

When was the last time you
gave your students a chance to
change the world?



K-2
International
Folktales
Edition

A
THINK
LAW

Summer School Curriculum



How will you capture your students and engage them in critical thinking this summer?



THE PROBLEM.

Our world is in **URGENT NEED** of critical thinkers. But critical thinking is **HARD TO TEACH**.

Critical thinking is the precursor to innovation, a key to college and career readiness and has been linked to more positive life outcomes. The complex global challenges we face today have placed a peak demand for critical thinkers. But our supply is limited because critical thinking is still a luxury good: only 1 of 10 educators teach it, and it's usually only taught at the best schools or to the best students. This means that most students are taught to ask "what" and "how to" instead of "why" and "what if," and rarely learn the habits and mindsets needed to apply critical thinking consistently.

THE SOLUTION

thinkLaw HELPS EDUCATORS teach critical thinking to ALL STUDENTS using real-life legal cases.

Our comprehensive program of teacher tools, student guides, and virtual coaching is based on real-life cases because the law's Socratic questioning methods make it easy for teachers to ask the questions that build student critical thinking skills. And the law speaks to students' sense of fairness and justice, motivating them to adopt the critical thinking mindsets and habits needed to apply these skills throughout their lives. thinkLaw is also standards-aligned, allowing teachers to incorporate it into what they are already doing in their classrooms. thinkLaw gives under-resourced schools with time-strapped teachers all they need to facilitate critical thinking through engaging discussions, writing assignments, and other learning activities with under 1 hour of initial training and less than 20 minutes of prep time per lesson.

thinkLaw Curriculum

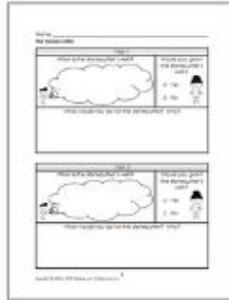
Comprehensive Teacher Guides



Less than 20 Minutes Prep Time!

Includes Over 500 Probing Discussion Questions!

Student Work Pages



To Accompany Each Lesson!

PowerPoint Presentations

Each Lesson has a pre made PowerPoint and/or Google Slide Presentation



Additional Lessons



thinkLaw Users Have Access to a Library of Additional thinkLaw Lessons



Assessments

Assessments Designed to Measure Critical Thinking Skills and Dispositions



Extension Activities

Additional Extension Activities to Review Math, Writing, and Science Skills Using Social Justice as a Motivator!



Project-Based Learning Experiences



Allow Students Real-World Opportunities for Active Citizenship

Comprehensive Teacher Onboarding



Training Video Calls to Explain the thinkLaw Approach and Materials

All thinkLaw Materials are Standards Aligned!

Lesson 7

Why the Pineapple has 1,000 Eyes

Settlement and Negotiation

Objective: Thinkers will analyze problems faced by characters in the story and determine why the problems are occurring. Thinkers will devise solutions to the problems faced by the characters.

Lesson Outline

1. Thinkers will begin by sharing experiences with lost shoes and how their parents responded.
2. Thinkers will listen to the story "Why the Pineapple has 1,000 Eyes." Thinkers will analyze the problems faced by the characters in the story. They will determine why the mother and daughter are having those problems and create solutions the characters could implement.
3. Thinkers will examine a picture of a strawberry and make observations. They will then extend their thinking by writing a story about a child who turns into a strawberry.

Materials

Why the Pineapple
PowerPoint
Presentation



Why the Pineapple
Student Sheet

The image shows a student sheet template. At the top, it says "NAME" and "DATE". Below that is the title "Why the Pineapple has 1,000 Eyes" and the subtitle "A Folktale from the Philippines". The main body of the sheet is a large grid with four quadrants. Each quadrant has a small icon of a person and a question: "What is the problem?", "What is the cause of the problem?", "What is the solution?", and "How could the characters solve the problem?".

Thinker Materials:
Writing Utensils

Optional
Bring in a real
pineapple for
students to examine

Common Core Content Standards

KINDERGARTEN	FIRST GRADE	SECOND GRADE
<p>RL.K.3 With prompting and support, identify characters, settings, and major events in a story.</p>	<p>RL.1.3 Describe characters, settings, and major events in a story, using key details.</p>	<p>RL.2.2 Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.</p>
<p>RL.K.10 Actively engage in group reading activities with purpose and understanding.</p>	<p>RL.1.10 With prompting and support, read prose and poetry of appropriate complexity for grade 1.</p>	<p>RL.2.3 Describe how characters in a story respond to major events and challenges.</p>
<p>W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p>	<p>W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p>	<p>W.2.8 Recall information from experiences or gather information from provided sources to answer a question.</p>
<p>SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</p>	<p>SL.1.3 Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.</p>	<p>SL.2.3 Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.</p>

Why the Pineapple has 1,000 Eyes

A Folktale from the Philippines

thinkStarter

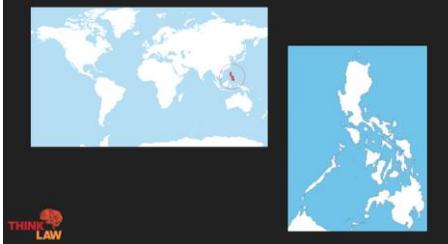


Raise your hand if you've ever lost one of your shoes at your house. Why was your shoe missing? **Allow thinkers to share their responses. Thinkers might say their shoe was missing because they did not put it away in the correct spot.**

- What do your parents say when you lose a shoe?
- Are they grumpy?
- What if they're trying to go somewhere and they're going to be late because they must find your shoe?
- Are they grumpy if it's only happened one time?
- Are they grumpier if it's happened a lot of times?
- Do they help you look?

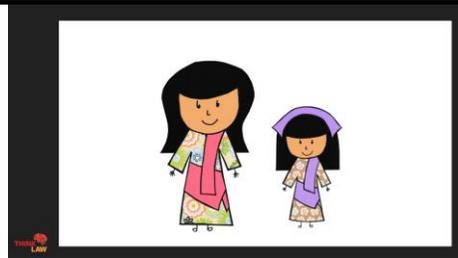
Allow thinkers to share their responses. Remember, in thinkLaw lessons you don't need to ask every, single question! Pick and choose the best questions for your class. Some thinkers will probably share that their families start to get frustrated over missing shoes.

Sometimes kids have trouble finding things. They might ask their parents over and over to help them look. If you were a mom or dad, would you be grumpy if your kid always had trouble finding things? Why or why not? **Allow thinkers to share their responses.**



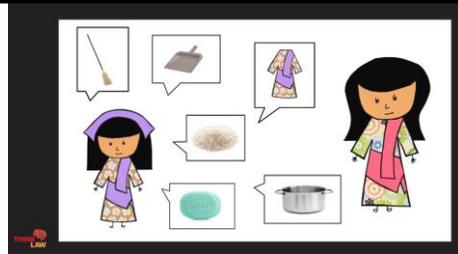
Our story today is from the Philippines. The Philippines is an island country in Asia. The story is called "Why the Pineapple has 1,000 Eyes," and it's about a girl who had trouble finding things.

thinkStory



Once upon a time, there was a widow named Rosa. Rosa had a 10-year-old daughter named Pingang whom she loved very much.

Rosa wanted Pingang to grow up and know how to do housework, so she taught her how to take care of their home and gave Pingang many chores.



Pingang always argued with her mother. Whenever Rosa tried to teach Pingang something new, Pingang would tell her mother that she already knew what to do.

But whenever Pingang had chores to do, she always had many questions for her mother.

Where is the broom? (Click to make the broom appear.)

Where is the dust pan? (Click to make the dust pan appear.)

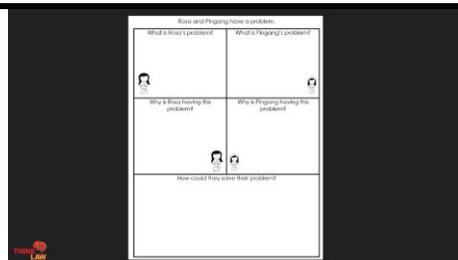
Where is the rice? (Click to make the rice appear.)

Where is the soap? (Click to make the soap appear.)

Where is the pot? (Click to make the pot appear.)

Where is my dress? (Click to make the dress appear.)

Pingang would never look for things herself. She would just ask her mother to find them.



Pingang and her mother are having a problem.

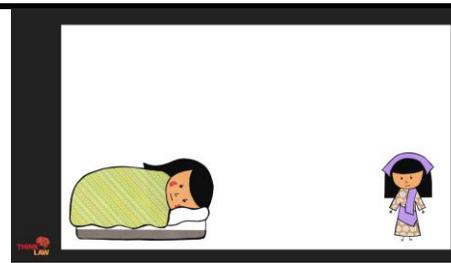
First, let's think about what problem Rosa is having and then about what problem Pingang is having. **Give**

thinkers time to respond and share their answers. Rosa's problem is that her daughter asks her too many questions. Pingang's problem is that she cannot find anything! Thinkers do not have to give these responses. They may have alternative problems. The most important point is that students can support their ideas.

Second, why do you think they are having this problem? Why do you think Pingang can't find the items she looks for? **Give thinkers time to respond and share their answers.** Some thinkers might suggest that Pingang isn't paying attention or she just asks her mom instead of looking for what she wants.

Finally, let's think about how they could solve their problem. How could Pingang do a better job of finding the items she's looking for? How would that help Rosa? What solution can you think of that might make them both happy? **Give thinkers time to respond and share their answers.**

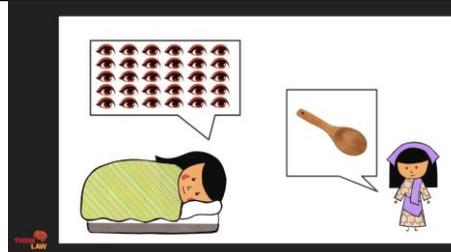
Let's keep reading to see what happens.



One day Rosa got very sick. She could not get out of bed.



Pingang was forced to do all of the housework. All day long she asked her mother questions.

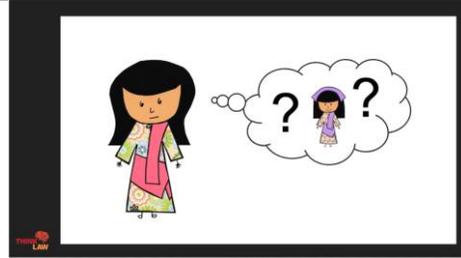


Rosa did not get mad, but she was disappointed that Pingang could not find anything on her own. Rosa was sick for a few more days, so Pingang had to keep taking care of the house.

One day while Pingang was cooking, she could not find the spoon for the rice, so she asked her mother where it was. **(Click to make the spoon appear.)**

Rosa was fed up with Pingang's questions. "Oh Pingang," she said, "I wish you had 1,000 eyes. **(Click to make the eyes appear.)** If you

had 1,000 eyes, then maybe you could find all of the things yourself and never ask questions again.”



The next morning Rosa was feeling better. She got out of bed. But she could not find Pingang.

She looked outside. She looked in the kitchen. She looked in the basement.



She could not find Pingang. But in the basement, she did find a strange plant growing.

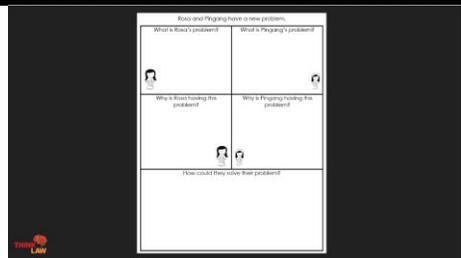
Rosa took the plant and put it in her garden.



The plant grew and soon there was a fruit. The fruit was shaped like a human head and surrounded by many eyes.

Rosa suddenly remembered her last words to Pingang that she wanted her

to have a lot of eyes to find all the things she was looking for. Rosa realized that the plant WAS Pingang. **(Click to make the thought bubble appear.)**



Now Rosa and Pingang REALLY have a problem.

First, let's think about what problem Rosa is having and then about what problem Pingang is having. **Give**

thinkers time to respond and share their answers. Rosa's problem is that she said something when she was angry and now her daughter has turned into a pineapple! Pingang's problem is that she's a pineapple. Thinkers do not have to give these responses. They may have alternative problems. The most important point is that students can support their ideas.

Second, why do you think they are having this problem? Why do you do you think Pingang turned into a pineapple? Give thinkers time to respond and share their answers. Some thinkers might suggest that Rosa was very angry when she told Pingang that she wished she had 1,000 eyes and didn't think about what she said.

Next, let's think about how they could solve their problem. How could Pingang turn back to a girl? Give thinkers time to respond and share their answers. Some thinkers might suggest that maybe if Rosa apologized to Pingang, she would turn back into a girl.

Let's keep reading to see how the story ends.



Rosa was very sad, but she took good care of the plant and called it Pingang after her daughter.

Later the fruit was called "pinya" or "pineapple" in English.

What did you think about the ending of the story? Did you like it? Why or why not? Give thinkers an opportunity to respond. Some thinkers might feel like the ending of the story was sad for both Rosa and Pingang.

Were you disappointed that Pingang did not turn back into a girl? Why or why not? Some thinkers might think it's sad that Pingang did not turn back into a girl because Rosa will miss her very much. Others might feel like Pingang and Rosa deserved what happened.

thinkBigger



Why do you think that the author of this story chose for Pingang to turn into a pineapple?

Do you think a pineapple looks like it has 1,000 eyes? Why or why not?



Now I want you to write a story about a kid who turns into a strawberry.

Let's start by thinking about how strawberries look.

- What color are strawberries?
- What size?
- What shape are strawberries?
- What are these little spots over the outside of the strawberries? (**seeds**) What do the seeds remind you of?
- What is the green part at the top of the strawberries? (**stems**) What do the stems remind you of?

Now that you've had some time to think about strawberries, I want you to write a story about a kid who turns into a strawberry! **Give thinkers time to write and share their responses with the class.**

The student response sheet comes in two formats: one for just drawing and one for drawing and writing. You could also provide students with a few sentence starters such as:

- **Once upon a time there was a boy/girl who had a big problem!**
- **The boy/girl's mom/dad always told him/her...**
- **The boy/girl never listened. They always did _____ instead...**

Write a story about a kid that turns into a strawberry.



Write a story about a kid that turns into a strawberry.

Write a story about a kid that turns into a strawberry.



Lesson 19

The Calabash Kids

Investigation and Discovery

Objective: Thinkers will use their detective skills to predict how a character will solve problems that she faces throughout the story.

Lesson Outline

1. In the thinkstarter, thinkers will examine a photograph of a little girl to determine if the girl is breaking a rule.
2. Thinkers will listen to the story "The Calabash Kids." They will examine a series of challenges faced by Shindo and predict how her problems will be solved.
3. Thinkers will extend their thinking by comparing and contrasting "The Calabash Kids" to "The Shoemaker and the Elves."

