and you need to clear snow away from the car’s exhaust so that when you turn on



jumped up and down to stay warm.

“I don’t think Dad will mind if we wait inside,” Julia said and she ran for the front door.

Inside, it was warm! His mother had built a fire and had hot chocolate waiting for them. Sparky barked in greeting.

“This is a real blizzard,” Julia said.

“Probably,” their mother said, as she helped them off with their jackets. “But we have flashlights, batteries, food, wood for the fireplace and bottled water. Don’t worry. We’ll be fine.”

Both Julia and Robbie felt tired from their walk in the snow.

“I’m taking a nap,” said Robbie. He fell asleep in front of the fire.

Skipper curled up at his feet.



the engine to stay warm, you don’t get carbon monoxide poisoning.”

“You think you’re so smart!” Robbie

Julia watched the snow fall thicker and thicker outside. The afternoon grew dark. Still their father was not home. What would they do if he got stuck in the snow? How long would he have to wait until he was rescued?

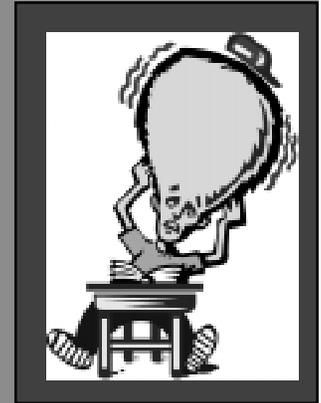
Her eyes started to close. It was so warm by the fire. The hot chocolate made her sleepy. She struggled to stay awake.

And then she heard the crunch of tires in the driveway. Their father was home safe. Now she could take a nap by the fire and really enjoy the blizzard. Maybe they would have tomorrow off from school, too!



1. When you go outside in the cold, dress in layers.

True False



2. If you get stuck in your car during a blizzard, you should:

- a. Get out and build a snowman
- b. Do your homework
- c. Stay with the car, running it every now and then to keep it warm
- d. Change a tire just for something to do

3. Flashlights, bottled water and food are good things to have on hand in case you must stay home during a blizzard.

True False

Answers: 1. True! 2. C! 3. True



CHAPTER TWO

The River Rises

Julia stared out the window. “Is it ever going to stop raining, Grandma?” she asked. It had been raining for three days. “This was supposed to be a vacation.”

“I hope it ends soon,” Grandma said. “I don’t know if the Acorn River can take much more.”

Grandma looked worried. Most of the time, the Acorn River was a nice, slow river, lazy as a cat in the sunshine. Now it was full and raging.

“But Grandma,” Robbie said, “we’re pretty far from the river.”

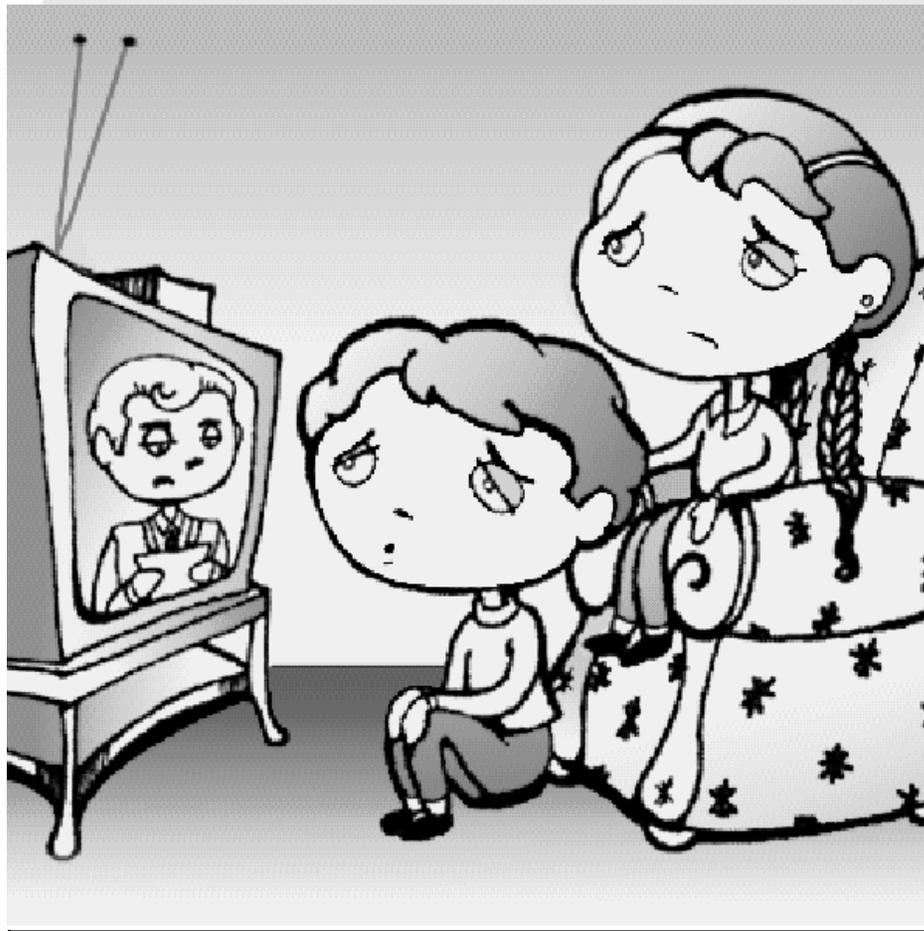
“You’re probably right,” she said. She didn’t want to act worried in front of the twins. “Are you ready for lunch?”

The twins went into the kitchen to help Grandma make grilled cheese sandwiches.

But still the rain fell, even past dinner.

That night the TV weatherman was serious. Usually he wore a funny tie and made jokes. He didn’t joke now.

“The river is approaching flood stage,” he said. “The Army Corps of Engineers is sandbagging along the shore.”



“Oh dear,” said Grandma and she started to rub her hands together, which she did when she was really worried.

“Is that bad?” Julia asked. “What does sandbagging mean?”

“I know,” shouted Robbie. He was always trying to prove he was smarter than his twin. “It means putting sand in bags, of course!”

