Inquiry Inc. And the Case of the Missing Ducklings



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"I never thought so much about drains! Now I see them and wonder what is down there." ~ First Grader at Jackson Street School

Thank you to the students and teachers who bring these stories to life.

The Water Inquiry Story Group 2016-2017

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For accompanying resources and materials see Inquiry Activities



Anna is walking home from her daily trip to the library, clutching her books about ducklings. As she gets close to her house, rain begins to fall. She pulls the hood of her raincoat over her head.

Just then she hears a faint noise, "Quack, quack, quack."



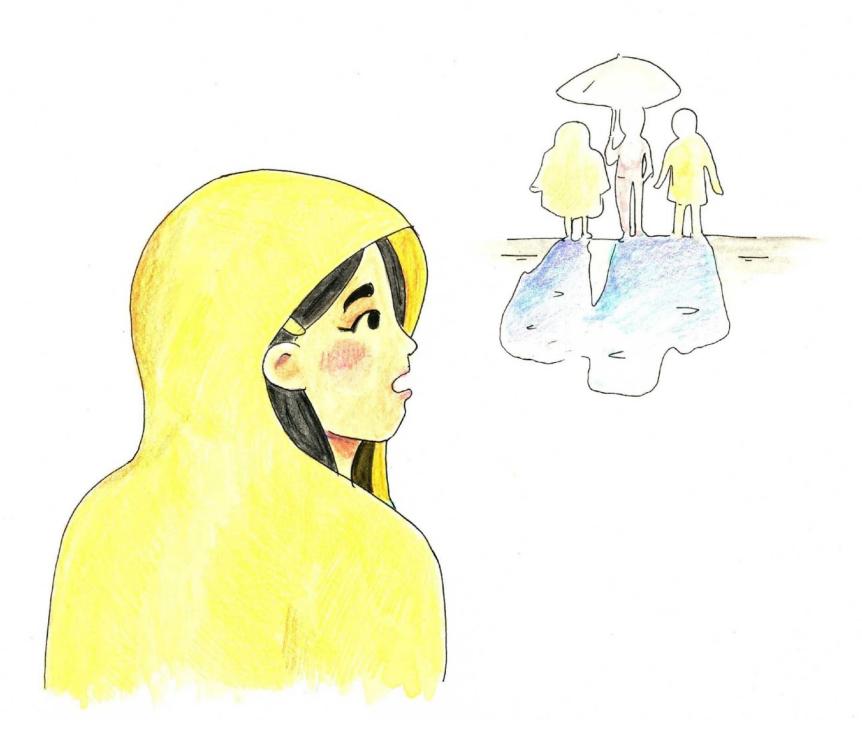
Anna becomes curious and walks toward the noise. Soon enough, she sees a duck standing by the side of a storm drain quacking and flapping her wings. "Hmm, that duck sure looks upset," Anna thinks. "I wonder what it's doing on the sidewalk?"

Suddenly, Anna hears another quieter squeaking noise coming from the drain. Anna looks down and sees not one, not two, but three, four, five tiny ducklings!

Anna tries to reach down through a hole in the grate and scoop up a duckling, but her arm cannot reach the bottom. "I don't know if I can solve this problem by myself," Anna thinks.



Identify Anna's problem. What would you do if you were Anna?



Anna looks around for something or someone to help. Through the rain, she sees a group of people walking toward her.

"Hey, I know those kids from school," Anna thinks to herself, "People call them Inquiry Inc., and they like to solve problems!"

"Hello!" Anna yells. "Can you please help me?"



"What's wrong?" asks a kid with a large backpack and a tool belt around her waist, packed full of useful equipment.

"There are five baby ducklings trapped in that storm drain," says Anna, pointing. "They must have fallen in, but I don't know how to get them out."