Materials

The Calabash Kids
PowerPoint



The Calabash
Student Work Pages

The image shows a student work page. At the top, it says "Name: _____" and "The Calabash Kids". Below that, it says "What are problems that Shindo is having?". There is a small drawing of a girl. Below that, it says "Why do you think the chef/on gave Shindo three seeds? Think of three ways the seeds may help her." There is a table with three rows and two columns. The first column has numbers 1, 2, and 3. The second column is empty. In the bottom right corner, there is a small drawing of a person.

Thinker Materials:
Writing Utensils

Common Core Content Standards

KINDERGARTEN	FIRST GRADE	SECOND GRADE
<p>RL.K.1 With prompting and support, ask and answer questions about key details in a text.</p>	<p>RL.1.1 Ask and answer questions about key details in a text.</p>	<p>RL.2.1 Ask and answer such questions as <i>who</i>, <i>what</i>, <i>where</i>, <i>when</i>, <i>why</i>, and <i>how</i> to demonstrate understanding of key details in a text.</p>
<p>W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p>	<p>W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p>	<p>W.2.8 Recall information from experiences or gather information from provided sources to answer a question.</p>
<p>SL.K.2 Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.</p>	<p>SL.1.2 Ask and answer questions about key details in a text read aloud or information presented orally or through other media.</p>	<p>SL.2.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p>
<p>SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</p>	<p>SL.1.3 Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.</p>	<p>SL.2.3 Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.</p>

The Calabash Kids

A Folktale from Tanzania

thinkStarter



Who can tell me what detectives do? If you've completed Lesson 14, then thinkers have discussed that detectives look for details and clues to solve mysteries.

You may remember that we've talked about how your brain works like a detective. Your brain notices all kinds of details. It puts those details together with all the things you already know! Your brain is a super detective! You're always figuring out answers to questions and mysteries- without even realizing what you're doing!

We're going to look at a picture, and I want you to think like a detective. When I show the picture, I don't want you to talk. I just want you to let your brain be a detective.



Give thinkers a moment to examine the picture before asking questions.

Do you think this girl is supposed to be getting a cookie? Why or why not? Thinkers will probably guess that

the girl is not supposed to be getting a cookie. The girl has a guilty expression on her face. Her eyes are wide like she's surprised. She's dressed up, and the cookie display is very nice, which suggests that she might be at a party or an event and may not be allowed to touch the food. If thinkers have trouble explaining how they knew, ask probing questions like the following:

- What is the girl's expression?
- Where do you think the girl is at? How do you know? What rules do they usually have at parties about food? Which rule might the girl be breaking?

- What expression would the girl have on her face if she was allowed to take a cookie?

That was a lot of good thinking. You thought about what you know about facial expressions. You thought about rules that people have at parties for taking food. You noticed that the cookies and cookie display were really nice and something that kids might not be able to touch.

Your brain is like a detective all the time. It is always working to find clues and to help you solve mysteries. When we read and listen to stories, our brain works like a detective to help us understand what's happening. When you hear a story, you think of other things you already know, and you think of questions you might have. Today, when we listen to our story, we're going to use our brains to think like detectives.



Today we're going to read a story called "The Calabash Kids" from Tanzania.

thinkStory



Once upon a time, there was a woman named Shindo. Her husband had died, and she had no children. Shindo was very lonely. She was also very tired because she had no one to help her with chores.

Every day, Shindo had to clean the hut, take care of the chickens, wash her clothes in the river, carry water, cut firewood, and cook food. She had no one to help.

At the end of each day, Shindo would look towards the mountains to pray. "Great Mountain Spirit," she would cry. "My work is too great! Please send me help!"



One day, Shindo was working hard in her vegetable patch. Suddenly, a noble chieftain appeared. (Click to make man appear.)

“Shindo, I am a messenger from The Great Mountain Spirit,” the chieftain said. He handed her some gourd seeds. “Plant these carefully and tend to them. They are the answer to your prayers.” Then the chieftain disappeared. (Click to make the man disappear.)



Shindo wondered, “How will this pile of seeds help me?” But she trusted the chieftain, so she planted the seeds and took great care of them.

What are Shindo's problems?

Shindo has some problems. What are Shindo's problems? Give thinkers time to respond. This section may be completed as a whole-class. Shindo is lonely. Her husband died, and she has no children. Shindo has

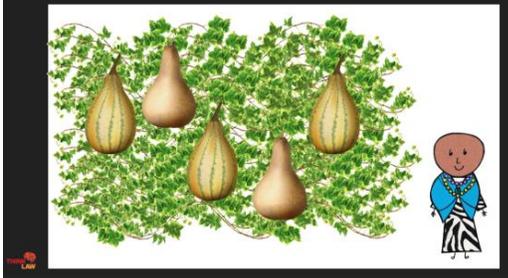
to do a lot of work. She must take care of the chickens, chop the firewood, carry the water, do the laundry in the river, clean the hut, and cook.

What are three ways the seeds may help?

1	
2	
3	

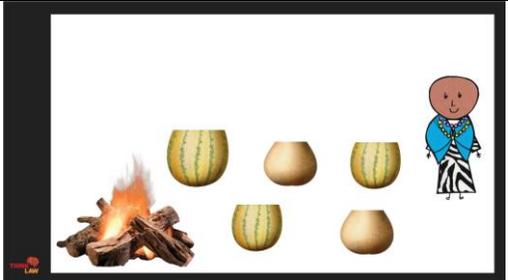
The chieftain gave Shindo seeds to solve her problem. I want you to think of three ways the seeds might help Shindo. Remember, these stories contain magic, so these seeds might be able to do things that

normal seeds cannot. Remember, your brain is like a detective. You can think of other stories you may have heard with magical seeds. What happened in those stories? Do you think that will happen in this story? Give thinkers time to brainstorm and share their responses.



Shindo was amazed at how quickly the vines grew, and in just a few weeks, ripe gourds appeared.

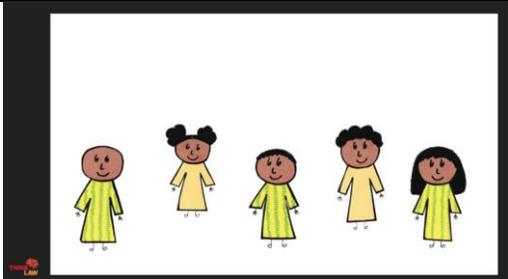
Shindo picked the gourds and took them to her home. **(Click five times to make the gourds disappear.)**



When she got home, she sliced off the tops and scooped out the pulp. Then she left the gourds out to dry. **(Click five times to make gourds appear.)**

“When they dry, I will take them to the market as calabashes, to be made into bowls and jugs.”

Shindo set the finest gourd by the cook fire. This one she wanted to use herself, and she hoped it would dry faster.



The next morning, Shindo left to work in the field. But back in the hut, the gourds began to change. They grew heads, then arms, then legs. **(Click five times to turn the gourds into children.)** Soon, all the calabashes had turned into children!

The gourd that was closest to the fire was called Kitete. He had no hair and was very lazy because he had been so close to the fire.

The children ran through the hut and yard and laughed and played. All but Kitete worked and completed all Shindo’s chores! They fed the chickens, washed the clothes, carried the water, cut the firewood, and cooked the meal.

Then they went back into the hut and turned back into calabashes. **(Click five times to turn the children back.)**

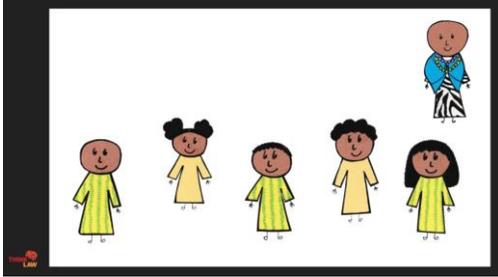


That afternoon Shindo returned home. She could not believe all of her work had been completed.

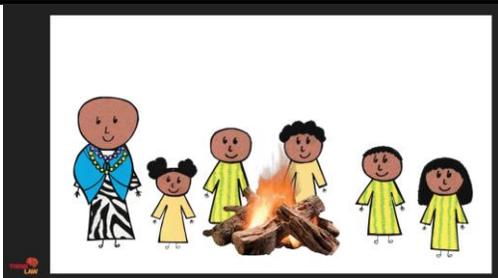
The other women of the village called to her. "Who were the children in your yard today? Where did they come from? Why were they doing your chores?"

"What children?" asked Shindo. She was so confused. Her work had been completed, but she did not know who had helped her.

The same thing happened for three days. Every morning when Shindo left, the gourds would turn into children. The children would run and play and then complete all the chores. Each day as Shindo arrived home, she became more and more confused.

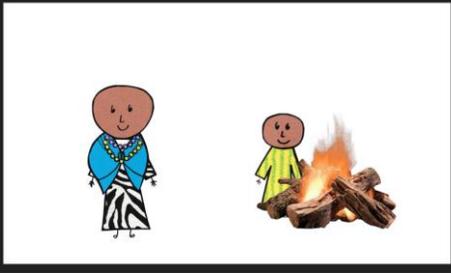


The fourth morning, Shindo pretended to leave but instead hid and waited. **(Click to make Shindo disappear.)** The gourds turned into children one by one. **(Click five times to make the gourds turn into children.)**



Shindo spoke to the children, "Do not turn back into gourds! I want you to be my children. I promise to love you and take care of you!"

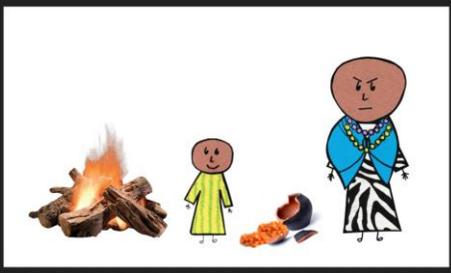
So, the children stayed, and Shindo took care of them as if they were her own. She was no longer lonely. The children were so helpful she soon became rich and owned many fields of vegetables, goats, and chickens.



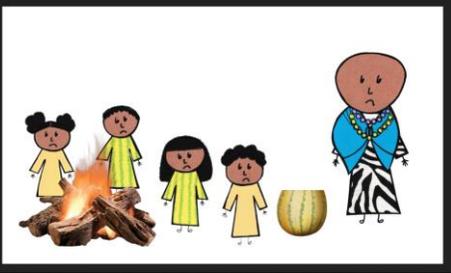
All the children were helpful and hardworking except for Kitete. He would just sit by the fire and smile.

Usually Shindo didn't mind. He was such a sweet baby. But sometimes she would get annoyed with him.

One day Shindo was cutting vegetables for supper. She tried to carry the pot to the fire to cook, but she tripped over Kitete. When she fell, the pot broke, and the vegetables spilled all over the floor.



"Haven't I told you to stay out of my way?" yelled Shindo. "But what can I expect? You aren't even a real child, you're nothing but a calabash." At that very moment, Kitete turned back to a gourd.



The children crowded into the hut. "I didn't mean what I said!" cried Shindo. "Kitete, you are not a calabash, you're my son! Children do something!"

What are Shindo's problems?



Shindo has a pretty big problem! What is her problem? **She became angry and yelled at Kitete, and he turned back into a calabash.**

What are three ways she might solve her problem?

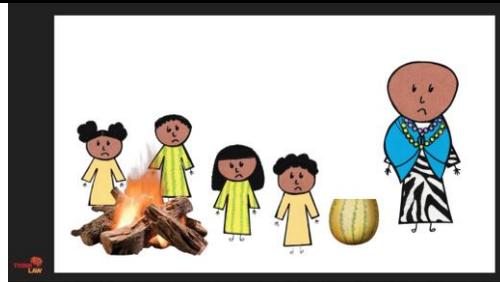
1	
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Let's brainstorm three ways that Shindo might solve her problem.

When you're trying to figure out what happens next, you're letting your brain be a detective. Think about

what has happened in the story so far. Think about all the things in this story that are magical. Think about other stories you've read that might be kind of like this story. **Give thinkers time to think and respond.**

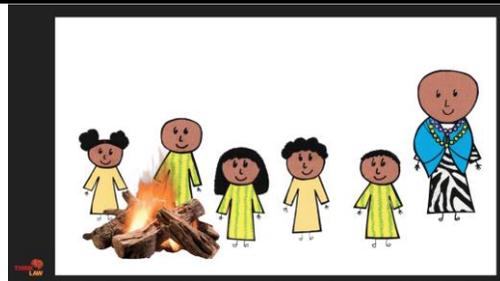
Let's keep reading to see what happens next.



The children crowded into the hut. "I didn't mean what I said!" cried Shindo. "Kitete, you are not a calabash, you're my son! Children do something!"

The children looked at each other and then sang, "Kitete come help us! We'll work for our mother. Come on and help us Kitete. Our favorite brother."

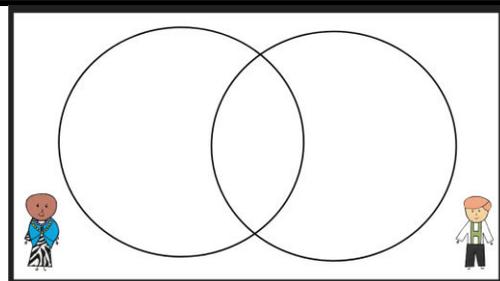
For a long time, nothing happened. Then slowly the gourd began to change. It sprouted a head, then arms, then legs.



Kitete was back! Shindo had learned her lesson, and after that day, she was always very careful what she called her children.

thinkBigger

If you are not going through the volume in order and have not read "The Shoemaker and the Elves," you will skip this thinkBigger.



This reminds me of some other stories we've thought about. Does this remind you of any of the other stories we read? **Some thinkers might suggest that it reminds them of "The Shoemaker and the Elves."** (Click to make the shoemaker appear.)

This story reminds me of “The Shoemaker and the Elves.” Why do you think “The Calabash Kids” makes me think of that story? Let’s think about things that are similar and things that are different between the two stories. This may be completed as a whole group activity or individually depending on the age of your thinkers. Give thinkers time to brainstorm and share. Sample responses are listed below.

Similarities:

- The main characters in both stories need help.
- The main characters in both stories receive mysterious, magical helpers.
- The main characters in both stories hid to find out who was helping them.
- The main characters in both stories want to help their helpers.

Differences:

- The settings of the stories are different. One takes place in Africa, and one takes place in Europe.
- The elves in the story leave and never come back, but Shindo adopts the kids.
- The shoemaker never really talks to the elves. The shoemaker is married.

Lesson 25

The Llama and the Great Flood

Asking and Evaluating Questions

Objective: Thinkers will consider questions that characters in a story should be asking and evaluate why the answers to those questions are important.