Julia scowled. “Everybody knows that! But why do they do it?”

Robbie started to answer but no words came out of his mouth. Finally, he admitted, “I don’t know why.”



Both Grandma and Julia laughed because Robbie looked like a funny fish with his mouth opening and closing.

When she stopped laughing, Grandma told them the sandbags would be stacked along the river to keep the water from flowing into the town.

“Then we’ll be safe,” said Julia hopefully.

“Probably,” said Grandma. “But we need to be prepared. This area flooded many years ago, when I was a little girl.”

“What should we do?” Julia asked.

Grandma said, “The water can rise very fast in a flash flood. We need to be ready to evacuate, just in case.”

Julia and Robbie looked at each other. This was serious.

“We’ll help,” Julia said. She defi-

nitely didn’t want to be swept away. The thought made her shiver.

“Pack a suitcase with things for a few days,” said Grandma.

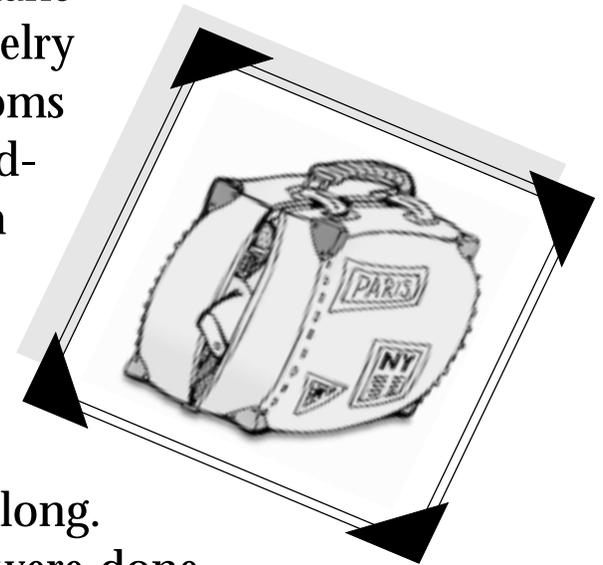
The twins went into their rooms and packed clothes and shoes. They didn’t forget their toothbrushes.

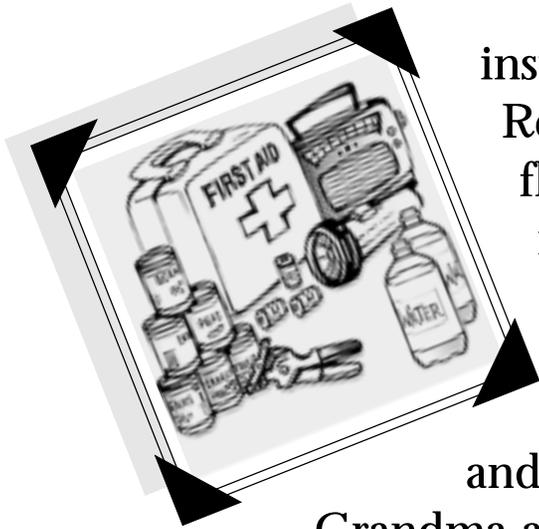
“Can I bring some toys?” Julia asked.

“By all means,” said Grandma.

Grandma packed a suitcase, too. In addition to clothes, she made sure she had important papers, jewelry and heirlooms like her wedding album and an antique quilt.

It didn’t take long. Soon they were done.





Then Grandma instructed Julia and Robbie to gather flashlights, batteries, a first aid kit, a battery-powered radio, canned food and a can opener.

Grandma also found the small cook stove in the camping gear, and then she did something funny.

“Grandma!” Julia shouted. “What are you doing?”

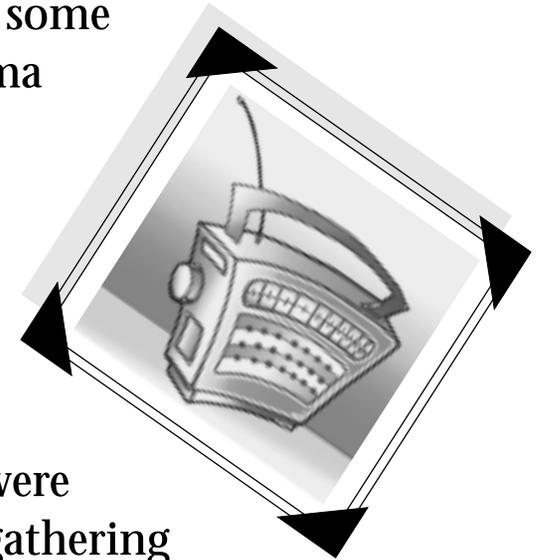
She was filling empty plastic soda bottles with water from the tap and putting them in a cooler. Their supplies formed a small pile in the living room.

“It’s important that we have a supply of water,” she said. “We don’t know what may happen.”

Grandma turned on the radio so they could hear important news.

“Now get some sleep,” Grandma said.

Julia and Robbie thought they would have trouble sleeping, but they were so tired from gathering all the disaster supplies that they fell fast asleep.



Grandma woke them up at dawn.