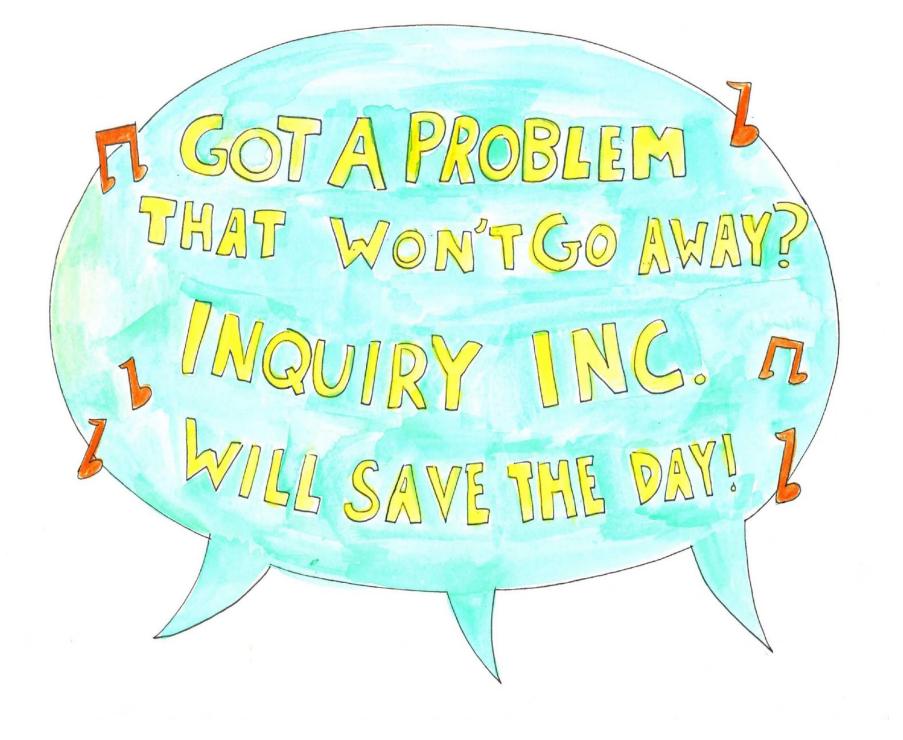
"Oh no, that's terrible! Don't worry, we can help you. My name is Silvia." As she says this, Anna looks more closely at Silvia's tool belt. She spots a net, a screwdriver, duct tape, a rope, a flashlight, a hammer, and one tool that Anna notices in particular.

"I like your measuring tape," she says to Silvia.

"Thank you! It's my favorite tool." Silvia replies.

"We were about to go solve a tadpole problem at the pond," says one of the kids. "But this is an important dilemma!"

Just then the kid in the too-big sweatshirt pipes up, "We call ourselves Inquiry Inc. and we like to solve problems! My name is Lee and that is Carlos," they say while pointing to the boy with the notebook. "What is your name?"



"My name is Anna, and I've heard of Inquiry Inc. I've seen you exploring the neighborhood before."

"Yeah, we solve a lot of problems around here." Carlos says. "So, how did you find these ducklings? How do you know they're stuck? Do you have any ideas about how to get them out? Where is their mother?"

"Okay, Mr. Question Man, let's try to figure this out first," says Silvia. "We need to go see for ourselves!"

"I bet we can find a way to rescue those ducklings! Let's go!" Lee says excitedly.