Lesson Outline

1. Thinkers will begin by considering the importance of asking questions throughout different professions.
2. Thinkers will listen to the story "The Llama and the Great Flood." They will pause throughout the story to create questions the characters should be asking and evaluate why the answers to those questions are important.
3. Thinkers will review previous stories and debate if characters in folktales ask enough questions.

Materials

The Llama and the Great Flood PowerPoint



The Llama and the Great Flood Work Pages

Two identical work pages for the story. Each page has a header "Name _____" and "The Llama and the Great Flood". Below that is a table with two columns: "What question should the character ask the llama?" and "Why is the answer to that question important?". There are two rows of empty space for writing. A small llama icon is in the bottom right corner of each page.

Thinker Materials:
Writing Utensils

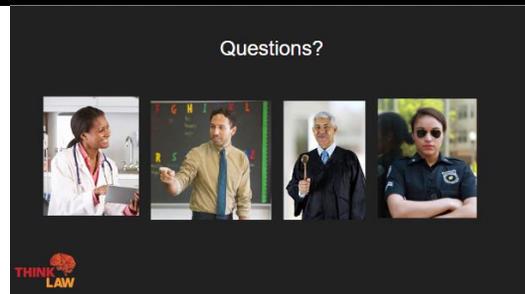
Common Core Content Standards

KINDERGARTEN	FIRST GRADE	SECOND GRADE
<p><u>RL.K.9</u> With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.</p>	<p>RL.1.9 Compare and contrast the adventures and experiences of characters in stories.</p>	<p>RL.2.2 Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.</p>
<p>W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p>	<p>W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p>	<p>W.2.8 Recall information from experiences or gather information from provided sources to answer a question.</p>
<p><u>L.K.1.D</u> Understand and use question words (interrogatives) (e.g., <i>who, what, where, when, why, how</i>).</p>	<p><u>SL.1.1.C</u> Ask questions to clear up any confusion about the topics and texts under discussion.</p>	<p><u>SL.2.1.C</u> Ask for clarification and further explanation as needed about the topics and texts under discussion.</p>
<p><u>SL.K.3</u> Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</p>	<p><u>SL.1.2</u> Ask and answer questions about key details in a text read aloud or information presented orally or through other media.</p>	<p><u>SL.2.3</u> Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issues.</p>

The Llama and the Great Flood

A Folktale from Peru

thinkStarter



We know that asking questions is a very important skill. Why is it important to ask a lot of questions? Questions help us learn. They help us understand things that are hard for us to understand.

There are jobs where asking questions is very important. What jobs do people have where they need to ask a lot of questions? Why do you think people who do those jobs need to be good at asking questions? Give thinkers time to respond.

(Click four times to make four jobs appear.) These are a few jobs where asking questions is very important. Do you recognize any of these jobs? The pictures include a doctor, a teacher, a judge, and a police officer.

What kind of questions might these people ask? Give thinkers a chance to share their ideas.

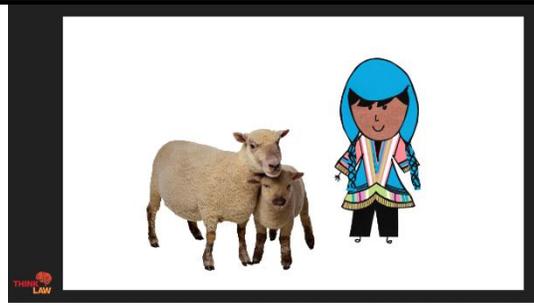
Why do you think these people ask so many questions? Asking questions allows them to help people and get information they need to make decisions.

Is it important for kids to ask questions? Why or why not? It is important for kids to ask questions because that's how they learn!



Today we're going to read a story from Peru. Peru is a country in South America. The story is called "The Llamas and the Great Flood." As we read, we'll stop to think about questions we should ask and why the answers to those questions are important.

thinkStory



Once upon a time, there was a shepherd. The shepherd was very kind. He worked hard and would help anyone that needed his assistance. The shepherd would always share whatever he had with anyone who had less.



The shepherd had a llama that he loved very much. The llama made his life so much easier.

The llama would transport all of his family's belongings wherever they went. The shepherd took very good care of the llama.



But one day, the llama stopped eating. At night he would just gaze sadly at the stars.



The shepherd was very worried. He took the llama to many different fields to offer him different kinds of grass, but still the llama wouldn't eat.

What question should the shepherd ask the llama?	Why is the answer to that question important?
	

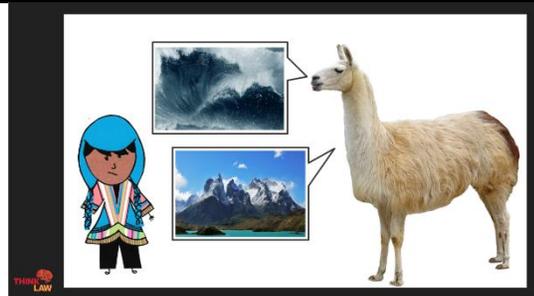
What questions would you ask the llama if you were the shepherd? Why are the answers to those questions important?

Sample responses might include:

- Why aren't eating?
- Why are you looking at the stars?
- What would you like to eat?

These questions would be important to ask because they would help the shepherd know how to take care of the llama and make sure that the llama was okay.

Those are a lot of great questions that would give you a lot of good information. Let's keep reading to see what the shepherd asked the llama.



Finally, the shepherd asked the llama what was wrong. The llama explained to the shepherd that a great flood was coming. (Click to make flood speech bubble appear.)

The llama told the shepherd that he must walk to the top of the Andes (Click to make the mountain speech bubble appear.), which is the highest mountain range in all of Peru, to escape the flood.

If I were the shepherd, I would have a lot of questions for the llama. Let's think of a few.

What question should the shepherd ask the llama?	Why is the answer to that question important?
	

Let's stop to think about this. What questions would you ask the llama if you were the shepherd? Why are the answers to those questions important?

Sample responses might include:

- How do you know about the flood?
- How do you know we will be safe at the top of the mountain?
- Why did you stop eating?

Before the shepherd moves his family, he should make sure that the llama know what he's talking about.

Let's keep reading to see what the shepherd asked the llama.



The shepherd asked the llama, "How do you know all of this?" The llama told the shepherd that he could read the future in the stars. The shepherd trusted the llama, so he gathered his family and headed to the mountain top.

Would you believe that llama if he told you that he could read the future in the stars? Why or why not? **Thinker responses will vary.** Some thinkers might say that since the llama can talk, he must have magical powers, so the shepherd should trust him.



As they climbed, the mountain, the rain began. The llama warned all of the animals he passed about the flood.

The animals began to join the family two at a time as they

headed to the top of the mountain. All of the animals believed the llama except for the fox.

What question should the fox ask the llama?	Why is the answer to that question important?
	

It seems as though the fox might have some questions! If you were the fox, what questions would you ask the llama? Why are the answers to those questions important?

Sample responses might include:

- How do you know about the flood?
- How do you know we will be safe at the top of the mountain?
- What will happen if I don't follow you?
- Why do you want to help everyone?

The fox might not want to leave his home and might need more information to understand why it's important.

Let's keep reading to see what the fox asked the llama.



“Why should I follow you up the mountain?” the fox asked. The llama explained what he had seen in the stars and that a great flood was coming. The fox thought about what the llama said.

The fox agreed to listen to the llama but walked so slowly up the mountain that his tail was in the rising water. It is for that reason that foxes have black tips on their tails.



At the top of the mountain, the group found a cave. It rained and rained for months. The family was afraid the sun had died.

But the llama told them that the sun was only resting in the waters of the great lake.



The mountain grew taller and taller. (Click twice to make the mountain grow.) Even though the waters reached the doors of the cave, they never came inside.



One day, the rain finally stopped, and the waters began to go down. The sun appeared again and caused the water to evaporate.

When at last the earth was dry, the families and the animals left the cave to return to their homes, and the mountain returned to its original height.



To this day humans live everywhere. But llamas remember the flood and so they only live in the highlands.

thinkBigger



Pet	What kind of questions would you ask?

A lot of the stories we have read together have animals that can talk.

Do you have a pet? Do you know someone has a pet? If you could talk to that pet and it could talk back to you, what questions would you ask?

Magic Seeds

Project 1

Early Elementary Volume 2

Project Overview: Thinkers will learn how a seed grows, investigate seeds, plant a seed, and write creatively about seeds.

Project Phases

Part 1: Learn How Seeds Grow

- Thinkers will learn how a seed grows by completing doodle notes.

Part 2: Exploring with Seeds

- Thinkers will examine 15 different types of seeds. They will sort the seeds into categories and try to match the seeds to the plants they will produce.

Part 3: Plant a Seed

- Thinkers will plant a seed to watch it grow. Thinkers can donate their seedlings to a local community garden.

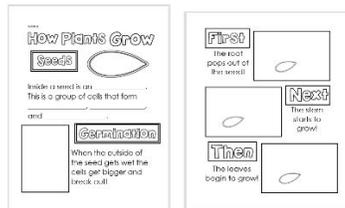
Part 4: Creative Writing with Seeds

- Thinkers will design a packet of magical seeds and write a story to accompany their creation.

Materials

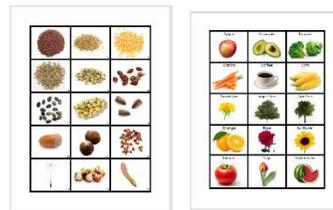
Part 1

- Student Doodle Note Sheets



Part 2

- Seed cards and sorting mat

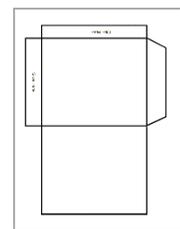


Part 3

- Seeds
- Dirt
- Cups or small containers.

Part 4

- Seed Packet Template
- Coloring Utensils
- Scissors
- Glue



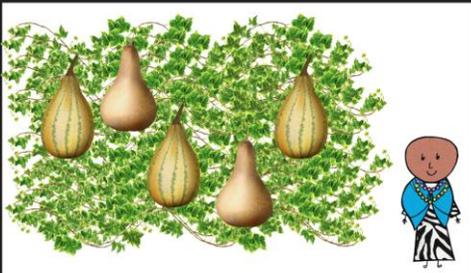
Magic Seeds?

thinkStarter



We read the story "The Calabash Kids" together and used our brains to think a lot about it. In the story, Shindo was very sad. She was all alone. But a noble chieftain appeared and gave Shindo some magic seeds.

What happened when Shindo planted the seeds? **Allow thinkers to respond.**



When Shindo planted the seeds, she grew gourds. The gourds then turned into children!



This makes me think of a question. I wonder why so many stories have magical seeds? Why do you think so many authors imagine that seeds are magical? **Thinkers might say that it's easy for people to imagine that seeds are magical**

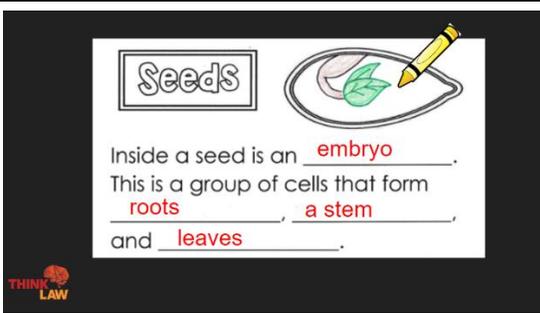
because they turn into something else! A tiny seed turns into a flower, a vegetable, or even a tree and that seems magical.



Seeds are pretty incredible! It's hard to believe that something so tiny can grow to be something so large!

It's easy to see why people thought seeds were magical. But today we know a lot more about science and we can explain how seeds grow!

thinkSeeds



Seeds

Inside a seed is an embryo.
 This is a group of cells that form
roots, a stem
 and leaves.

THINK LAW

Inside of a tiny seed is an embryo. (Click to make the word embryo appear.) An embryo is a group of cells that form roots, a stem, and leaves. (Click three time to make the word embryo appear.)

Give thinkers time to write down the missing words and draw the plant embryo inside of the seed.

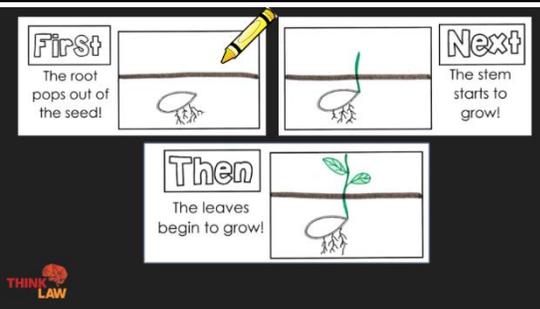


Germination

When the outside of the seed gets wet the cells get bigger and break out!

THINK LAW

The next thing that happens has a pretty long name! Germination happens when the outside of a see gets wet. The cells inside the seed get bigger and bigger until they break out! Give thinkers time to sketch a picture of germination.



First
The root pops out of the seed!

Next
The stem starts to grow!

Then
The leaves begin to grow!

THINK LAW

The first thing that pops out of the seeds are the roots! Give thinkers time to sketch a picture of the roots.

The next thing that pops out of the seeds is the stem! Give thinkers

time to sketch a picture of the stem.

Then the leaves begin to grow. Give thinkers time to sketch a picture of the leaves.



THINK LAW

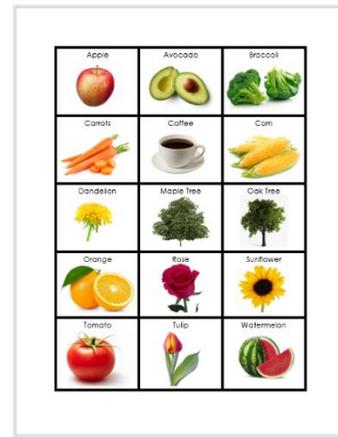
Now that we've thought about how seeds grow, we're going to take some time to look at some seeds.

There are cards with 15 different types of seeds. The cards are

numbered in the bottom right corner.

There are two flexible options for these cards.

1. Have thinkers break into small groups or work with a partner. Ask thinkers to sort the cards into different groups. Thinkers could sort the seeds by color, size, shape, or any other types of categories they may brainstorm. Ask thinkers to share their categories. Ask thinkers to justify why they put seeds into specific groups.
2. There is a sheet that contains a grid of plants that grow from the seeds thinkers have been analyzing. Thinkers should try to match the seed to the plant they think grows from that seed.



1. Broccoli
2. Carrots
3. Corn
4. Tomatoes
5. Coffee
6. Apple
7. Watermelon
8. Orange
9. Sunflower
10. Oak tree
11. Avocado Seed
12. Rose Seed
13. Dandelion Seed
14. Tulip
15. Maple Tree



The number at the bottom right of the cards corresponds with the answer key on the left.