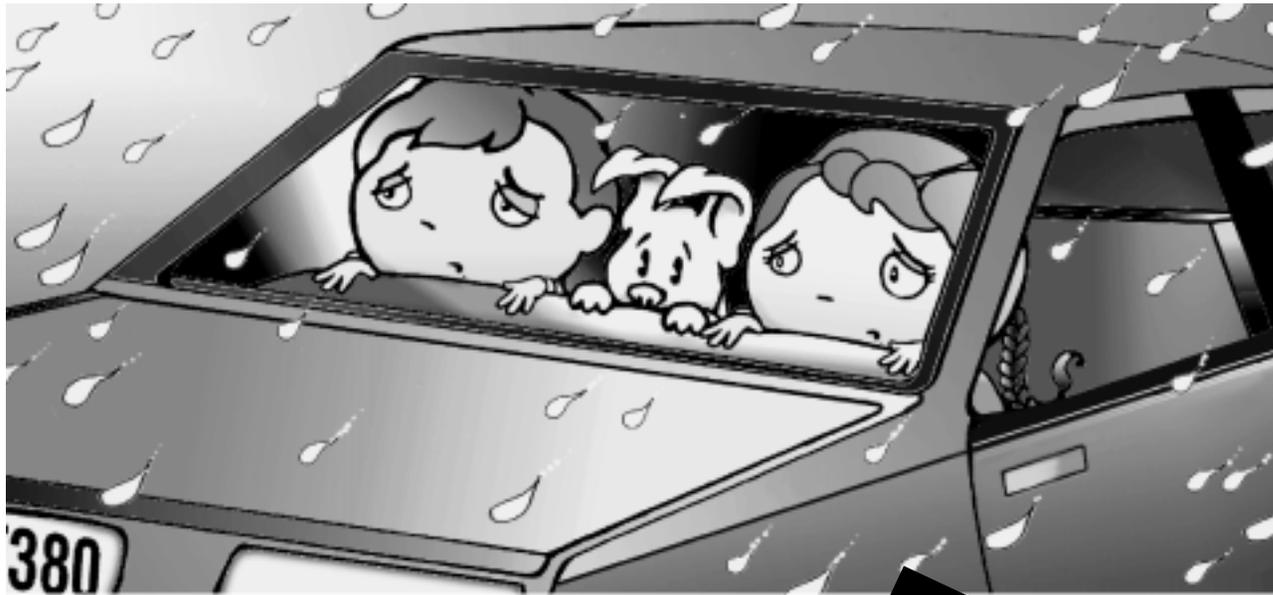
“It’s time to go,” Grandma said.

“We’re being asked to evacuate.”

Julia and Robbie were scared and excited at the same time.

Grandma put their suitcases and disaster supplies in the car. She had the twins’ dog, Skipper, on a leash and extra food for him. They all got in and Grandma drove out of the driveway. Other families were doing the same.

It was still raining but the twins didn't see a flood. Asked Julia, "Where's the water?"



"It's still far away, but it's spilling over the sandbags," Grandma said. "But not to worry. We evacuated in time. Sometimes people wait. That's not smart. Even six inches of water can sweep a car away."

Grandma had grown up along the river. She knew all about flood safety.

"We're going to go into the next town," she said. "There's a Red Cross shelter there. We'll stay there until the

water recedes."

"What about Skipper?" Julia asked.

"He can't stay at the shelter," said Grandma.

"But there's a nice kennel in Porterville where he can stay until we can take him home."



"But what about the house?" Julia cried. "What about your nice house?"

"Don't cry, honey," Grandma said.

“I have all the important things with me – you two and Skipper and my heirlooms and papers. I don’t keep important things in the basement because it might flood. And my utility box is upstairs, away from the water.”

“You’re great, Grandma,” said Robbie. “You know everything.”

“I even have flood insurance,” she said, with a smile.

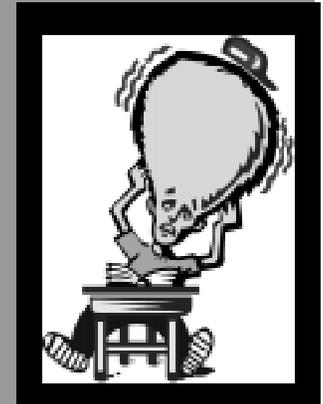
Soon Grandma turned into the twin’s favorite diner. “Anybody ready for breakfast?” she asked.

The twins didn’t have to be asked twice. They could almost taste the pancakes. Then Julia realized something.

“It stopped raining,” she said. “Finally!”



What did you learn?



1. In addition to clothes, what did Grandma take with her when she evacuated?

- A. Old Shoes
- B. Important papers and heirlooms
- C. Soap

2. Where would Skipper stay during the flood?

- A. A kennel in Porterville
- B. In Grandma’s house
- C. The Red Cross shelter

3. How did Grandma prepare for a flood?

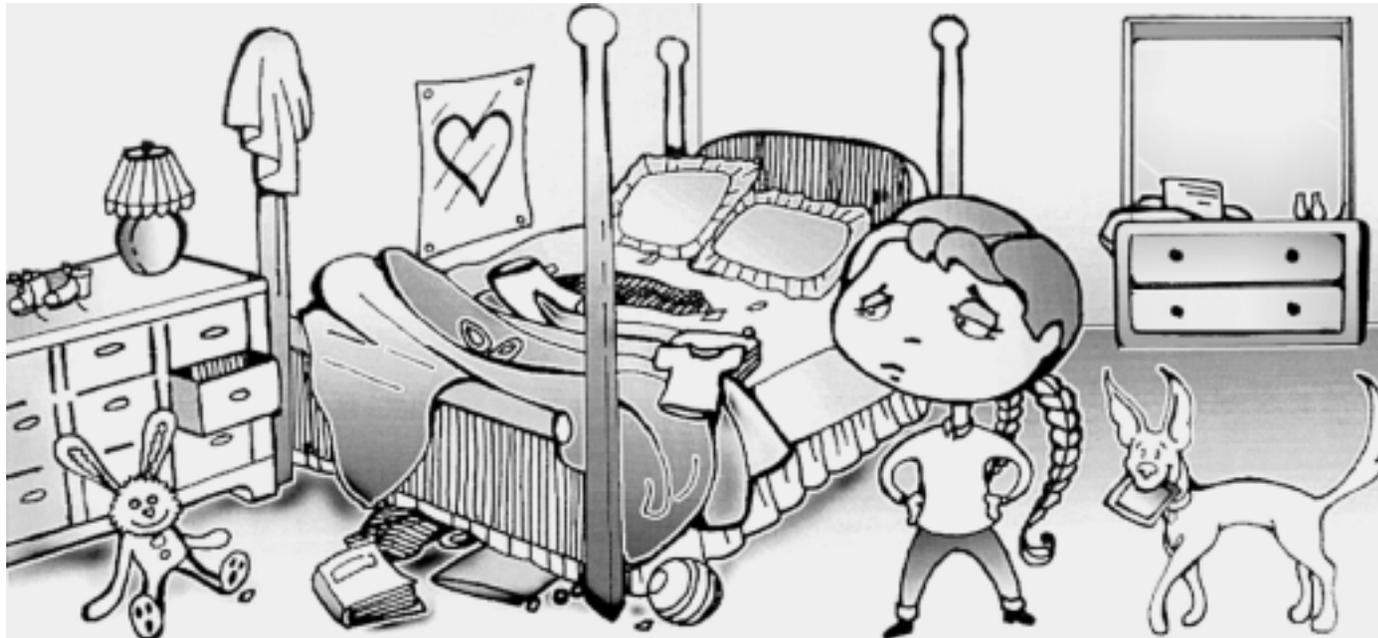
- A. She moved her utility box upstairs and bought flood insurance
- B. Nothing
- C. She bought a raft
- D. She bought plastic furniture