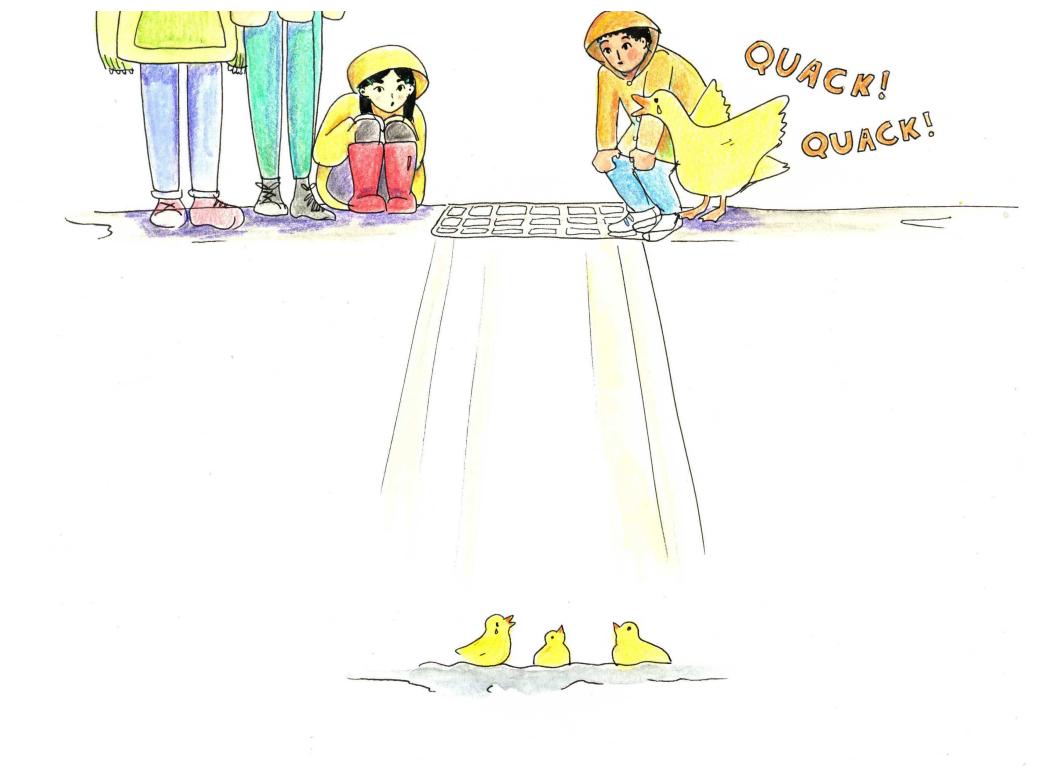
"This calls for Inquiry Inc.!" Carlos cries.

"Got a problem that won't go away? Inquiry Inc. will save the day!" the three cheer.

The group hurries back to the storm drain as the rain comes down harder.



Investigate your school grounds and find as many storm drains as you can. What do you notice inside of the drains? Where are the drains located? Pick one to sketch.



"Quack, flap, quack, flap!" The mother duck is still flapping her wings by the drain.

"I hope we can save the five ducklings!" Anna exclaims.

"Wait, how many ducklings are down there?" Carlos says, peering into the drain. "One, two... three. I see only three ducklings."

"Hold on," Anna frowns. "Are you sure? I definitely saw five earlier."

"Yup," Lee says, leaning down to look. "One, two, three. Three ducklings."

"Uh-oh. Then where did the other two ducklings go?" Carlos wonders.

"I don't know," Lee says. "I think we're going to have to investigate - that's another way to say 'looking for clues.'"

Everyone pauses and thinks about what to do next.

"I wonder how deep the drain is," says Carlos.

"I've got it!" Silvia takes the measuring tape from her tool belt. She lowers it down the hole until it touches the water at the bottom. "Look," she says, pulling it out and showing it to the others, "This is how far down the ducklings are!"



"So how can we get the ducklings out when they are so far away?" Carlos asks. "Even my dad wouldn't be able to reach the ducklings, and he's really tall."

Lee puts on their brainstorming face. "We could use our tadpole nets!" they yell.

"Good idea!" Silvia exclaims. They lower the net through one of the holes in the grate. One, two, three - they scoop the ducklings up and into their hands.

"Quack! Flap!" The mama duck quacks happily. The three little ducklings squeak like they've never squeaked before and stay close by her side. Inquiry Inc. cheers! "Got a problem that won't go away? Inquiry Inc. will save the day!"

"But wait! Two ducklings are still missing!" says Carlos, keeping the group on track.

"Now we have an even bigger problem," Anna says. "We have to figure out where the other two ducklings went!"