Let's look at the seeds to see what they become. What did you think seed number 1 grows into? Give thinkers time to respond. Click to make the broccoli appear. These little seeds grown into broccoli. Did anyone guess that correctly?

Go through all the slides to reveal the plants that grow from each group of seeds. You may ask some of the following probing questions:

- How did you know that seed grew into that plant?
- Which seeds were easy to guess? Why?
- Which seeds were hardest to guess? Why?
- Which seeds surprised you the most? Why?

Thank you for thinking so hard about these seeds! But we're not done yet! We have some more thinking to do.

thinkBigger

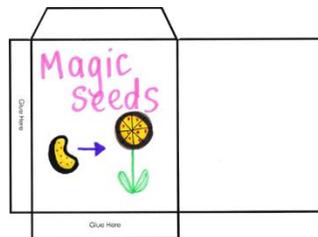
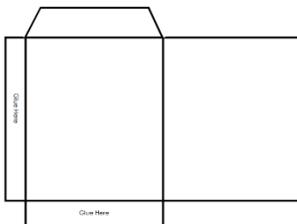
There are two options for a thinkBigger activity!

Option 1: Plant Seeds

Thinkers could plant seeds in the classroom to watch them grow. Consider planting vegetable seeds and then donating the seedlings to a local community garden.

Option 2: Invent your own magic seeds

As a creative writing activity, have thinkers design their own magic seeds. They can design and assemble a seed packet, make magic seeds inside, and write about what grows from their magical seeds!



When was the last time you
gave your students a chance to
change the world?

Environmental Justice



3rd and 4th
Grade
Edition



Summer School Curriculum



How will you capture your students and engage them in critical thinking this summer?



THE PROBLEM.

Our world is in **URGENT NEED** of critical thinkers. But critical thinking is **HARD TO TEACH**.

Critical thinking is the precursor to innovation, a key to college and career readiness and has been linked to more positive life outcomes. The complex global challenges we face today have placed a peak demand for critical thinkers. But our supply is limited because critical thinking is still a luxury good: only 1 of 10 educators teach it, and it's usually only taught at the best schools or to the best students. This means that most students are taught to ask "what" and "how to" instead of "why" and "what if," and rarely learn the habits and mindsets needed to apply critical thinking consistently.

THE SOLUTION

thinkLaw HELPS EDUCATORS teach critical thinking to **ALL STUDENTS** using **real-life legal cases**.

Our comprehensive program of teacher tools, student guides, and virtual coaching is based on real-life cases because the law's Socratic questioning methods make it easy for teachers to ask the questions that build student critical thinking skills. And the law speaks to students' sense of fairness and justice, motivating them to adopt the critical thinking mindsets and habits needed to apply these skills throughout their lives. thinkLaw is also standards-aligned, allowing teachers to incorporate it into what they are already doing in their classrooms. thinkLaw gives under-resourced schools with time-strapped teachers all they need to facilitate critical thinking through engaging discussions, writing assignments, and other learning activities with under 1 hour of initial training and less than 20 minutes of prep time per lesson.

thinkLaw Curriculum

Comprehensive Teacher Guides



Less than 20 Minutes Prep Time!

Includes Over 500 Probing Discussion Questions!

Student Work Pages

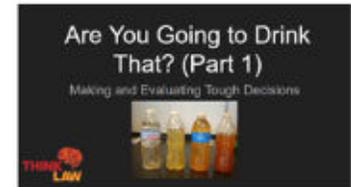


Available as Workbooks or Electronically

Compatible with Google Classroom

PowerPoint Presentations

Each Lesson has a pre made PowerPoint and/or Google Slide Presentation



Additional Lessons



thinkLaw Users have Access to a Library of over 50 Additional thinkLaw Lessons

Writing Assessments



Assessments with Scoring Guides using the DRAAW+C Framework

Braincandy

Online Database of over 1,000 questions that accompany all thinkLaw Lessons



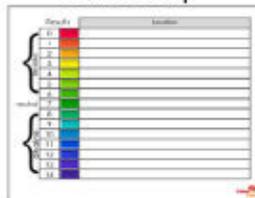
Extension Activities

Additional Extension Activities to Review Math, Writing, and Science Skills Using Social Justice as a Motivator!



Project-Based Learning Experiences

Allow Students Real-World Opportunities for Active Citizenship



Comprehensive Teacher Onboarding



Training Video Calls to Explain the thinkLaw Approach and Materials

All thinkLaw Materials are Standards Alligned!

Lesson 2

Are you Going to Drink That? (Part 1)

Making and Evaluating Tough Decisions



Objective:

Objective: Thinkers will analyze the impact of the Flint, Michigan water crisis on local residents and businesses. They will determine how they would have responded to the crisis if they were in charge.

Lesson Outline:

1. Thinkers will imagine a scenario where a principal makes an announcement. Thinkers will brainstorm questions to ask the administrator.
2. Thinkers will be introduced the Flint water crisis and determine what they would do if they were the mayor of Flint.
3. Thinkers will ask questions about the Flint water crisis and consider how they would feel if they were residents of Flint.
4. Thinkers will conclude by considering different locations in a town and determining how this places would be impacted by the water crisis.

COMMON CORE CONTENT STANDARDS

	R11	R13	W1	SL3
Third Grade	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.	Write opinion pieces on topics or texts, supporting a point of view with reasons.	Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
Fourth Grade	Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.	Write opinion pieces on topics or texts, supporting a point of view with reasons and information.	Identify the reasons and evidence a speaker provides to support particular points.

PowerPoint:

Are You Going to Drink That? (Part 1)

Making and Evaluating Tough Decisions



Instructor's Note:

There are no right or wrong answers to most thinkLaw questions. The teacher's edition shows possible thinker responses in red. It is okay if thinkers reach different conclusions. The most important part of their answer is the explanation of their thinking.

Instructor's Note:

thinkLaw lessons contain a lot of probing questions. These are discussion questions you can use as you go through the lesson. You do not need to ask every question. Pick and choose the questions that you feel have the best fit.

Instructor's Note:

Give thinkers an opportunity to share their questions. Ask thinkers to explain why the answer to that question is important.

Probing Questions:

- How do you think your parents would react when you told them about this announcement? Why do you think they would react in that manner?
- If you heard this announcement in the morning, would you feel comfortable eating lunch from the cafeteria? Why or why not?
- What other ways does the school use tap water throughout the building? (To wipe down tables in the cafeteria, to mop the floors, etc.) What safety concerns would you have about these water uses?

Lesson 2

Are You Going to Drink That? (Part 1)

Making and Evaluating Tough Decisions

thinkStarter

One day, the principal comes into class to make an announcement.

Today we are having problems with water in the school building.

You may use water to flush the toilet only. Do **NOT** use the water to wash your hands. You must not drink any of the school water or get it into your mouth. Do not use the drinking fountains or use school water to fill up your water bottles. If you drink the school water, you may get sick.



What questions would you ask?

*What happened to the water?
What made it unsafe to use?*

What exactly will happen to us if we drink the water?

When will the water problem be fixed?

thinkStarter Summary

You might not think about the water you drink every day. You might not worry if the water you drink is safe. But what if you needed to worry?

Are You Going to Drink That?

Flint, Michigan got the water for their town from Lake Huron and the Detroit River.

In 2014, the city switched to use water from the Flint River instead.

When they made the switch, lead from the pipes got into the water of over 100,000 people.

WARNING

Swallowing lead can cause the following problems:

- Memory Problems
- Headaches
- Brain Damage
- Abdominal Pain
- Seizures
- Comas

If you were the mayor of Flint, what would you do as soon as you heard that water from the pipes contained lead?

To Do:

- I would organize a community meeting to warn people about the dangerous water.
- I would ask for donations for bottled water to pass out in the community.
- I would ask the state governor for help.
- I would switch the water pipes back to Lake Huron and the Detroit River.



Instructor's Note:

You may point out to thinkers that at most wellness visits, the pediatrician will ask if a child has experienced any exposure to lead. Why do you think doctors ask parents this question?

Instructor's Note:

thinkLaw lessons are designed to be flexible and allow for flexible grouping options. Thinkers can brainstorm how they would handle the crisis individually, with a partner, in a small group, or with the whole class. Be sure to leave enough time for thinkers to share their ideas with the class.

Probing Questions:

- Which side effect of swallowing lead do think is the most serious? Why?
- Do you think 100,000 people is a large number? Why or why not?
- If you were the mayor of Flint, would you tell people right away that the water was contaminated? Why or why not? What reasons would the mayor have for not telling people right away?
- What items on your "To Do" list would be the easiest to complete? What items on your "To Do" list would be the most difficult to complete?
- Which item on your "To Do" list is the most important? Why?

Braincandy Questions:

- (2.1) What would you think about this announcement from the principal?
- (2.2) What should the school do to solve the problem?
- (2.3) What is the first thing you would do if you were the mayor of Flint?

Instructor's Note:

- **April 2014**- The Flint switched their water supply from Lake Huron and the Detroit River to the Flint River.
- **October 2014**- The General Motors Plant in Flint stopped using Flint tap water because the water was destroying the metal on their car parts.
- **February 2015**- A worker from the Environmental Protection Agency tested water in a home in Flint. The lead levels in the water were 7 times higher than acceptable limits.
- **July 2015**- The Flint Mayor drank a glass of tap water on local television to show that the water was safe.
- **September 2015**- Virginia Tech scientists

said that lead levels were too high in 40% of the homes in Flint. They recommend that Michigan declare that water in Flint is not safe to drink or to use when cooking

- **September 2015**- A local pediatrician releases a report about the increase of lead being found in the blood of local children.
- **October 2015**- Michigan's governor signs a bill to have Flint switch back to Lake Huron/Detroit River.
- **December 2015**- Flint's mayor declared a state of emergency.
- **January 2016**- President Obama declared a state of emergency and promises \$5 million in aid.

The events listed above are a few points on the Flint water crisis timeline. Almost 2 years passed between the start of the crisis and the point where the situation was declared a state of emergency. Why do you think it took so long?

Braincandy Questions:

(2.4) What questions would you ask if you lived in Flint?

At first, no one noticed a problem. The leaders in Flint told people that the water was safe for months. But then people started to get concerned. The water coming out of their faucets looked like this.



What questions would you have for the mayor if you lived in Flint?

Why did it take so long to figure out and tell people that the water was dangerous?

Why did it take so long to figure out and tell people that the water was dangerous?

We used the dangerous water for a long time. What will happen to us?



The mayor of Flint even went on TV. He drank a glass of Flint tap water to show people that the water was safe to drink. Would you feel better if you lived in Flint and saw the mayor drink the water?

- Yes
- No

Why or why not?

Thinker responses will vary. Some thinkers will say that it would make them feel better to see the mayor drink the water because he wouldn't drink it if he didn't think it was safe. Others might say the water still looks really bad.

thinkBigger

The water in Flint was not safe to drink for a very long time. The water was also not safe to use when people brushed their teeth, took a shower, or washed their hands. What kinds of problems do you think this would cause? List all the problems unsafe water would cause in each of the following places.

<p>At a School</p> <ul style="list-style-type: none">• Students couldn't wash their hands or use the drinking fountains.• It would be more difficult to cook in the cafeteria if the workers couldn't use the tap water.	<p>At a Hospital</p> <ul style="list-style-type: none">• Doctors and nurses couldn't use the water to wash their hands.• The nurses couldn't use the water to clean wounds.• Hospitals must be very sterile. They wouldn't want to use the water to clean or mop.
<p>At a Store</p> <ul style="list-style-type: none">• If customers weren't washing their hands, there would be a lot of germs. The store would need to buy hand sanitizer.• At the grocery store they couldn't spray the produce to keep it wet.	<p>At a Restaurant</p> <ul style="list-style-type: none">• Restaurants wouldn't be able to cook with the tap water.• Usually when people order water at a restaurant it's free because it's tap water. If they couldn't serve the tap water, they would have to charge for bottled water.
<p>At a Park or Community Center</p> <ul style="list-style-type: none">• If the park or community center had a pool or splash pad they would need to worry about the safety of the water.• Parks would need to shut off their drinking fountain.	<p>At a House</p> <ul style="list-style-type: none">• Families use tap water to do laundry, wash dishes, and cook.• Pets also wouldn't be able to safely drink the water. 

Instructor's Note:

This exercise is an opportunity to think big. What are all the things that will be impacted by contaminated tap water?

If thinkers get stuck, ask them to begin by thinking about all the ways each of these locations use water. There are some similarities between how each of these places use water. For example, people at every location use water to wash their hands. How is each location uniquely affected by the water crisis?

Instructor's Note:

As a flexible grouping option, you could split the class into six groups and assign each group a different location.

Probing Questions:

- Will all these issues lead to an increase in lawsuits in the city? Why or why not?
- Would you sue if you were a Flint resident? Who would you sue? What would be your complaint?
- Do you think about the quality of water? At home? At a store? At a park? Why or why not?
- What do you think is the biggest challenge during a water crisis? Why?
- Do you think people would want to visit Flint to shop, stay, or do business? Why or why not? How will that impact the area?

Braincandy Questions:

- (2.5) Poll: Which location do you think faced the most problems over the water crisis?
(2.6) What problems do you think were created by the water crisis?

Instructor's Note:

This lesson includes an extension activity for thinkers to determine how much water their families use in an average day and the expense their families would incur by having to switch completely to bottled water.

Lesson 3

Are you Going to Drink That? (Part 3)

Making and Evaluating Tough Decisions



Objective:

Thinkers will analyze the impact of the Flint, Michigan water crisis on the students and schools in that area. They will determine how they would help the students who may need additional support and evaluate Court's response to the crisis

Lesson Outline:

5. Thinkers will imagine a scenario where they are the superintendent of Flint Schools.
6. Thinkers will be introduced to a class actual lawsuit against the Michigan Department of education. They will assume the role of the judge and address the three main complaints of the suit.
7. Thinkers will evaluate the settlement of the lawsuit.
8. Thinkers will conclude by brainstorming a list of outside individuals and companies that could help the families impacted by the water crisis.

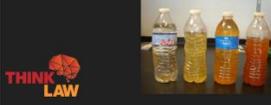
COMMON CORE CONTENT STANDARDS

	R11	RI3	W1	SL3
Third Grade	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.	Write opinion pieces on topics or texts, supporting a point of view with reasons.	Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
Fourth Grade	Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.	Write opinion pieces on topics or texts, supporting a point of view with reasons and information.	Identify the reasons and evidence a speaker provides to support particular points.

PowerPoint:

Are You Going to Drink That? (Part 2)

Making and Evaluating Tough Decisions



Instructor's Note:

It might help thinkers to expand their thinking by considering different age groups that school districts service.

- What support do you need to provide children affected by lead that are between 0 and 5?
- What supports will elementary aged students need?
- Middle school students?
- High school?
- How will students continue to need support as they graduate?

