

### The Water Detective

By Cindy Cranford

It began as an ordinary Tuesday. Elizabeth's mother picked her up from school and dropped her off at Mrs. Dupree's house for her weekly piano lesson. Elizabeth wasn't real excited about piano lessons, but she did enjoy the old woman and the bizarre stories she told about her plants.

You see, Mrs. Dupree thought of her plants as children and always talked about their proper care. Elizabeth had learned a lot about caring for plants, even though Mrs. Dupree was a little forgetful and sometimes repeated herself.

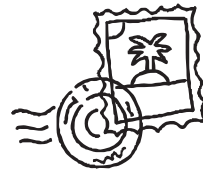
When they arrived at her house, Mrs. Dupree was not home. For a minute Elizabeth was thrilled at the thought of no piano lesson. Then she began to wonder if something had happened to Mrs. Dupree. (After all, Elizabeth had always been interested in detective work.) Elizabeth began to search for clues. She talked to neighbors and asked when they had last seen Mrs. Dupree. With no clues, Elizabeth walked home deep in thought.

Elizabeth arrived home as her mother was going through the mail. As Elizabeth began sharing her story with her mom, she was handed a card. There in the mail was a postcard from Mrs. Dupree.



Dear Elizabeth,  
I decided to visit my grandson in Oregon. I'm having so much fun I am staying a few more days. I hope you get this in time, as I will miss your Tuesday lesson. Being my forgetful self, I got the water out, but forgot to water my plants before leaving. You will find three cups of water sitting in the window for the violets. Be sure they each get exactly one cup of this warm water. I also left a gallon of water. The other plants each need two cups of water. Mrs. Smith has a key.

Thanks,  
Mrs. D



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## The Challenges – Teacher Resources

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Elizabeth looked at her mom and said with a laugh, “I guess I had better go water the plants.”

“I’ll go with you and help,” responded her mom.

They got the key from Mrs. Smith and went inside Mrs. Dupree’s house. There in the kitchen window sat three measuring cups with water. Elizabeth picked up one cup to pour it on a violet, then she stopped. “This isn’t a full cup,” she said. “It only has 6 ounces of water.” She checked the other two cups and found them to be the same. “Just go ahead and water with what you have,” suggested her mother.

Elizabeth looked at her mother in disbelief. “Are you serious?” she questioned. “You don’t understand how particular Mrs. Dupree is with her plants. They must have EXACTLY one cup of water warmed by the sun. I’m just a little stunned. If she left exactly three cups, where did the water go, and how am I going to give them enough water?”

Elizabeth’s mom chuckled as she reminded Elizabeth about the water cycle they had studied at school. “Remember, when water sits in the open and warms, some evaporates,” she said. “I think this is a case of water evaporation. After all, the cups have been sitting there for almost a week.”

Elizabeth answered with a sigh, “I guess you’re right ... some detective I’ll make.”

“There’s still a problem to solve,” replied her mom. “You need to decide how to give the plants exactly one cup of water. Perhaps you can use the gallon jug of water.”

“Let me think,” said Elizabeth. “I know it takes eight ounces to make a cup. Since each cup now has six ounces of water, I’ll pour two more ounces of water from the jug into each cup. That will take care of the violets.”

Elizabeth began to ponder her situation. “That was the easy part. I still need to figure out how many plants will receive the full two cups of water with only the remaining water in the gallon jug.” Maybe I can draw pictures to help.” And she continued to work.

### Reading Response Questions

Be a water detective and help Elizabeth solve her problem. How many plants will Elizabeth be able to give 2 cups of water? Will she have any water left in the gallon jug? Explain how Elizabeth might solve her problem.

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