"We can solve this! Remember, Inquiry Inc. is able to solve problems in a very special way. *Muy* especial." says Silvia. Anna knows from the Spanish books she reads that this means "very special."

Step One Identify The Problem. Come up with Step Two: Come up with augstions. step Three: Brainstorm ideas. 5+e Four Test Your ideas. Carlos pulls out a piece of paper from his notebook with a list of steps written down:

Step 1: Identify the problem

Step 2: Come up with questions

Step 3: Brainstorm some ideas

Step 4: Test your ideas

"We know the problem is that two ducklings are missing, so now let's come up with some questions," says Lee. "Where did the two other ducklings go?"

"How did they get down there in the first place?" Anna wonders.

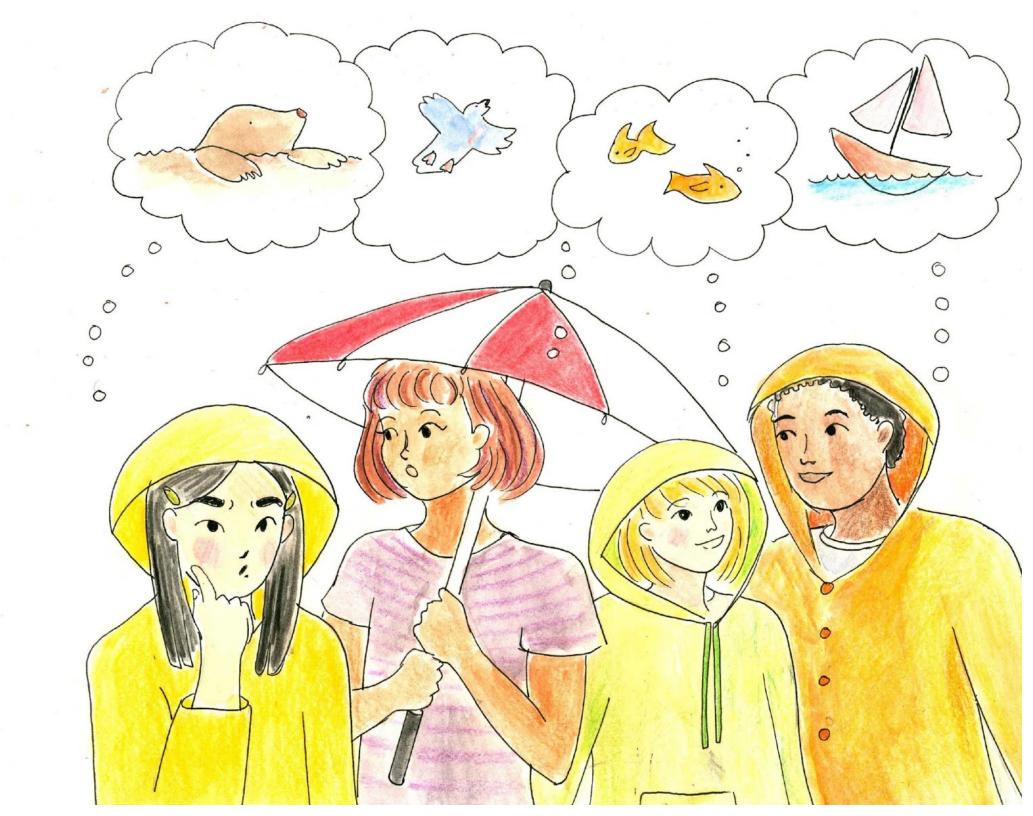
"Are they hungry?" giggles Carlos, "Because I'm pretty hungry."

"Are the ducklings scared? Are they wet? Are they lost? Can they hear their mother?"

"I have another question," Anna says. "What happens to the drain when it rains? Where does the water go?"



What other questions do you have for Inquiry Inc.? Where do you think the water goes?



"Hmm," Silvia says. "Let's look at all our questions and start brainstorming ideas. Remember, it's okay to say things you're not sure about!"

"Maybe the ducklings flew out," Silvia wonders out loud.