Instructor's Note:

Give thinkers an opportunity to share their questions. Ask thinkers to explain why the answer to that question is important.

Probing Questions:

- How do you think your parents would react when you told them about this announcement? Why do you think they would react in that manner?
- If you heard this announcement in the morning, would you feel comfortable eating lunch from the cafeteria? Why or why not?
- What other ways does the school use tap water throughout the building? *(To wipe down tables in the cafeteria, to mop the floors, etc.)* What safety concerns would you have about these water uses?

Braincandy Questions:

(3.1) What is the most important thing the school can do to prepare to meet the needs of these students?

Lesson 3

Are You Going to Drink That? (Part 2)

Making and Evaluating Tough Decisions

thinkStarter

Lead poisoning is very dangerous for children. Many children who drank the water that contained lead will have trouble paying attention. The children will have an increase in learning problems and behavior problems.



In Flint 30,000 children from birth to age 19 were exposed to very high levels of lead in their water for almost two years. Many of those children bathed in the water, washed their hands, drank the water, and had their food cooked using the water.

These children will need extra help in school to recover from the effects of the lead exposure.

If you were the superintendent of Flint schools, what would you need to do to get ready to help that many children with special needs?

To Do:

- They should hire more teachers.
- The school district should make sure that the teachers have special training to learn how to help the students.
- The school should make sure that the students have extra breaks during the day.



Today you'll think about a lawsuit that was filed because many parents felt that Flint schools were not ready to help the children who had lead poisoning.

thinkCivilRights

(D.R., et. al. v. Michigan Department of Edu., Michigan, 2016)



Chandrika is a woman who lives in Flint, Michigan. Chandrika has a 4-year-old son who use the dirty the water for two years. Her son was covered in hives and rashes from bathing in the Flint water.

Chandrika's son was tested for lead poisoning by the county, but they did not call her for over a year with the results. Her son had very high levels of lead in his blood. Chandrika knew that her son would need help in school and tried to enroll him in preschool, but all the preschool programs were full.

Chandrika was not the only parent who needed help. She joined together with other parents to fil a lawsuit against the Michigan Department of Education.

The lawsuit said that the Department of Education needed to help Flint Schools. The Flint School system did not have enough staff or resources to test and help 30,000 kid who might have special needs.

There were 3 main problems listed in the lawsuit. Pretend you're the judge in this lawsuit.

How would you tell them to fix these three problems?

Problem 1
The Flint School board has not created a plan to prepare to meet the special needs of so many children with lead poisoning.
The school board should have two weeks to draft a plan to give to the Court. The plan should include how they will test all of the students and what they will do to help them once they have the test results.



Instructor's Note:

This case is a class action lawsuit. A class action lawsuit is a lawsuit where a lot of people join to sue on behalf of a group.

- Why would people want to file a class action lawsuit instead of filing a lawsuit by themselves?
- Why do you think the people in this case chose to file a class action suit?

Instructor's Note:

Encourage thinkers to move past just saying, "I would have the school make a plan."

- What kind of plan should they make?
- How long will you give them to make the plan?
- What information should they include in their plan?

Instructor's Note:

The ACLU released a 3-minute video overview of this lawsuit. The video includes interviews with several plaintiffs.

The video is embedded in the PowerPoint or may be found at the following link:

<https://bit.ly/2RJlm8z>



Instructor's Note:

For this section, you could split the class into 3 groups. Assign each group one of the 3 complaints. Have each group brainstorm a solution to present to the class. When they present their solution, you could have the rest of the class brainstorm possible problems with this solution.

Braincandy Question:

(3.2) Poll: Which of the three complaints in the lawsuit do you think is the most serious

Probing Questions:

- Which of the three complaints do you think is the most serious? Why?
- If you were a parent in Flint, what would be your biggest concern? Why?
- If you were a student in Flint, what would be your biggest concern? Why?
- Is it important for the Flint School Board to plan ahead for the students with lead poisoning? Why or why not?
- Is it important for the Governor to talk about the schools in his plan? Why or why not?

Problem 2

The Governor of Michigan made a 75-point plan to fix the Flint water crisis; but none of the 75-point related to education.

The Governor of Michigan should have 2 weeks to add points to his plan about education. The Governor's team should meet with the school to learn more about the problem. The plan should include how much money the state will give the school and other resources the state will give to the district.

Problem 3

The Flint School District was already \$10 million in debt before the water crisis and was already struggling to meet the needs of their special education students.

The school district is going to need more money from the government to meet the needs of their students. Thinkers should write how much money they think the district will need in aid. What resources will they need? What repairs will they need to make to their pipes? Think about everything they will need and estimate an amount of money.

Your teacher will tell you what the Judge told the Department of Education to do.

Do you think this plan will help the students in Flint, Michigan?

- Yes
- No



Why or why not?

Thinker responses will vary. What do thinkers like about the plan? What do thinkers dislike about the plan? How will this plan help students in Flint?

Instructor's Note:

A slide in the PowerPoint contains the result of the settlement

- The state of Michigan will provide more than \$4 million to test children affected by the tainted water to see how they have been affected. The tests will look at effects of lead on brain cognitive development, memory and learning.
- The state, city and school district will provide staff to make sure the testing program and the schools are working together. Training and professional development will be provided for administrators, teachers and staff about how to recognize children potentially harmed by lead who may need to be referred for testing.
- The results of the assessments will be sent to the schools to be used in the process of evaluating students for special education services.

Probing Questions:

- What are the strengths of this settlement? What are the weaknesses?
- If you were a parent in Flint, would you be satisfied with this settlement?

What else could the Department of Education and Flint Schools do to help the students who were affected by the water crisis?

Thinker responses will vary. What do thinkers like about the plan? What

do thinkers dislike about the plan? How will this plan help students in

Flint?

thinkBigger

Government rules say that if water has levels of lead above 15 ppb (parts per billion) the water is unsafe to drink and must be treated.

Samples of water were taken from Flint's 11 public schools. The water from the schools had lead levels ranging from 61 ppb to 2,856 ppb!



Billionaire Elon Musk is famous for Tesla Cars and his Space X company that wants to create a colony on Mars. Elon gave new water filtration systems for all 11 public schools in Flint. The filtration systems cost about \$500,000.

If you were a community activist in Flint, who else could you ask for help? Brainstorm a list of people and companies that might be able to help solve some of the problems created by the water crisis.

Brainstorm- Who could help?

Probing Questions:

- What needs will the school district have? What are companies that have products that would meet those needs?
- Who are experts that might be able to help with the problems in Flint? How could they donate their time or resources to help?
- What can everyday people do to help the residents of Flint? What could you do to help the residents of Flint?
- Why should we care about what happened in Flint?
- If you were a student in Flint, who would you like to help you? How would you want people to help?
- Why do you think people just don't move away from Flint?

- Would you want to move away from here if we had a water crisis? Why or why not? Why might it be difficult to move?
- If you were a millionaire, what would you do for the residents of Flint? Why?

Braincandy Questions:

(3.3) Poll: Do you think this plan will help students in Flint, Michigan?

(3.4) What else do you think needs to be added to the settlement?

(3.5) Who are private citizens or private companies that you think could help the residents of Flint?

Environmental Justice Extension 1

Accompanies Lesson 2

PowerPoint:



Instructor's Note:

This activity allows thinkers to review math operations by adding and multiplying using social justice as a motivator. This exercise allows thinkers to empathize with families in Flint and consider how they would be impacted by a water crisis.

Instructor's Note:

Remind thinkers that this table allows them to create an *estimate* of how much water their family consumes. Thinkers should not spend an excessive amount of time trying to determine each

line. For example, their family may not do laundry on a daily basis. Thinkers should consider how much laundry their family does in a week and consider what their daily average might be. All the numbers listed are approximate amounts. There are more specialized dishwasher and washers that use less water so water amounts will vary.

Probing Questions:

- Does your family use water in other ways? What other ways might households use water?
- Does your family try to conserve water? How? Do you turn the sink off when you brush your teeth? Are you mindful of how long you're in the shower? What could your family do to conserve water?

Name _____

How Much Water Does Your Family Use?

What daily activities in your house use tap water?

Use this table to estimate how much water your household uses in a day.

Activity		Total Gallons Per Day
<p>Washing Your Hands</p> <p><i>When you wash your hands, you use about 1 gallon of water.</i></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 100px;"> <p>How many times a day do you wash your hands?</p> </div> <div style="font-size: 2em; margin: 0 20px;">X</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 100px;"> <p>How many people live at your house?</p> </div> <div style="font-size: 2em; margin: 0 20px;">=</div> </div>		
<p>Brushing Your Teeth</p> <p><i>When you brush your teeth, you use about 1 gallon of water.</i></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 100px;"> <p>How many times a day do you brush your teeth?</p> </div> <div style="font-size: 2em; margin: 0 20px;">X</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 100px;"> <p>How many people live at your house?</p> </div> <div style="font-size: 2em; margin: 0 20px;">=</div> </div>		

Showers

When you take a shower, you use about 25 gallons of water.

How many showers
are taken each
day at your house?

$$25 \times \boxed{} = $$

Washing Machine

When you take a shower, you use about 45 gallons of water.

How many loads of
laundry does your
family do?

$$45 \times \boxed{} = $$

Dishwasher

When you run the dishwasher, you use about 15 gallons of water

How many times
does your family
run the
dishwasher?

$$15 \times \boxed{} = $$

Instructor's Note:

Depending on your time constraints, you may allow thinkers to use calculators when totaling their estimates.

Instructor's Note:

Thinkers might say that they do not have a washing machine at home. Even if they use a laundry room at an apartment complex or a laundry mat, they should consider how much water they're using for this exercise.

Instructor's Note:

Thinkers might also not have a dishwasher. If this is the case, have them use the number of times a day they wash dishes in the sink.

Instructor's Note:

The general recommendation is for people to drink eight 8-ounce glasses of water a day. Thinkers may say that their family doesn't drink water. If this is the case, have them use the recommended number of glasses per person in their household. (And remind them of the importance of drinking water!)

Probing Questions:

- Did your final number of gallons surprise you? Why or why not?
- What surprised you the most as you went through this list?
- How would you be impacted if you suddenly could not use tap water for these daily activities? What challenges would that present?
- Do you have a pet? How much water would you need for your pet?

Instructor's Note:

You could collect the gallon totals for individuals and list them on the board. Why do some families use more water than other families? Create a graph as a class to represent water usage.

Other Uses <i>Estimate, or make an educated guess, of how much water your family might use for other activities. How much water does your family drink per day?</i>		
Add your totals.		
+		Washing Hands
		Brushing Teeth
		Showers
		Washing Machine
		Dishwasher
		Other
Total Number of Gallons		

What is your "gut reaction" to this number? Do you think your family uses a lot of water? Why or why not?

As a point of reference, it might be helpful to bring in a gallon jug to give thinkers a visual reminder of the size of a gallon.

When you pay the city for the water that comes out of your tap, it costs about \$0.004 per gallon. When you buy bottled water, it cost about \$1 per gallon.

About how much money would it cost for your family to replace tap water with all bottled water?

Thinkers should just take their total gallons and turn it into a dollar amount.

Do you think that's a reasonable amount of money? Why or why not?

Thinkers will most likely say that it is not a reasonable amount of water because the cost of using the bottled water is so much higher than the cost of using tap water.

The total number of gallons you calculated is rough estimate of how much water your family uses per day. Many families in Flint had to use bottled water for over 1,600 days.

If you lived in Flint, how would you feel? Why?

Thinkers will most likely say that they would feel frustrated or scared. They might be concerned about the expenses that would be related to using bottled water for an extended amount of time or the health risks that come from drinking contaminated water.

Why is important for people who are not involved in a crisis to stop and think about how they would feel in that situation?

If people can put themselves into the shoes of others, it develops empathy. If people understand how the crisis would impact their family, they might be more likely to donate water or money to help the people who live in Flint.



Instructor's Note:

Have thinkers share their totals. What else could their families buy with that amount of money? For example, for that amount of money my family could buy groceries for two weeks!

Probing Questions:

- Do you think most families have that much money to spend on bottled water?
- What would the world look like if everyone had to pay that much money for a gallon of water? What would happen? What problems would that create?
- How does the amount of time Flint family were without water impact your thinking about the situation?
- Think about how many families would struggle

to cover the cost of one day. Do most families have enough money to cover the cost of 1,600 days?

- Flint residents were still paying for tap water. They could use the water for things like flushing the toilet. How would you feel if you were paying the city for water but also needed to buy bottled water?

Instructor's Note:

Responses will vary but thinkers might say that if people stopped to think about how they would feel in any given situation, they might feel more compelled to help. If more people had considered the magnitude of the water crisis in Flint, they might have tried to help or donate bottled water.

How's the Water?

Project 1

Environmental Justice



Project Overview: Thinkers will test the ph levels of the water in various locations throughout their neighborhood or town. Thinkers will write a letter to their local water department with their findings.

Project Phases

Phase 1: Planning

- Thinkers will learn about the ph scale and how varying ph levels impact drinking water. Thinkers will create a plan to test the ph levels of the tap water in their community.

Phase 2: Testing

- Thinkers will test the ph levels of the tap water from various locations in their community. Thinkers will compile and analyze their results. They will record the testing locations on a ph chart.

Phase 3: Action Planning

- Thinkers will determine their plan of action. Thinkers will write a letter thanking the water department for keeping drinking water safe or write a letter requesting further testing to be done on water in certain locations in their neighborhood. They will organize their information and results in a graphic organizer to draft a letter to their local water department.

Phase 4: Final Draft of the Letter

- Thinkers will write and send the final draft of their letter to the water department.

Materials

Required

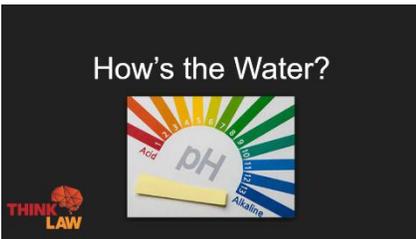
- thinkLaw Students Sheets
- ph Testing Strips (10 per Thinker or Small Group)

Optional

- Map of City or Neighborhood
- Additional Types of Beverages to Test
- Computers/Printers for Final Drafts of Letters

Environmental Justice Project 1

PowerPoint:



Instructor's Note:

This project can be completed individually or in small groups.

Instructor's Note:

The first few slides of the PowerPoint will explain the pH scale and the range for acceptable drinking water. Go through the slides and have thinkers fill in their graphic organizers. If you have a document camera in your classroom, you could also place a blank notes sheet under the camera and fill in the organizer together.

Instructor's Note:

Thinkers can also doodle the "How do you test pH?" steps.