Answers: 1. B; 2. A; 3. A.

CHAPTER THREE

The Afternoon Tornado

Julia's mother stood at the door to her daughter's room, with her hands on her hips.



“This room looks like a tornado hit it,” Julia’s mom said. She was mad.

Julia couldn’t argue. Clothes and shoes and toys were scattered over the floor and her bed as if put there by a strong wind.

“I’ll clean it up later, Mom. I promise,” Julia said. “Can I go out and play now? The weathercaster said there would be thunderstorms later. I’ll clean it up then.”

Julia’s mother was thinking it over when Robbie, Julia’s twin, stuck his head through the door.

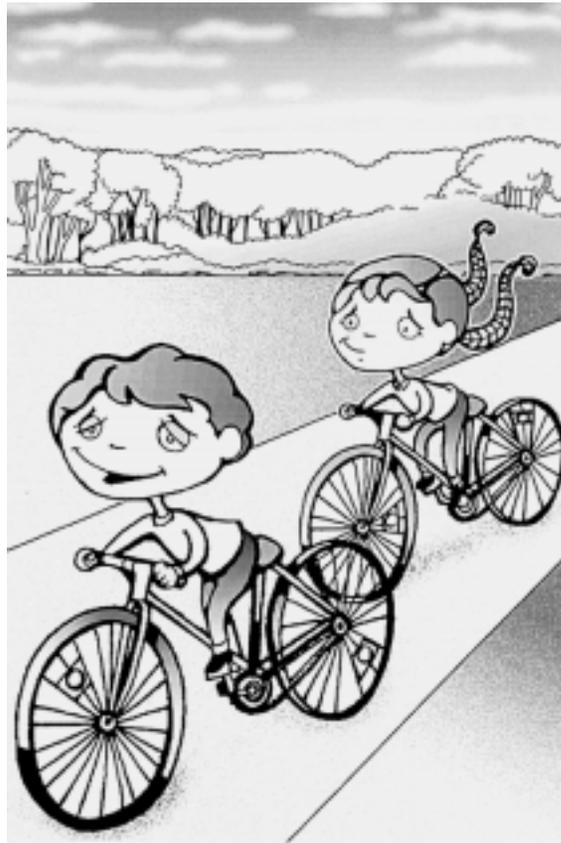
“I’ll even help her, Mom,” Robbie said. “Can we go out and play? Please?”

The twins looked so pleading that she gave in.

“OK,” she said. “Go have fun. Just come home when it starts raining.”

The twins darted out the door, before their mother changed her mind.

They rode their bikes to Jensen Park. It was six blocks from their house, across the street from Mr. Henry’s bookstore, a gas station and other shops. The park was their favorite place to play. There was a small house in a tree and a swing set and a small pond where Robbie liked to pretend he was fishing.



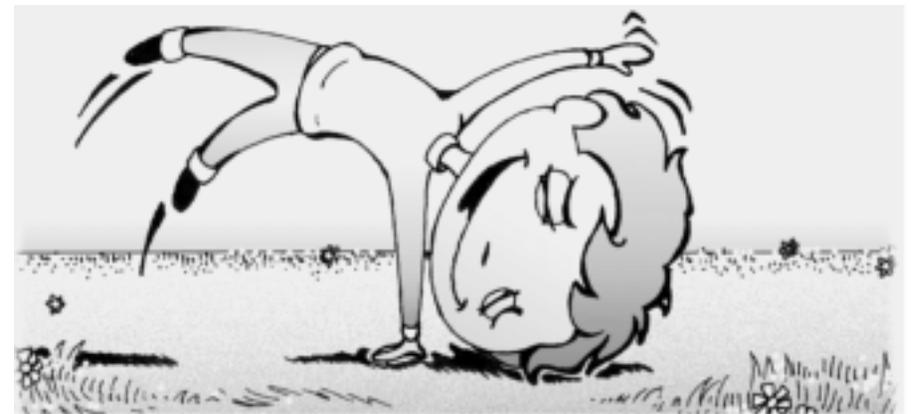
There was a strong wind and Julia peddled hard against it. Her hair flew out behind her.

“Summer is great!” Robbie shouted into the breeze.

Julia agreed, but just nodded and peddled harder.

Once at the park, Julia went looking for wildflowers. Robbie followed her, jumping and trying to do cartwheels, which he didn’t do very well. When he fell he made a soft thud against the soft grass. Julia giggled.

“Look at how fast the clouds are moving,” Julia said.



They seemed to be galloping across the sky like horses.

“And they’re getting pretty dark,” sighed Robbie. “We have to go back.”

“We still have some time,” Julia said, admiring her flowers. “I don’t want to clean my room yet.”

Robbie didn’t seem to be listening. He stared at the sky. Then he stood up and pointed. “Look!”

Julia looked. The clouds near the horizon were dark, nearly as dark as night and they seemed to be moving in a pattern. Julia had never seen anything like it before.

“What is it?” she asked.

Robbie motioned for his sister to get up, too. “I think,” he said slowly, “it’s a tornado.”

Julia didn’t like the way the clouds looked, but she didn’t think Robbie was right. He couldn’t be right!