"Well," Anna says, thinking about her trip to the library, "I don't think they could fly out, because I learned from the books I read that little ducklings are too young to fly."

"So that means that they still have to be down there somewhere. Things can't just disappear like magic," reasons Lee.

"Maybe they went in some weird secret underground tunnel!" Anna exclaims. "Maybe moles used to live down there and dug tunnels in the dirt."

"Maybe they have a little pirate ship down there!" Carlos suggests.

"The ducklings could have turned into fish," says Lee, "and swam away!"

"Swam away! What if this drain leads somewhere else?" asks Anna.

"Hang on," Lee says. "I wonder if the drains connect to each other under the ground."

"Well, the water has to go somewhere, right?" Silvia points out. "Maybe if we can figure out where the water goes, we can figure out where the ducklings went."



Think about their ideas. How would you answer Anna's question: Where does the water go? Where could the ducklings be?



"How can we find out where the next drain will be?" asks Carlos.

"Look at the water running down the street," Anna says. "It's going downhill."

"I bet if we follow the water flow, we'll find the next drain," Lee says.

All of a sudden, Anna realizes something that makes her very nervous. She grips her books tightly. "If it's raining right now, that means that the water will wash the ducklings away. And if the water moves downhill, who knows where they'll end up!"

"Oh no!" they all cry. All of a sudden, their problem seems more important than ever! They need to figure out a way to rescue the ducklings as fast as possible!

They walk down the sidewalk, looking carefully until they find the next drain. "Quack! Quack!" they hear from below. They try looking down but it's too dark to see, so Silvia pulls the flashlight out of her tool belt.

Splash! Silvia's pencil falls through the grate. "Oops," she says, shining her flashlight down into the drain. "But look, I found both of the missing ducklings!"

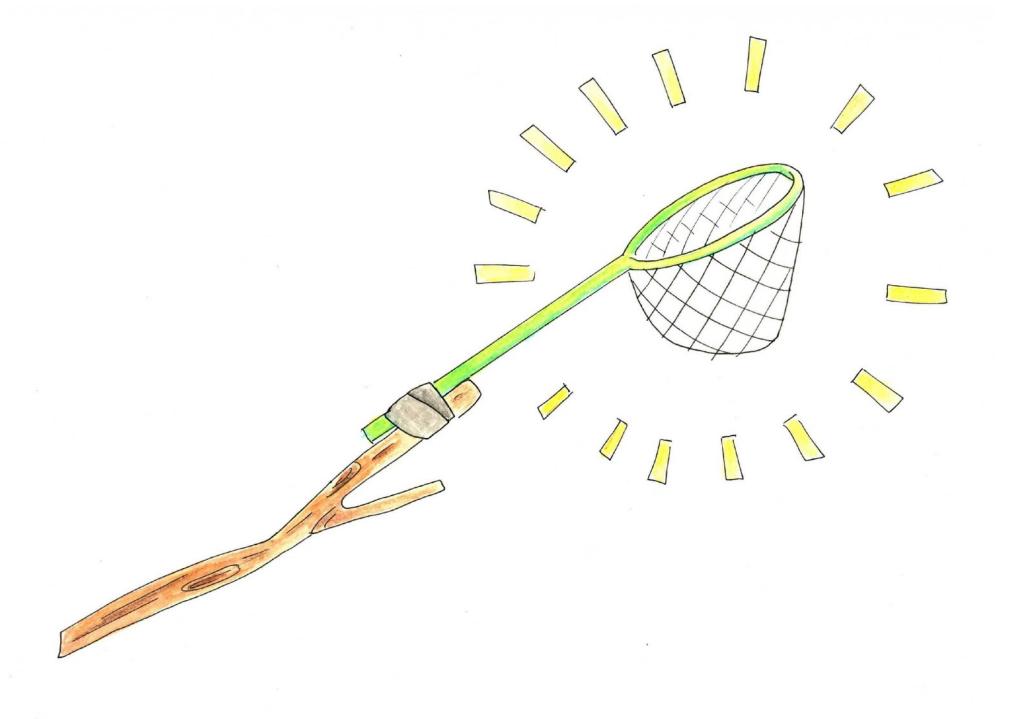
"Now the ducklings have something to write with!" jokes Carlos, pointing at the floating pencil.