Probing Questions:

- Have you ever tested the pH of the water at your house?
- What factors might cause water quality to test differently in different locations?
There might be an issue with the pipes in certain areas. There might also be different types of pollutants in different areas of town.

Name _____

How's the Water?

Phase 1: Planning

Big Question: What can pH levels tell you about water quality?

Water and pH Levels

What is pH?

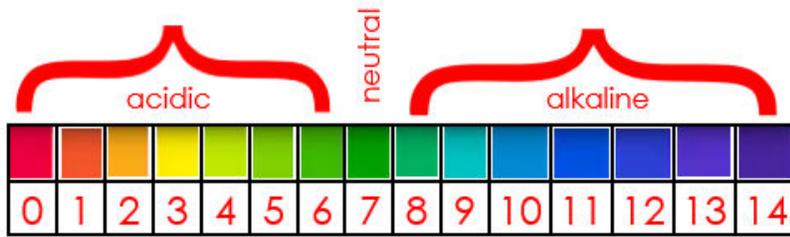
The measure of acid or alkaline in a liquid.

Too much acid?
Too much acid in water is very dangerous. This means you have too much metal in your water.

Too much alkaline?
Alkaline water has too much hydrogen. It is not as dangerous as acidic water but can cause vomiting, confusion, muscle twitching, and skin irritation.

How do you test pH?

1	Collect the water you want to test in a clean container.
2	Dip the paper testing strip into the water.
3	Compare the color of the testing strip to the pH chart to determine the pH level.



Safe drinking water should be between 6.5 – 8.5

If water is perfectly filtered, it's pH level should be 7

What does a water's pH level tell us?

- It is almost impossible for water to have a pH level of a perfect 7
- It won't tell you EXACTLY what is contaminating water.
- It will give you a warning that your water might need further testing.

Why should we test our water?

We should test our water because we want to make sure it's safe to drink.

Instructor's Note:

When thinkers fill in the pH chart, it will be difficult to exactly match the colors.

Coloring the boxes on the notes sheet is mostly for instructional purposes. Thinkers should try to match the colors but use the official charts when comparing the colors on the pH testing strips.

Instructor's Note:

This question provides an opportunity to explicitly discuss the importance of active citizenship and critical thinking. It's important that we take the lessons from the legal cases that we analyze and apply them in real life! It's more than just a class assignment! Our thinkers are stakeholders in the community!

Instructor's Note:

thinkLaw lessons and projects are always designed to be flexible. Thinkers can work individually, with a partner, or a small group to create a plan.

You can also decide how you want the thinkers to handle testing. Do you want them to take the ph strips to the location or collect a water sample to test in class? Will each group collect and test samples or will the class collect samples and test them together?

You can have thinkers bring in samples of water from home to test. You might also visit a few locations around town or in the neighborhood for the class to test.

Instructor's Note:

As an extension, you could also have students test the ph levels of other beverages as a point of comparison to the water.

Probing Questions:

- How did you choose the locations you'd like to test?
- What do you think will be easy about this project? What do you think will be hard about this project?
- Why is this project important?
- What do you think you will discover? Why?
- Why is it important to use water samples from different locations?

You're on the case.



Your Mission:

Create a plan to make sure the drinking water in your town is safe. Your teacher will give you ph strips to use.

- Where should you test?
- How many locations should you test?
- How will you collect water samples?
- What will you do if you find water that is outside of the safe ph range?

My plan:

Results		Location
0	Red	
1	Orange	
2	Yellow-Orange	
3	Yellow	
4	Light Green	
5	Green	
6	Light Green	
7	Green	
8	Light Green	
9	Light Blue	
10	Blue	
11	Dark Blue	
12	Dark Blue	
13	Dark Blue	
14	Dark Blue	

acidic (0-6)
neutral (7)
alkaline (8-14)

THINK LAW

Results		Location
0	Red	
1	Orange	
2	Yellow-Orange	
3	Yellow	
4	Light Green	The Gas Station
5	Green	
6	Light Green	School, My House
7	Green	
8	Light Green	McDonalds, The Library
9	Light Blue	
10	Blue	
11	Dark Blue	
12	Dark Blue	
13	Dark Blue	
14	Dark Blue	

acidic (0-6)
neutral (7)
alkaline (8-14)

Thinkers should record their locations on the chart next to the color/number that matches the test strip.

Instructor's Note:

Once thinkers have their test strips, they should compare the colors to the ph test chart to determine the ph level of the water.

Thinkers should check each strip and record the location next to the number.

You may print the charts in color, project the chart from the PowerPoint slide, or use the charts that come with the ph strips for color comparison.

Instructor's Note:

Once the ph levels have been determined, one option is to draw or print out a map of the town to mark the different locations that the class tested with the color that came from the result.

Instructor's Note:

Matching the ph strips by color might lead to some disagreements about which category a location should be placed in. Allow thinkers to defend their selection to the class. If there is a disagreement between two colors, have the class vote to break the tie.

Instructor's Note:

Reminder, the EPA says drinking water should be between 6.5-8.5 to be considered safe.

Instructor's Note:

The project might show that there are some concerns about certain locations in town. The project might also show that all locations fell between the acceptable range. Thinkers can write letters to the local water department with either result. If thinkers feel that the water levels are safe and consistent, they should write a letter to the water department thanking the workers for their vigilance and hard work. If the students have some concerns, they should write a letter to the local department to encourage workers to conduct further testing in specific locations for water quality.

Name _____

How's the Water?

Phase 3: Action Planning

Who are you writing?	Who are you?
Who	
What did you do?	What
What have you been learning about?	What did you discover in your experiment?
When	When did you do your experiment?

Instructor's Note:

We've provided a graphic organizer for thinkers to organize the content of their letter and a template to write a rough draft of a business letter.

These documents are available in the Google Drive in the "Projects" folder. The documents are available as electronic, editable PDF's and as Word/Google Documents. If you would like your thinkers to provide additional information that is not included on the original documents, you may edit the Word Document before printing copies for your class!

Where did you test?

Where

Why

Why did we test the water?

Why are the results important?

How did this learning experience change you think about water?

How

How should the water department respond?

Instructor's Note:

Thinkers do not need to answer these questions in complete sentences. They should just jot down the ideas that they want to include in their letter.

Instructor's Note:

If the thinkers have concluded that some of the ph levels were off, they should recommend the water department further test the site. Remember, the ph level test does not specifically identify what is causing the levels of the water to be off.

When was the last time you
gave your students a chance to
change the world?

Environmental Justice



Summer School Curriculum



How will you capture your students and engage them in critical thinking this summer?



THE PROBLEM.

Our world is in **URGENT NEED** of critical thinkers. But critical thinking is **HARD TO TEACH**.

Critical thinking is the precursor to innovation, a key to college and career readiness and has been linked to more positive life outcomes. The complex global challenges we face today have placed a peak demand for critical thinkers. But our supply is limited because critical thinking is still a luxury good: only 1 of 10 educators teach it, and it's usually only taught at the best schools or to the best students. This means that most students are taught to ask "what" and "how to" instead of "why" and "what if," and rarely learn the habits and mindsets needed to apply critical thinking consistently.

THE SOLUTION

thinkLaw HELPS EDUCATORS teach critical thinking to ALL STUDENTS using real-life legal cases.

Our comprehensive program of teacher tools, student guides, and virtual coaching is based on real-life cases because the law's Socratic questioning methods make it easy for teachers to ask the questions that build student critical thinking skills. And the law speaks to students' sense of fairness and justice, motivating them to adopt the critical thinking mindsets and habits needed to apply these skills throughout their lives. thinkLaw is also standards-aligned, allowing teachers to incorporate it into what they are already doing in their classrooms. thinkLaw gives under-resourced schools with time-strapped teachers all they need to facilitate critical thinking through engaging discussions, writing assignments, and other learning activities with under 1 hour of initial training and less than 20 minutes of prep time per lesson.

thinkLaw Curriculum

Comprehensive Teacher Guides



Less than 20 Minutes Prep Time!

Includes Over 500 Probing Discussion Questions!

Student Work Pages

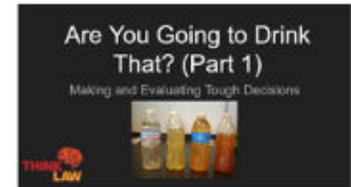


Available as Workbooks or Electronically

Compatible with Google Classroom

PowerPoint Presentations

Each Lesson has a pre made PowerPoint and/or Google Slide Presentation

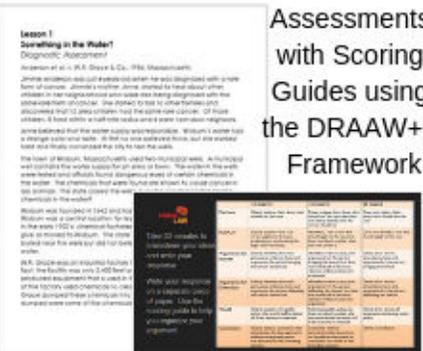


Additional Lessons



thinkLaw Users have Access to a Library of over 50 Additional thinkLaw Lessons

Writing Assessments



Assessments with Scoring Guides using the DRAAW+C Framework

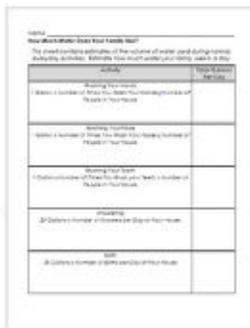
Braincandy

Online Database of over 1,000 questions that accompany all thinkLaw Lessons



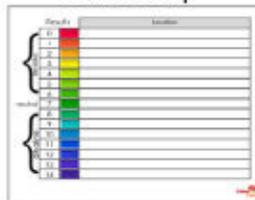
Extension Activities

Additional Extension Activities to Review Math, Writing, and Science Skills Using Social Justice as a Motivator!



Project-Based Learning Experiences

Allow Students Real-World Opportunities for Active Citizenship



Comprehensive Teacher Onboarding



Training Video Calls to Explain the thinkLaw Approach and Materials

All thinkLaw Materials are Standards Alligned!



Are you Going to Drink That? (Part 1)

Making and Evaluating Tough Decisions

Objective: Thinkers will analyze the impact of the Flint, Michigan water crisis on local residents and businesses. They will determine how they would have responded to the crisis if they were in charge.

Common Core Content Standards

Grade 5	Grade 6	Grade 7
RI.5.6 Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.	RI.6.6 Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.	RI.7.6 Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.
RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.	RI.6.9 Compare and contrast one author's presentation of events with that of another	RI.7.9 Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.
W.5.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.	W.6.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	W.7.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
SL.5.1C Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.	SL.6.1C Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.	SL.7.1C Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
SL.5.1D Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.	SL.6.1D Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.	SL.7.1D Acknowledge new information expressed by others and, when warranted, modify their own views.

Lesson Outline:

1. Thinkers will begin by considering how they would react to a water crisis at their school.
2. Thinkers will examine the timeline of the water crisis in Flint, Michigan and determine what they would have done if they were the mayor of Flint.
3. Thinkers will create questions they would ask if they were residents of Flint.
4. Thinkers will analyze the impact of the contaminated water on all areas of the community.

Common Core Content Standards

Grade 8

RI.8.6 Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.

RI.8.9 Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.

W.8.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

SL.8.1C Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.

SL.8.1D Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.

Grade 9/10

RI.9-10.6 Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

RI.9-10.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

W.9-10.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

SL.9-10.1C Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.

SL.9-10.1D Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

Grade 11/12

RI.11-12.6 Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness or beauty of the text.

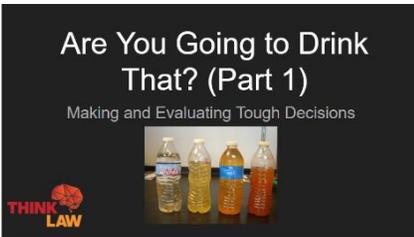
RI.11-12.8 Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning and the premises, purposes, and arguments in works of public advocacy.

W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

SL.11-12.1C Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.

SL.11-12.1D Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

PowerPoint:



Instructor's Note:

There are no right or wrong answers to most thinkLaw questions. The teacher's edition shows possible thinker responses in red. It is okay if thinkers reach different conclusions. The most important part of their answer is the explanation of their thinking.

Instructor's Note:

thinkLaw lessons contain a lot of probing questions. These are discussion questions you can use as you go through the lesson. You do not need to ask every question. Pick and choose the questions that you feel have the best fit.

Probing Questions:

- What questions would you have for your administrator after hearing this announcement? Why?
- How do you think your parents would react when you told them about this announcement? Why do you think they would react in that manner?
- If you heard this announcement in the morning, would you feel comfortable eating lunch from the cafeteria? Why or why not?
- What other ways does the school use tap water throughout the building? (To wipe down tables in the cafeteria, to mop the floors, etc.) What safety concerns would you have about these water uses?
- Do you think that access to clean drinking water is a basic human right? Why or why not?
- If the water at your school was contaminated for a day do you think that's a violation of your human rights? For a week? For a month? For a year? Why or why not?

Lesson 2

Are You Going to Drink That?

Making and Evaluating Tough Decisions

thinkStarter

Pretend your school principal made an announcement to the school:

Good morning students! We are having some issues today with water in the building. You may use water to flush the toilet; but do not use the water to wash your hands. You must not drink any of the school water or get it into your mouth. Do not use the drinking fountains or use school water to fill up your water bottles. If you drink the school water, you may get sick. The water is not safe, at this time.

What would you think about this announcement? Why?

Thinkers may feel this announcement would be upsetting. They might say that they wouldn't feel safe at school and that they wouldn't want to come to school until the problem was fixed.

What would you expect the school to do? Why?

Thinkers might feel like school should be canceled until the problem is fixed. They might say that the school should provide bottled water and hand sanitizer for students to use until the water was safe for use.

thinkStarter Summary

Access to clean drinking water is important. In 2010, the United Nations recognized the right to clean drinking water as an essential human right.

You might not think about the water you drink every day. You might not worry if the water you drink is safe. But what if you needed to worry?

Are You Going to Drink That?

Flint, Michigan used to use Lake Huron and the Detroit River to supply the city with water. In 2014, the city began to pull water from the Flint River

instead. When they made the switch, lead from the pipes got into the water of over 100,000 residents.

Swallowing lead, even in small amounts, can cause memory problems, headaches, and intellectual disabilities. It can also cause abdominal pain and even lead to seizures or comas. Many people who bathed or washed their hands using the tap water had rashes or hives all over their skin.

If you were the mayor of Flint, what would you do as soon as you heard that water from the pipes contained lead?