“We’ve never had a tornado here,”

she said.

“Tornadoes can happen anywhere,” Robbie said.

“What do we do?” Julia asked.

Robbie grabbed her hand and they ran toward their bikes. He didn’t take his eyes off the dark clouds.

Julia was scared. The wind was blowing harder now through the trees. It started to rain.



“It’s pretty far away,” Robbie said.

“But we have to get home,” he added.

“Let’s just hide in the tree house,” Julia suggested.

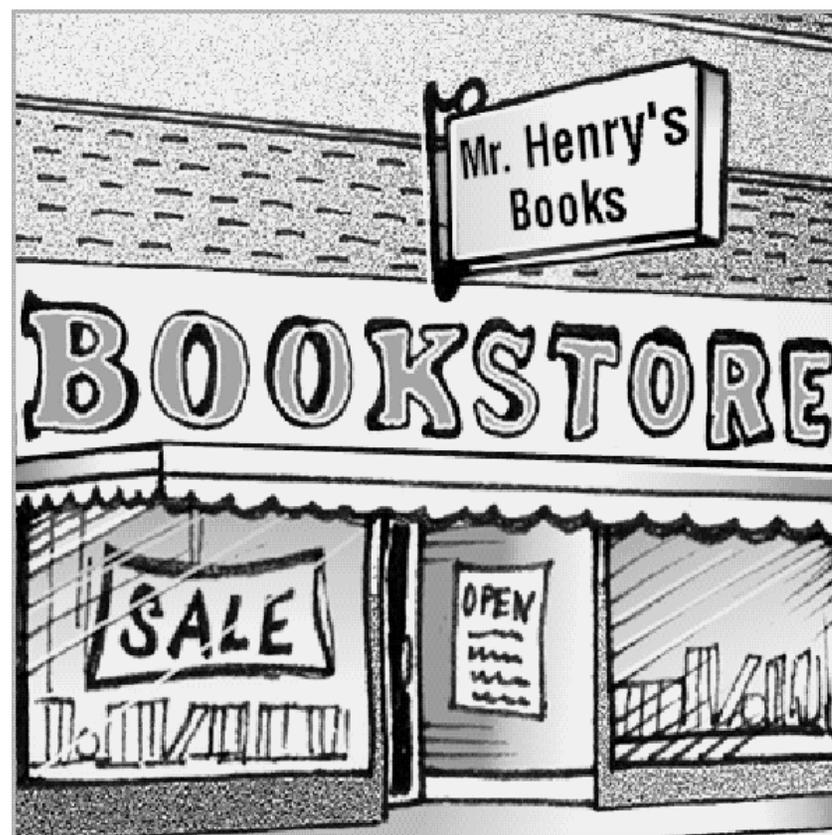
“No, that’s not safe,” Robbie said. “We have to get in a low spot, like a ditch, and cover our heads. Or we need to run inside.”

Robbie looked at Julia and they decided together – they didn’t want to be outside with a tornado.

“Let’s go,” Robbie yelled and headed for the bookstore. They burst through the front door.

“Help!” Robbie called. “Mr. Henry! We need help!”

There was no answer, but a radio was on and a newscaster was giving a tornado warning. “Everyone get inside,” the radio said. “Get in the basement or in a reinforced room in the center of your house. Stay away from windows.”



“Get downstairs!” Julia shouted. The twins dashed through the bookstore until they found the door that led to the basement. They ran downstairs. In the basement, they found the storeowner and a clerk.

“Kids!” Mr. Henry, the bookstore owner, hugged them. “I’m glad you

found someplace safe to be. We'll be fine down here."

"We have to call our Mom," Robbie said.

Mr. Henry had a phone in the basement and Robbie called to say they were safe.

"Just stay in the basement until it's over," his Mom said.

The twins huddled on the concrete floor and listened to the radio news about the storm. They imagined what the wind must sound like outside.

"Tornadoes sure can come suddenly," Julia said.

"They often come with bad thunder-



storms," said Mr. Henry. "They are hard to predict, but we did get some warning this time. That's why it's good to have a weather radio to alert you to severe weather."

"We need to get one," said Robbie.

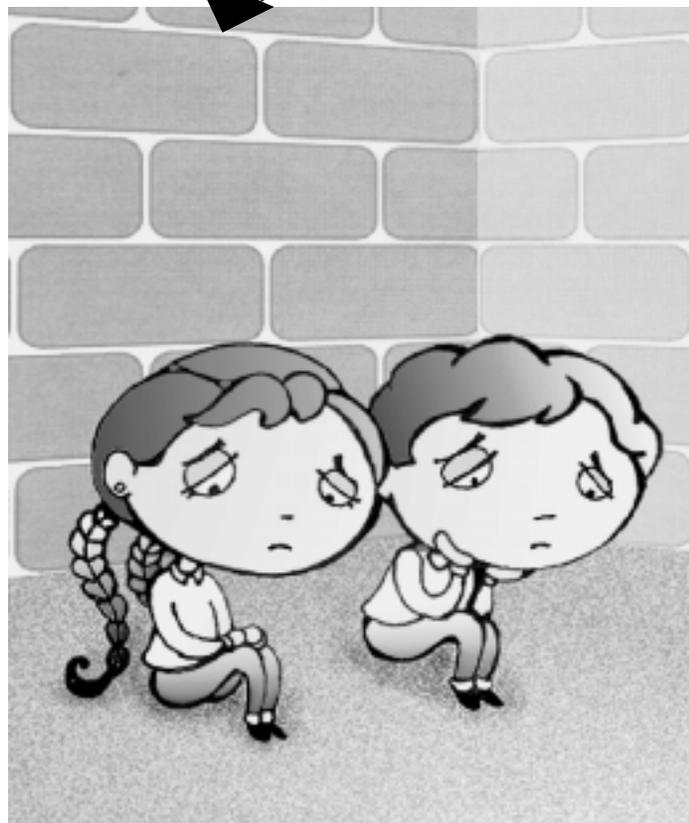
"Some people even build a safe room in their house to protect themselves from tornadoes," Mr. Henry said.

