The Challenges — Teacher Resources

The Rainy Day Blues
By Cindy Cranford

Jerry stomped into class, leaving a trail of water behind. “I can’t believe it is supposed to rain all weekend,” he grumbled. “My friend, Corey, is coming to visit, and we’ll be stuck inside the whole weekend.”

“My parents say we need rain,” said Rebecca. “They are concerned that everything is drying up and our aquifer is getting lower. Remember when we learned about the water cycle? Mrs. Parker told us that precipitation helps to replenish our groundwater sources.”

“Yeah, I know that … but does it have to rain this weekend?” Jerry whined.

“Why don’t you make the rainy weekend an adventure?” offered Mark.

“How can we do that if we’re stuck inside?” questioned Jerry.

“Easy! Just think of all the things that happen outside because of water,” Mark said with a smile. “Have you ever wondered how much water we get from a rainstorm? Or how much water stays in a puddle? Or how much water your dog drinks? Or does the same amount of rainwater fall in two different places? Or….”

“OK, OK, I get the message. Maybe we can create a rainy day scavenger hunt,” Jerry said thoughtfully as he glanced out the window. Suddenly, things were starting to get better.

That afternoon the rain had almost stopped when Corey arrived. Jerry shared his idea for the weekend with Corey. They excitedly began to make their plan. Soon they grabbed a pencil, paper, and their rain gear and shot out through the door.

They busily began gathering rain gauges and buckets and other containers they found around the neighborhood. To get accurate information, they knew they would either need to empty all the containers or measure the amount of water in each before the rain started up again.

Later that night they could hardly hear the rain pounding on the roof of the house. Both boys could hardly wait until morning so they could get outside and gather their information.

Finally, it was morning and the boys quickly got dressed and hurried to breakfast. Jerry noticed his mom using a measuring cup to measure the water she added to the pancake mix. She also pulled out measuring spoons and was measuring the amount of oil the mixture needed. “Wow,” thought Jerry, “I’ve never thought about measuring water and oil to cook.”
After breakfast, the boys grabbed their gear and hurried out the door. Due to the rain, the yards were soggy with water, but they didn’t care. After all, this was an adventure. Jerry suggested they begin by checking his dad’s rain gauge in the flower garden. They noticed that the rain gauge was about half full, but knew they needed a more accurate measurement. The gauge showed that 120 milliliters of rainwater had collected overnight. Corey recorded the amount of water collected, along with the time of this observation.

Next, they checked Mr. Jones’ rain gauge. They found that his gauge had collected four ounces of rainwater. “Houston, we have a problem,” piped up Corey. “Your dad’s gauge uses metric measurement and Mr. Jones’ gauge uses standard measurement. What do we do now?”

Jerry replied, “Hmmm, that’s a good question.”

Suddenly, Corey shouted, “I have an idea! What if we empty your dad’s rain gauge and pour the water from Mr. Jones’ gauge into your dad’s? Then we can compare the metric amounts on both.”

“Yeah, that’ll work,” said Jerry.

Jervey quickly ran back to get his dad’s rain gauge. He emptied it and carefully poured the water from Mr. Jones’ rain gauge into his dad’s. “This is awesome!” shouted Jerry. “It’s the same as dad’s … about 120 milliliters.”

“Come on,” said Corey. “We’ve got to check the dog’s water bowl.”

Looking at the water bowl, Corey realized there were no measurements on the dish. “We’ll have to pour the water into a measuring container and see how much is here,” said Corey. “Why don’t we use the rain gauge again to measure?”

“Good idea,” said Jerry, as he handed the rain gauge to Corey. “You measure this time.”

Pouring the water from the dog’s dish into the rain gauge was a little more difficult than expected, but Corey cautiously emptied the dog’s dish without spilling a drop. He checked the measurement on the rain gauge and noticed it
contained 100 milliliters of water. “Www... wait a minute!” he stammered. “Why doesn’t the dog’s dish have the same amount of water as the rain gauges? I didn’t spill any of the water, and the dog hasn’t been out this morning to drink any.”

“Hmmm, another good question,” remarked Jerry. “For now, let’s record the amount. Maybe we’ll come up with the solution later.”

The boys busily went about checking containers. They were still puzzled that the dog’s dish had 20 milliliters less rainwater than most of their other sources. As they sat and pondered, Corey suddenly jumped up and shouted, “I’ve got it! Think about the location of all the containers. The dog’s dish was by the back door and under the overhang of the porch. The other containers were in the open where nothing was hanging over them. I bet some of the rainwater hit the porch covering and bounced off, so not all of the drops fell in the dish. What do you think?”

“I think you’re right,” agreed Jerry. “Problem solved!”

Corey grabbed Jerry’s hand and pulled him up. “Come on Jerry,” said Corey. “Let’s go measure more. Do you think your parents will mind if we measure how many gallons of water it takes for a bath? I’m feeling really muddy right now.”

Smiling, Jerry followed along. “I’m with you, buddy,” he said.
Reading Response Questions

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- Short Response
  Corey and Jerry ran into a problem when Mr. Jones’ rain gauge was in ounces. Explain why this concerned them.

- Short Response
  The boys discovered the dog’s water dish had less water than other places because it was partially covered. Explain what this tells us about the amount of water our yard gets when we use sprinklers to water the grass.

- Extended Response
  In the story, the boys realize they must find a way to measure the water in the dog’s dish. They decided to pour it into Jerry’s father’s rain gauge. Explain why this was a better idea than pouring it into Mr. Jones’ rain gauge.

- Extended Response
  The end of the story suggests that the boys will measure the amount of water used in the bathtub with cups. Explain why this is or is not the best measurement tool they could use.