Silvia reaches her net down, but this drain is deeper. The net can't reach! Time for Inquiry Inc. to think of a new solution.



Think about the tools that Inquiry Inc. has.

Brainstorm a possible solution as a class to rescue the ducklings!



"Oh no!" Anna says. "Maybe a firefighter could help us."

"No, I think we can fix this by ourselves!" Lee says.

"How can we reach the drain now that it's deeper?" they wonder.

"Maybe we can use what we already have," Silvia suggests.

"What if we use our net but make the handle longer?" asks Carlos.

"We could use a stick to do that!" says Anna.

"I have duct tape!" Silvia cries, pulling a roll out of her tool belt. They find a stick beneath a tree and tape the stick and the net together.

They lower the new tool down the drain. "The net reaches!" they cheer. One, two -- they scoop the ducklings up into their hands.

"Quack! Quack!" All of the ducks are very happy to be back together! The mother leads her babies away, the ducklings waddling in a line behind her.



"Hopefully the mother duckling doesn't walk over any storm drain grates again!" Carlos says.

"I hope so too," says Anna. "Hmm, I wonder what else falls into drains? Why do we even need them?"

"That's a question for another day!" Lee says. "We have to get back to our tadpoles!"

"Thanks for helping me save the ducklings," Anna says.

"I'm glad we could solve this problem together!" Silvia responds. "I hope we can solve problems with you again soon."

"Really? I'd love to!" says Anna.

"Yes! Anyone who helps is a part of Inquiry Inc.!"



Handoff #6: Why do we need drains? What else falls in a drain? What are some ways drains could be improved so that fewer objects fall through? Design your own drain using these ideas.



MEET INQUIRY INC!

Hi! We're Inquiry Inc. and we're a group of friends that like to solve problems together. Got a problem that won't go away? Inquiry Inc. will save the day!



Hola! Bon jour! My name is Silvia. I am a girl and I use the pronouns she/her. I love working with Inquiry Inc. I like to build, solve problems, and learn new languages. When I was just three years old, I moved from Ecuador to the United States with my mom, dad, and brother Juan. My family taught me to speak Spanish and English, but I'm teaching myself French, too. Do you want to know a secret? I have a sidekick! Her name is Scarlet, and she is a bright red betta fish. I like to talk to her in all the languages I know, because talking out loud is a good way to solve problems



Hi! What's your name? Where are you from? Do you like to solve problems? How did you find this book? Oh goodness, I've forgotten to introduce myself!

My name is Carlos, and I sometimes get carried away asking questions. I am a boy and I use the pronouns he/him. I think asking good questions is the best way to learn more about the world. When I'm with Inquiry Inc., I like to brainstorm, take careful notes, and ask my friends about their thoughts and feelings. Together, we always find a way to save the day!



Hey there! I'm Lee. I am non-binary and I use the pronouns they/them. I have a twin brother named Hunter, an orange tabby cat named Whiskers, and I like to do magic tricks. There is some magic involved in Inquiry Inc. When we create a plan that solves a problem, it feels just like pulling a rabbit out of a top hat. Only there's no secret to problem-solving... if you put your thinking cap on, you can help us do magic too!



Hi, friends! My name is Anna and I am a girl. I use the pronouns she/her. I'm new to Inquiry Inc. I just moved into town with my moms and sister. Moving was kind of scary, but the best part of my new house is a big backyard with lots of room for pet chickens! I love to read, and I carry a book with me all of the time. When I was moving, it was nice to know that books could be with me wherever I went. They kept me company when I didn't know anybody in town, but now that I have my Inquiry Inc. friends we can read stories together and learn new information to help us fix sticky situations.