"Cool!" said Robbie.

Soon the radio gave the all clear. The tornado had not touched the town at all.

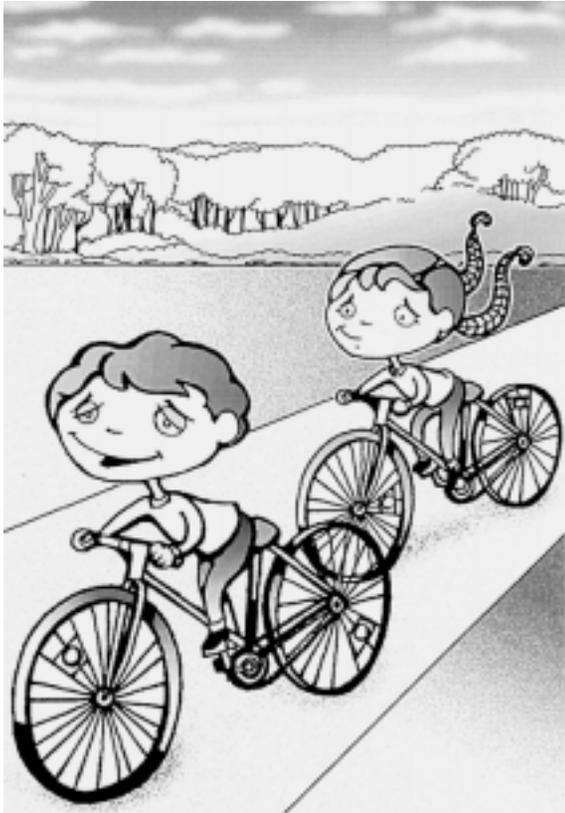
"We were lucky," Julia said, as she and Robbie ran outside.

"But that was close," said Robbie, his eyes wide with amazement.



“I’m glad we have a basement,” Julia said. “In case this ever happens again. It’s too scary.”

They jumped on their bikes and pedaled hard. Julia wanted to get home fast, even if it meant she had to clean up her room when she got there!



What did you learn?

1. Tornadoes can happen almost anywhere.

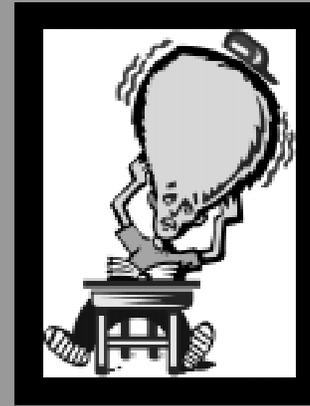
True False

2. Where is the best place to be during a tornado?

- A. Basement
- B. Tree house
- C. On your bicycle
- D. Playing in the park

3. Scientists always know when tornadoes will hit and can give lots of advance warning.

True False



ANSWERS: 1. True! 2. A! 3. False.

The Shaky Vacation



The twins thought visiting Southern California during their summer vacation was a great idea. Their Uncle James lived there and they could visit the ocean.

“We can see movie stars in Hollywood and visit amusement parks, too,” shouted Julia.

“Let’s go!” Robbie jumped up and down with excitement. Their Mom and Dad smiled and said they’d make the plans.

Two weeks later, they were all on a plane to Los Angeles, which Julia didn’t like much, but which Robbie thought was “as fun as a rollercoaster.”

Their Uncle James picked them up from the airport and took them straight to his house, since they were so tired.

“Take a nap,” he said, “Then I’ll show you around.”

“We don’t take naps,” said Julia, even as her eyes closed. The twins slept for a few hours and then awoke, ready to explore. Their parents had gone to the ocean and the twins were glad to be with Uncle James by themselves.

“California is very different from where you live,” he said. “Let me show you.”

Uncle James took them to the backyard where the branches of his lemon and orange trees were heavy with brilliantly colored fruit.

“Can we have an orange from the tree?” Robbie asked.

“Take your pick,” Uncle James said. Then the twins noticed his palm



tree, which shot straight up into the sky like an arrow.

“I’ve never seen anything like it,” Robbie said.

“Southern California has a very unique climate,” Uncle James said. He explained that it rarely rains in the summer and that the days get cool in the evening, even when it’s hot during the day. In the winter, it almost never snows.

“And there’s another thing,” he said. “We get earthquakes.”

The twins look confused.

“There are faults in the earth in California,” Uncle James explained. “Earthquakes happen along these faults, sometimes. We can’t predict them, so we

don't know when they'll come."

"What does it feel like?" Robbie asked. He looked down at his feet, as if expecting an earthquake at any minute.



"Sometimes they're small, they

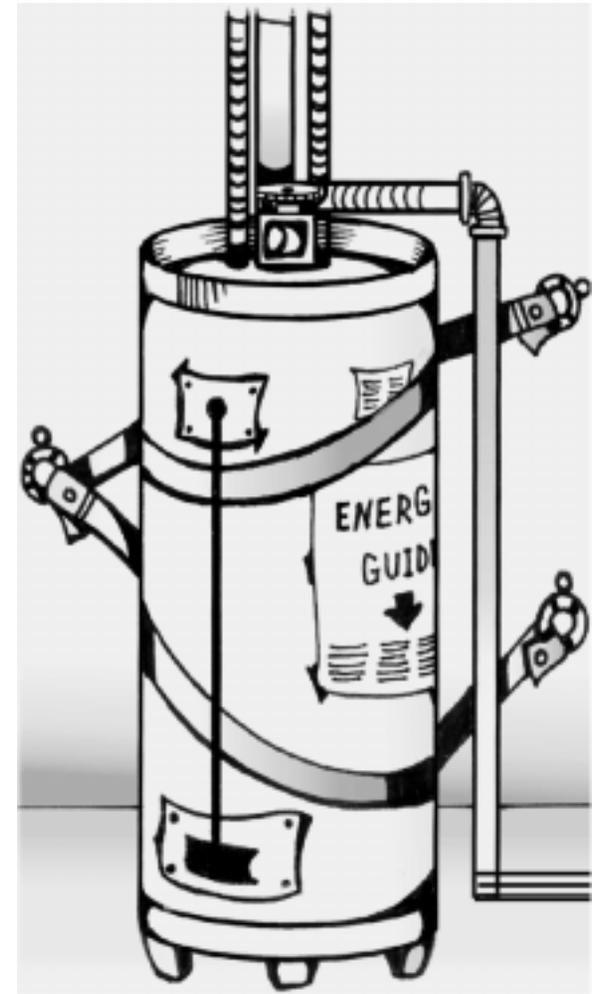
feel like a big truck rumbling by. Sometimes, they can be very large. The Northridge Earthquake happened near here. It was so large that buildings came down and people were hurt."