What would You Do?	Why?
<p>Thinkers may suggest:</p> <ul style="list-style-type: none"> Shut off the contaminated water pipes Switch back to using water from Lake Huron and the Detroit River Hold a press conference to talk about the crisis and to tell people what they should do to keep safe Hold community meetings to warn people about the dangers of lead Ask for help from the state and federal governments Collect donations of bottled water for families to use while the pipes are being repaired Hire additional workers to help repair the pipes and improve water filtration Ask for help from water experts 	<ul style="list-style-type: none"> You would shut off the pipes to try to reduce the impact of the contamination. There weren't major contamination problems with the other water sources so the town could keep using that. You would want to keep in contact with the public and keep them informed. If the water isn't safe you want to make sure that everyone knows. It would be important for the public to really understand the risks of using water so they can make informed choices. Many families won't be able to afford bottled water. Collecting donations would help families in the community and help to reduce their stress.

Instructor's Note:

thinkLaw lessons are designed to be flexible and allow for flexible grouping options. Thinkers can brainstorm how they would handle the crisis individually, with a partner, in a small group, or with the whole class. Be sure to leave enough time for thinkers to share their ideas with the class.

Instructor's Note:

This lesson includes an extension activity. Thinkers can estimate how many gallons of water their family uses in a day and how much it would cost to purchase that much bottled water.

NAME _____

How Much Water Does Your Family Use?

Use the water meter at the end of the house to get the amount of water used during normal everyday activities. Estimate how much water your family uses a day.

Activity	Estimated Gallons	Estimated Cost
Waking Your Bed 1. Give a number of times you wake. Give the number of people in your house.		
Washing Your Face 1. Give a number of times you wash your face. Give the number of people in your house.		
Showering Your Hair 1. Give a number of times you wash your hair. Give the number of people in your house.		
Drinking 2. Give a number of glasses per day of your house.		
Brushing 3. Give a number of bottles per day of your house.		

Probing Questions:

- When you look at the pictures of water from Flint taps, would you believe public officials when they told you it was safe? Why or why not?
- How would your day be impacted if you could not use tap water? How would your morning change? How would your afternoon change? How would your evening change?
- How much bottled water would your family need to replace all the tap water you use? Is it fair to ask families to buy that much bottled water? Do you think most families could afford to buy that much bottled water? Why or why not?
- Who do you think is responsible for the water crisis in Flint? Why?

Braincandy Questions:

- (2.1) What would you think about this announcement from the principal?
- (2.2) What should the school do to solve the problem?
- (2.3) What is the first thing you would do if you were the mayor of Flint?
- (2.4) Poll: What event on the timeline do you think is the most shocking?

Instructor's Note:

An instructional option for the timeline could be to print out the timeline and have thinkers cut the events apart. Have thinkers put the events in order, not by time, but by importance. What are the most important events in this crisis? Why?

Probing Questions:

- If the water was destroying metal, how do you think it was impacting the people who were drinking it and bathing in it?
- What would you do if you lived in Flint and heard about the GM Plant? Who would you contact? What would you say?
- At what point do think the city should have declared a state of emergency?
- Do you think that the city waited too long to declare a state of emergency?
- As a resident of Flint, would you feel better if you saw the mayor drink a glass of water on television? Why or why not?

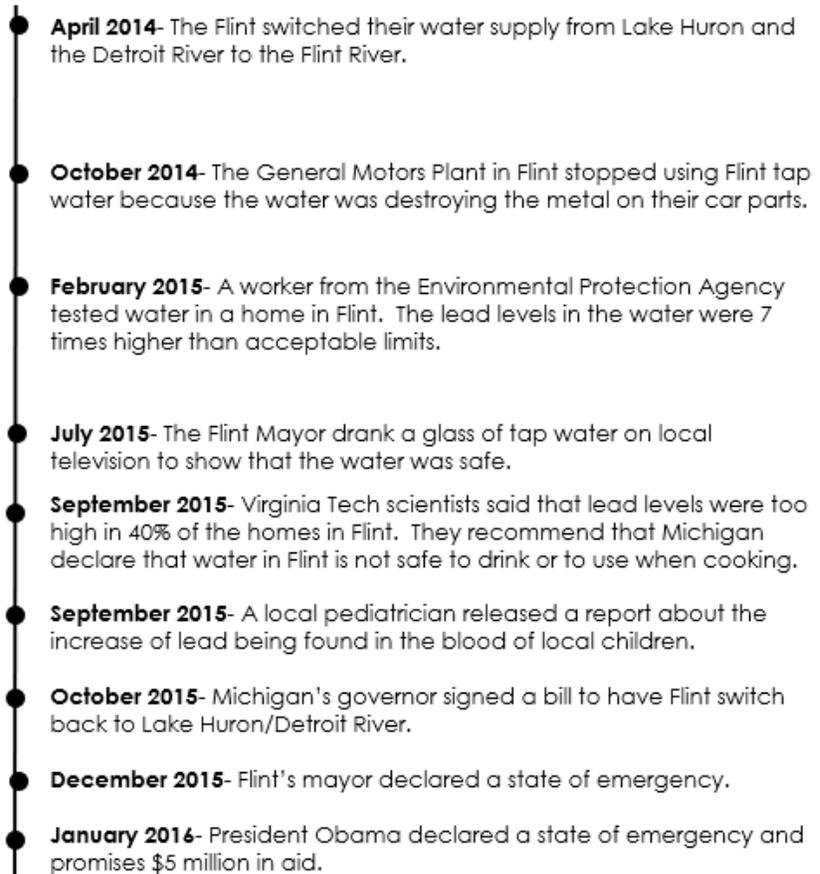
Instructor's Note:

Lead is very dangerous for human consumption. Lead can cause stomach problems, behavioral problems, brain damage, and other health problems. Once consumed, lead can move quickly throughout the body.

Instructor's Note:

A state of emergency is when there is a situation, like a disaster or civil unrest, and the government is allowed to perform actions that it ordinarily cannot. For example, in Flint once a state of emergency was declared the Federal Government could give the city additional money to get the resources it needed to help its citizens.

Look at a short timeline of events:

- 
- **April 2014-** The Flint switched their water supply from Lake Huron and the Detroit River to the Flint River.
 - **October 2014-** The General Motors Plant in Flint stopped using Flint tap water because the water was destroying the metal on their car parts.
 - **February 2015-** A worker from the Environmental Protection Agency tested water in a home in Flint. The lead levels in the water were 7 times higher than acceptable limits.
 - **July 2015-** The Flint Mayor drank a glass of tap water on local television to show that the water was safe.
 - **September 2015-** Virginia Tech scientists said that lead levels were too high in 40% of the homes in Flint. They recommend that Michigan declare that water in Flint is not safe to drink or to use when cooking.
 - **September 2015-** A local pediatrician released a report about the increase of lead being found in the blood of local children.
 - **October 2015-** Michigan's governor signed a bill to have Flint switch back to Lake Huron/Detroit River.
 - **December 2015-** Flint's mayor declared a state of emergency.
 - **January 2016-** President Obama declared a state of emergency and promises \$5 million in aid.

What stands out to you the most in this timeline? Why?

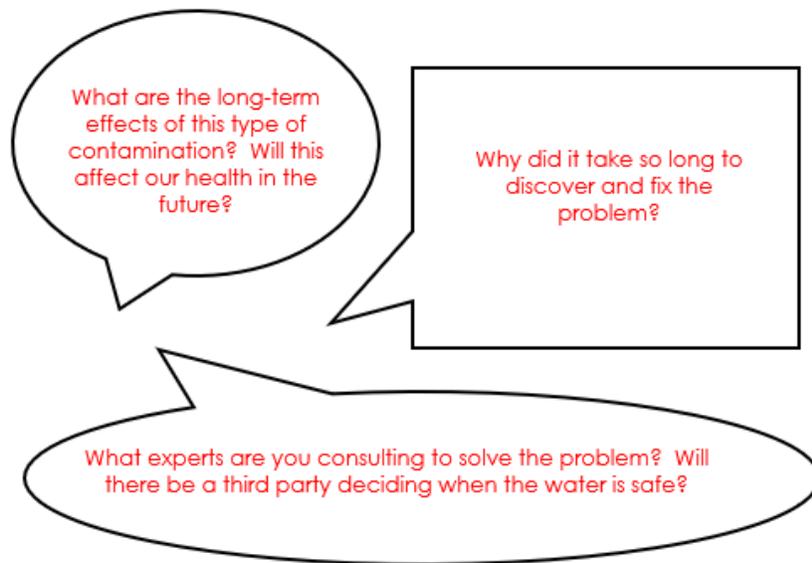
Thinkers might say that they found the amount of time that passed before the water lines were switched is the most shocking.

Why do you think it took so long for Flint to be declared in a state of emergency?

Thinker responses will vary. Some thinkers might say that fixing the problem would be very expensive and difficult and so leaders were reluctant to acknowledge how bad the problem really was.

thinkQuestions

If you were a resident of Flint, what questions would you have for your local leaders?



Instructor's Note:

The timeline used in this lesson is a very brief overview of the Flint water crisis. As an extension, thinkers could research and create a more comprehensive timeline.

Instructor's Note:

An important characteristic of active citizenship is the ability to ask questions. What questions should Flint citizens ask? Why are the answers to those questions important?

Probing Questions:

- Which question do you think is the most important? Why is that question the most important? Who would have the answer to that question?
- Think about your local community and government. Have you ever wanted to ask those leaders questions? What questions did you want to ask? How could you contact those leaders to ask your question?

Braincandy Questions:

- (2.5) What questions would you ask if you lived in Flint?
- (2.6) What other problems would be created by the water crisis?
- (2.7) What lawsuits might be filed after the water crisis?

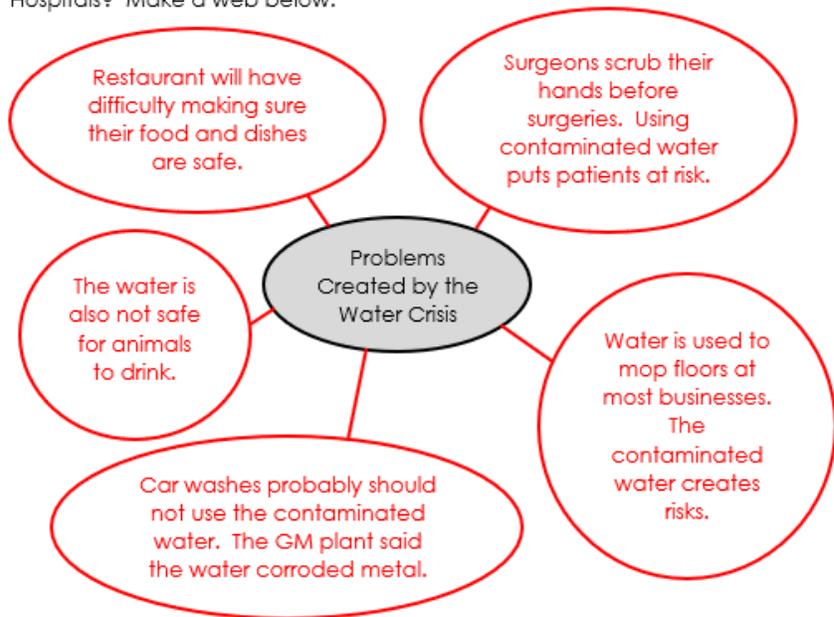
Instructor's Note:

This exercise is an opportunity to think big. What problems will be created by the water crisis? Encourage thinkers to brainstorm situations that are outside of the most obvious.

- How are animals impacted?
- How are pools and parks impacted? What about other public spaces?
- How are doctor's offices and surgeons impacted?
- If people can't use water to wash their hands what issues might be created?
- How do custodians need to rethink how they clean?
- How is tourism impacted? Will people want to go to Flint to eat, shop, or stay?

thinkBigger

What problems do you will be created by the Flint Water Crisis? Think creatively. How will businesses be impacted? Animals? Schools? Hospitals? Make a web below.



What lawsuits do you think will be filed as a result of the water crisis?

- Pet owners might sue the city.
- Car washes and car dealers might sue the city because the water corroded the metal on cars.
- Restaurant owners and workers might sue because their businesses were negatively impacted.
- Parents might sue over the negative impacts the contaminated water has had on their children.

Instructor's Note:

Give thinkers an opportunity to share their ideas. Create class list of all the types of issues that would be created. Sort them by impact. What problems are the greatest?

Probing Questions:

- Will all these issues lead to an increase in lawsuits in the city? Why or why not?
- Would you sue if you were a Flint resident? Who would you sue? What would be your complaint?
- Do you think about the quality of water? At home? At a store? At a park? Why or why not? Do you think you will think about water quality after this lesson? Why or why not?



Are you Going to Drink That? (Part 2)

Making and Evaluating Tough Decisions

Objective: Thinkers will analyze the impact of the Flint, Michigan water crisis on the students and schools in that area. They will determine how they would help the students who may need additional support and evaluate Court's response to the crisis.

Common Core Content Standards

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RI.5.6 Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.	RI.6.6 Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.	RI.7.6 Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.
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Lesson Outline:

1. Thinkers will begin by pretending they are the superintendent of Flint schools and determine what they would need to do to address the increase of students with lead poisoning.
2. Thinkers will examine three complaints brought by the ACLU regarding the Flint school system.
3. Thinkers will read the Court's decision on how to help the children of Flint and determine what else the settlement should include.
4. Thinkers will brainstorm outside people and companies that could help the Flint community.

Common Core Content Standards

Grade 8

RI.8.6 Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.

RI.8.9 Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.

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Grade 9/10

RI.9-10.6 Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

RI.9-10.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

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SL.9-10.1C Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.

SL.9-10.1D Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

Grade 11/12

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RI.11-12.8 Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning and the premises, purposes, and arguments in works of public advocacy.

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SL.11-12.1D Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

PowerPoint:

Are You Going to Drink That? (Part 2)

Making and Evaluating Tough Decisions



Instructor's Note:

It might help thinkers to consider different age groups. You could encourage the class to think about different age groups that school districts service.

- What support do you need to provide children affected by lead that are between 0 and 5?
- What supports will elementary aged students need?
- Middle school students?
- High school?
- How will students continue to need support as they go to college and post-secondary options?

Probing Questions:

- If you were the parent of a child in Flint, what support would you want the school district to give your child?
- If you were the superintendent of the school district and you didn't know how you should prepare to help the students, what experts could you talk to? How could those people help you?

Braincandy Questions:

(3.1) What is the most important thing the superintendent can do to prepare to meet the needs of these students?

Lesson 3

Are You Going to Drink That? (Part 2)

Making and Evaluating Tough Decisions

thinkStarter

Lead poisoning is very dangerous for children. In Flint 30,000 children from birth to age 19 were exposed to very high levels of lead in their water for almost two years. Many of those children bathed in the water, washed their hands, drank the water, and had their food cooked using the water.

These children will need extra help in school to recover from the effects of the lead exposure. Many children will have trouble paying attention. The children will have an increase in learning problems and behavior problems.