Julia looked alarmed. "This won't happen while we're here, will it?"

"I hope not," Uncle James said.

"But let me show you how I'm prepared."

The twins followed behind, like ducklings waddling after their mother. Uncle James said his house was bolted to the foundation so it wouldn't slide off during an earthquake. Then he showed how he'd strapped his water heater to the wall so it would not fall over and start a fire.



And there was more.

“See how I attached these heavy cabinets? They’re attached to the wall so they won’t tip over during an earthquake and fall on someone,” he said. “I’m very careful about where I put furniture. I don’t have heavy plants or mirrors over the bed, for example.”

“Good thinking,” said Robbie.

“That way, stuff won’t fall on you when you’re sleeping.”

“Exactly,” said Uncle James.

“Should we run and get in bed if an earthquake comes?” Julia asked.

“Don’t be silly,” said Robbie. He liked to prove that he was smarter than his sister. “You run outside if an earthquake comes.”

Uncle James shook his head. “You

definitely *don’t* run outside. Something could fall on you! You stay inside and get under something heavy, like a table or a desk. And cover your head. It’s called duck and cover.”

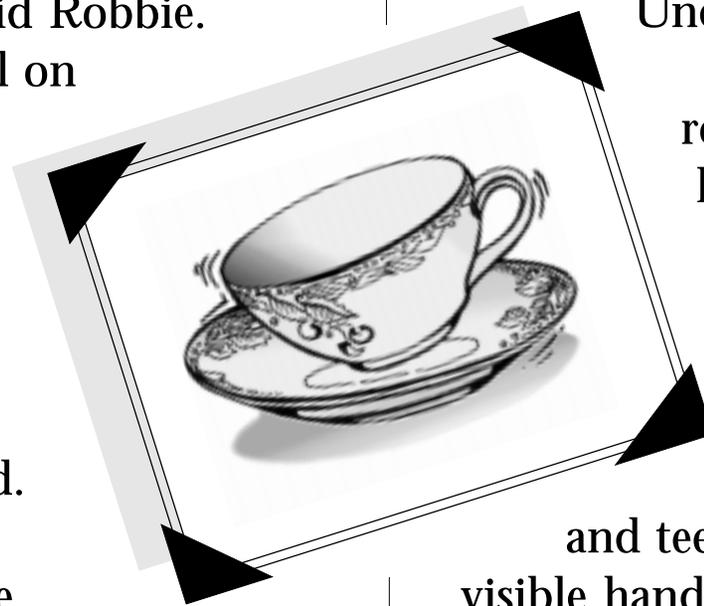
Julia looked around. “Like under the dining room table?”

“That would be good,” said Uncle James.

“Speaking of the dining room,” said Robbie. “I’m hungry.”

Uncle James offered to make them sandwiches. And then it happened. The teacup on the counter started to rattle. It jumped and teetered as if pushed by an invisible hand.

Then the walls shook and it felt like a really, really big truck had just roared in front of the house. But it didn’t stop right away.





“What’s happening?” asked Julia.

“It’s an earthquake! Get under the table,” shouted Uncle James.

The twins dove under the table and covered their heads. Uncle James squeezed under, too, and put his arms around them. They heard a glass fall off the counter and smash on the ground, and then books began to fall off a shelf.

“How long will this last?” Julia whispered.

“It’ll be over in a few seconds,” Uncle James said.

And it was, although to the twins it seemed like the earthquake had lasted hours. They came out from under the table to pick up the fallen books. They turned on the radio and

heard there had been no major damage.

“I’m glad it’s over,” said Julia.

“Me, too. It was sort of like a not-very-fun rollercoaster,” said Robbie.

“But I don’t want to do *that* again for a long time.”

Uncle James hugged the twins.

“Disaster are *always* happening to us,” said Julia with a sigh. “It was just a good thing you were prepared.”

What did you learn?

1. Earthquakes occur along _____

- a. Rivers
- b. Faults
- c. No-fault lines
- d. State borders

2. What did Uncle James do to his house to make it safer in an earthquake ?

- a. Bolt his house to the foundation and strap the water heater to the wall
- b. Move all his furniture to the backyard
- c. Decorate his water heater with pretty bows
- d. Put on hurricane straps

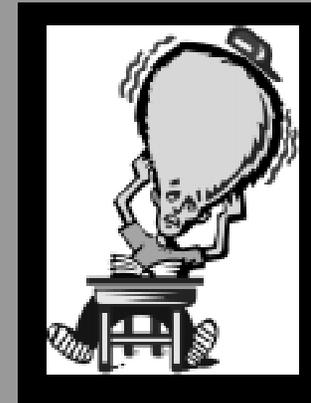
3. Earthquakes are predictable:

True

False

4. What did Uncle James tell the twins to do during an earthquake?

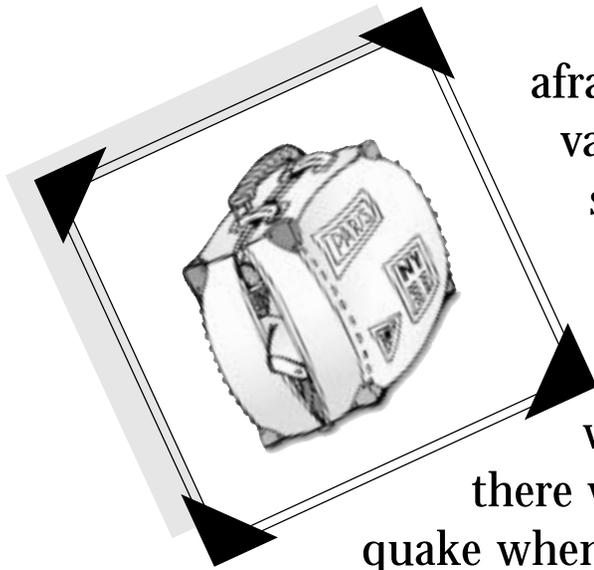
- a. Play checkers
- b. Run outside and look around at what is happening
- c. Duck and cover
- d. Scream for help



Answers: 1. B! 2. A! 3. False! 4. C

It's Hurricane Season

Julia and Robbie's mother sighed as she packed the last of their clothes. She pushed down on the suitcase to make it close and she snapped the latch.



"I'm almost afraid to plan a vacation," she said. "You two *are* Double Trouble."

"It wasn't our fault there was an earthquake when we visited



Uncle James," said Robbie. He was eating a peanut butter sandwich and he talked with his mouth full.

Julia giggled.

"And it wasn't our fault that the Acorn River flooded when we visited Grandma," said Julia.

Skipper barked, as if in agreement.

“Of course it wasn’t your fault and I’m not mad,” their mother said. “But everywhere you go something happens.”

Julia nodded. She knew it was true. In addition to the earthquake and the flood, a tornado had nearly hit their town.

“But this time will be different,” said Julia.

“I can’t wait to see what Florida looks like,” said Robbie.

It was a long drive to Florida and their father kept them busy by asking them hurricane questions. The twins had studied hurricanes at school.

“So,” their father said as he drove. “When is hurricane season?”

“I know,” shouted Julia. She raised her hand as if she were in class, and then she lowered it when she remembered where she was. She blushed a little at her mistake.



“Go ahead,” their father said.
“Hurricane season is June 1 through November 30,” she said.

Robbie yelled. “That’s right now!”
“That’s what I’m worried about,”
their mother said. “After all you are the
disaster twins!”

Their father quizzed them some
more. Julia knew there were five categories of hurricanes and that the winds in a hurricane blow in a counter-clockwise direction. She knew hurricanes had an “eye” in the center.

“Have there been a lot of hurricanes where we’re going?” Julia asked. She was getting just a little bit worried.

Their father nodded. “Oh yes. All the states along the coast here have been hit by hurricanes in the past.”

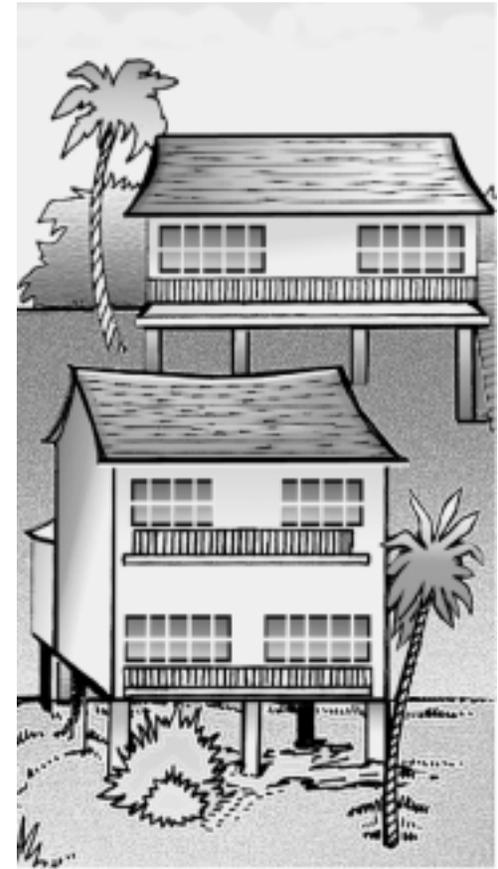
Julia slapped her forehead in mock alarm and looked out the window. Before long, they had arrived at the coast.

“Look at those houses,” shouted Robbie.

“They look like long-legged birds,” said Julia.

The houses sat on top of long stilts. Their father explained that the houses were elevated to be above the high water that a hurricane can bring.

He also explained that many of the houses had special straps that keep the roofs on during high winds. Some houses also had hurricane shutters to keep the windows from being broken during a hurricane and letting the rain and wind into the house.



“It’s important to be prepared when you live in a hurricane state,” their father said.

For the whole week, the sun was shining and the water was blue as sapphires. The twins went swimming every day.

As usual, their parents sat on the beach, with a radio on. The twins splashed and played in the water until they got tired and then they



sat on towels next to their parents.

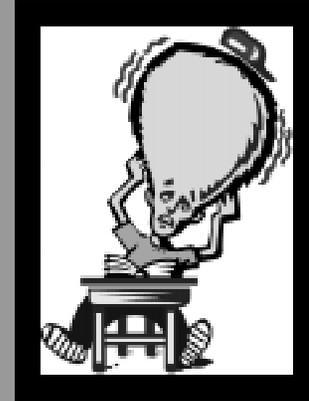
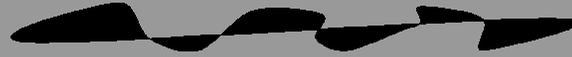
Suddenly, their father reached down and turned up the volume on the radio.

“Listen,” their father said.

The radio announcer said, “According to the National Weather Service, there is a Category One hurricane approaching the coast. There is a Hurricane Watch in place. Repeat, there is a Hurricane Watch in place.”

The twins looked worried. Their mother shook her head as if the twins had done it again.

What did you learn?



1. Hurricane season is:

- a. Summer and Fall
- b. Winter
- c. All year

2. How many categories of hurricane are there?

- a. 10
- b. 5
- c. One
- d. None

3. Hurricanes have something in the middle of it that is named for a body part. What body part?

- a. A foot
- b. A hand
- c. An eye
- d. An ear

Answers: 1. A; 2. B; 3. C

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