If you were the superintendent of Flint schools, what would you need to do to get ready to help that many children with special needs?

What would You Do?	Why?
<ul style="list-style-type: none">• The school system should create a team of teachers and health professionals to create a plan.• The district should begin by testing all the children exposed to lead to get a realistic idea of how much support these children will need.• The schools should use the results from their testing to plan to meet the needs. They should figure out how many more teachers they need and what supplies they need. The district could ask the state for enough money to implement the plan.	<ul style="list-style-type: none">• The school will need to learn from experts about lead poisoning about the special needs of these students.• The district will need a realistic idea of how many students will need special services so that they can make sure they have enough staff and resources.• It's important that the school collect information, research, and expert advice to create a workable plan.

thinkStarter Summary

In the previous lesson, you brainstormed all the possible impacts of the water contamination in Flint and considered all of the lawsuits that might possibly be filed. In today's lesson, you will analyze one of those lawsuits.

thinkCivilRights (D.R., et. al. v. Michigan Department of Edu., Michigan, 2016)

A group of 15 Flint parents filed a lawsuit against the Michigan Department of Education. One of the parents is Chandrika Walker. Chandrika has a 4-year-old son who was exposed to the water for two years. Chandrika's son was covered in hives and rashes from bathing in the Flint water. Her son was tested for lead poisoning by the county, but they did not call her for over a year with the results. He had very high levels of lead in his blood. Chandrika knew that her son would need help in school and tried to enroll him in preschool, but all the preschool programs were full.

The lawsuit says that the Department of Education needs to help Flint Schools. The Flint School system does not have enough staff or resources to test and help 30,000 kid who might have special needs.

Pretend you're the judge in this lawsuit.

What would you decide for each complaint?

The Flint School board has not created a plan to prepare to meet the special needs of so many children with lead poisoning.

How should this problem be addressed?

As a judge, thinkers might rule that the school must create a plan to address the needs of the 30,000 students. They might decide that they would give the school 3 month, or a similar timeline, to submit the plan to the Court.

Why might this problem be difficult to fix?

The school district knows that 30,000 children have been impacted by lead in the water but don't really know all the problems each student will have. It's difficult to plan if they don't know how many students will have learning-related issues.

Instructor's Note:

This case is a class action lawsuit. A class action lawsuit is a lawsuit where a lot of people join together to sue on behalf of a group.

- Why would people want to file a class action lawsuit instead of filing a lawsuit by themselves?
- Why do you think the people in this case chose to file a class action suit?

Instructor's Note:

This case was filed by the ACLU. Students can access a fact sheet with more information regarding this case at the following link.

<https://bit.ly/2sGriUP>

Instructor's Note:

The ACLU released a 3-minute video overview of this lawsuit. The video includes interviews with several plaintiffs.

The video is embedded in the PowerPoint or may be found at the following link:

<https://bit.ly/2RJlm8z>



Instructor's Note:

For this section, you could split the class into 3 groups. Assign each group one of the 3 complaints. Have each group brainstorm a solution to present to the class. When they present their solution, you could have the rest of the class brainstorm possible problems with this solution.

The Governor of Michigan made a 75-point plan to fix the Flint water crisis; but none of the 75-point related to education.

How should this problem be addressed?

As a judge, thinkers might say that the Governor of Michigan should add points about education to the 75-point plan or create a different plan to help the schools.

Why might this problem be difficult to fix?

The governor might have left education out of the 75-point plan on purpose because they had a different plan in mind for the schools. It might be difficult to get different groups to agree to how the schools should address the problems.

The Flint School District was already \$10 million in debt before the water crisis and was already struggling to meet the needs of their special education students.

How should this problem be addressed?

The district is going to need more money. The state of Michigan and the Federal government could give them money to test students, buy materials students need, and hire additional teachers.

Why might this problem be difficult to fix?

The state might not have enough money to give the Flint school district. If the state has to take money away from other programs to help the Flint situation, other problems might be created because funding for other programs would have to be cut.

Braincandy Question:

(3.2) Poll: Which of the three complaints in the lawsuit do you think is the most serious?

Instructor's Note:

The national poverty rate for children in the United States is 14.8%. The childhood poverty rate in Flint is 42%. The city has one of the highest rates of poverty in the nation. Their population is primarily African American.

- How do you think Flint's poverty levels contributed to the water problem?
- How do you think Flint's poverty levels contributed to the slow response once people realized the water had been contaminated?

Probing Questions:

- Which of the three complaints do you think is the most serious? Why?
- If you were a parent in Flint, what would be your biggest concern? Why?
- If you were a student in Flint, what would be your biggest concern? Why?
- Is it important for the Flint School Board to plan ahead for the students with lead poisoning? Why or why not?
- Is it important for the Governor to talk about the schools in his plan? Why or why not?

Instructor's Note:

A slide in the PowerPoint contains the result of the settlement.

- The state of Michigan will provide more than \$4 million to test children affected by the tainted water to see how they have been affected. The tests will look at effects of lead on brain cognitive development, memory and learning.
- The state, city and school district will provide staff to make sure the testing program and the schools are working together.
- Training and professional development will be provided for administrators, teachers and staff

about how to recognize children potentially harmed by lead who may need to be referred for testing.

- The results of the assessments will be sent to the schools to be used in the process of evaluating students for special education services.

A settlement, or agreement, was reached in this case. Read the details on the slide.

Do you think this plan will help the students in Flint, Michigan?

- Yes
- No

Why or why not?

Thinker responses will vary. Some thinkers might say that testing all of the students to assess the extent of the problems is a good first step. If they understand the needs, they will be able to create a better plan.

What else should they add to this plan? Why?

This plan will help create first steps and help the district make a plan to help, but these students will probably have life-long needs that have been caused by the lead poisoning. A long-term plan is needed.

thinkBigger

Federal regulations say that if water has levels of lead above 15 ppb (parts per billion) the water is unsafe to drink and must be treated. Samples of water were taken from Flint's 11 public schools. The water from the schools had lead levels ranging from 61 ppb to 2,856 ppb.

Billionaire Elon Musk is famous for Tesla Cars and his Space X company that wants to create a colony on Mars. Elon privately donated new water

Settlement:

- The state of Michigan will provide more than \$4 million to test children affected by the tainted water to see how they have been affected. The tests will look at effects of lead on brain cognitive development, memory and learning.
- The state, city and school district will provide staff to make sure the testing program and the schools are working together.
- Training and professional development will be provided for administrators, teachers and staff about how to recognize children potentially harmed by lead who may need to be referred for testing.
- The results of the assessments will be sent to the schools to be used in the process of evaluating students for special education services.

Probing Questions:

- What are the strengths of this settlement? What are the weaknesses?
- If you were a parent in Flint would you be satisfied with this settlement? Why or why not?
- If you were a student in Flint would you be satisfied with this settlement? Why or why not?
- If you were a teacher in Flint would you be satisfied with this settlement? Why or why not?

filtration systems for all 11 public schools in Flint. The filtration systems cost about \$500,000.

If you were a community activist in Flint, who else could you ask for help? Brainstorm a list of people and companies that might be able to help solve some of the problems created by the water crisis.

Thinkers might list other millionaires that could donate money or resources.

Encourage thinkers to consider companies that specialize in water, water filtration, or educational resources.

Anheuser-Busch had their beer factories can water instead of beer to donate to Flint residents and Nestle donated over 1.6 million bottles of water.

Thinkers might also brainstorm ways everyday people could help. They might say local schools and businesses could collect water or school supplies for Flint.

Probing Questions:

- What needs will the school district have? What are companies that have products that would meet those needs?
- Who are experts that might be able to help with the problems in Flint? How could they donate their time or resources to help?
- What can everyday people do to help the residents of Flint? What could you do to help the residents of Flint?
- Why should we care about what happened in Flint?
- If you were a student in Flint, who would you like to help you? How would you want people to help?
- Why do you think people just don't move away from Flint?

- Would you want to move away from here if we had a water crisis? Why or why not? Why might it be difficult to move?
- If you were a millionaire, what would you do for the residents of Flint? Why?

Braincandy Questions:

(3.3) Poll: Do you think this plan will help students in Flint, Michigan?

(3.4) What else do you think needs to be added to the settlement?

(3.5) Who are private citizens or private companies that you think could help the residents of Flint?

Environmental Justice Extension 1

Accompanies Lesson 2

PowerPoint:



Instructor's Note:

This activity allows thinkers to review math operations by adding, subtracting, and multiplying using social justice as a motivator. This exercise allows thinkers to empathize with families in Flint and consider how they would be impacted by a water crisis.

Instructor's Note:

Remind thinkers that this table allows them to create an *estimate* of how much water their family consumes. Thinkers should not spend an excessive amount of time

Name _____

How Much Water Does Your Family Use?

This sheet contains estimates of the volume of water used during normal, everyday activities. Estimate how much water your family uses in a day.

Activity	Total Gallons Per Day
Washing Your Hands $1 \text{ Gallon} \times \text{Number of Times You Wash Your Hands} \times \text{Number of People in Your House}$	
Washing Your Face $1 \text{ Gallon} \times \text{Number of Times You Wash Your Faces} \times \text{Number of People in Your House}$	
Brushing Your Teeth $1 \text{ Gallon} \times \text{Number of Times You Brush your Teeth} \times \text{Number of People in Your House}$	
Showering $25 \text{ Gallons} \times \text{Number of Showers per Day at Your House}$	
Bath $36 \text{ Gallons} \times \text{Number of Baths per Day at Your House}$	

trying to determine each line. For example, their family may not do laundry on a daily basis. Thinkers should consider how much laundry their family does in an average week and consider what their daily average might be. All the numbers listed are approximate amounts. There are more specialized dishwasher and washers that use less water so water amounts will vary.

Probing Questions:

- Does your family use water in other ways? What other ways might households use water?
- Does your family try to conserve water? How? Do you turn the sink off when you brush your teeth? Are you mindful of how long you're in the shower? What could your family do to conserve water?

Instructor's Note:

The average cost of a gallon of tap water is \$0.004. Thinkers can calculate percentage of price increase between a gallon of tap water and a gallon of bottled water.

$1.22 \div 0.004 = 305\%$

Instructor's Note:

Have thinkers share their totals. What else could their families buy with that amount of money? For example, a thinkers might say, "for that amount of money my family could buy groceries for two weeks!"

Probing Questions:

- Do you think most families have that much money to spend on bottled water?
- What would the world look like if everyone had to pay that much money for a gallon of water? What would happen?
- How does the amount of time impact your thinking about the situation? Think about how many families would struggle to cover the cost of one day? Do most families have enough money to cover the cost of 1,600 days?
- Flint residents were still paying for tap water. They could use the tap water for things like flushing the toilet. How would you feel if you were paying the city for water but also needed to buy bottled water?
- Do you think it's important for leaders to think about how their residents are feeling? Why or why not? If you were a leader in Flint, how would you address your resident's frustrations?

The average cost of a gallon of bottled water is \$1.22. How much would it cost for your family to buy enough bottled water to cover your daily usage?

What is your "gut reaction" to this number? Do you think that is a reasonable amount of money? Why or why not?

The total number of gallons you calculated is rough estimate of how much water your family uses per day. Many families in Flint had to use bottled water for over 1,600 days.

Multiply your daily amount from above times 1,600.

What is your "gut reaction" to this number? Do you think that is a reasonable amount of money? Why or why not?

What issues, other than money, are created when you cannot use tap water?

If you lived in Flint, how would you feel? Why?

Why is important for people who are not involved in a crisis to stop and think about how they would feel in that situation?

How did completing this exercise impact your thinking about the water crisis in Flint?



Instructor's Note:

Allow thinkers to share their responses to these questions.

Instructor's Note:

Responses will vary but thinkers might say that if people stopped to think about how they would feel in any given situation, they might feel more compelled to help. If more people had considered the magnitude of the water crisis in Flint more people might have tried to help or donate bottled water.

How's the Water?

Project 1

Environmental Justice



Project Overview: Thinkers will test the ph levels of the water in various locations throughout their neighborhood or town. Thinkers will write a letter to their local water department with their findings.

Project Phases

Phase 1: Planning

- Thinkers will learn about the ph scale and how varying ph levels impact drinking water. Thinkers will determine a list of 10 locations in their neighborhood or town where they will test the ph levels of the tap water.

Phase 2: Testing

- Thinkers will test the ph levels of the tap water at their ten locations. Thinkers will compile and analyze their results. They will record the testing locations on a ph chart.

Phase 3: Action Planning

- Thinkers will determine their plan of action. Thinkers will write a letter thanking the water department for keeping drinking water safe or write a letter requesting further testing to be done on water in certain locations in their neighborhood. They will organize their information and results in a table to draft a letter to their local water department.

Phase 4: Final Draft of the Letter

- Thinkers will write and send the final draft of their letter to the water department.

Materials

Required

- thinkLaw Students Sheets
- ph Testing Strips (10 per Thinker or Small Group)

Optional

- Map of City or Neighborhood
- Additional Types of Beverages to Test
- Computers/Printers for Final Drafts of Letters

Environmental Justice Project 1

PowerPoint:



Instructor's Note:

This project can be completed individually or in small groups.

Instructor's Note:

The first few slides of the PowerPoint will explain the pH scale and the range for acceptable drinking water. Go through the slides and encourage thinkers to jot down the most important pieces of information. Thinkers do not need to copy the information word for word.

Name _____

How's the Water?

Phase 1: Planning

What can PH levels tell you about water quality?

Jot down the most important points.

- The pH scale goes from 0 to 14.
- pH is the measurement of acidity or alkaline in a liquid.
- A score of 0-6 is considered acidic and a score of 8-14 is considered alkaline.
- If water were completely pure, it would have a score of 7. It's almost impossible to purify water completely.
- Drinking water should have a pH range of 6.5-8.5 according to the Environmental Protection Agency.
- If water is acidic, it is usually caused by traces of metal in the water. If water is too acidic it can corrode metal. Any acidic rating below 6.5 is considered too dangerous to drink.
- Alkaline water is not considered to be as dangerous. However, it can have negative side effects such as vomiting, muscle twitching, confusion, hand tremors, and skin irritations.
- Alkaline water is caused by an increase in the water's hydrogen levels.
- pH testing does not tell you specifically what is affecting water. It will not tell you if water contains lead or other specific pollutants. However, pH testing is a strong first step. If you test water and find that it does not fall within the 6.5-8.5 range, the water should go for further testing.

What range should the water fall between? 6.5 - 8.5

Why is it important to check water samples from a variety of places?

Water quality might not be consistent around town. It's important to check multiple places to see if there is contamination in different parts of town.

Probing Questions:

- Have you ever tested the pH of the water at your house?
- Think back to the Flint water crisis. One of the first events to happen was the GM plant noticed that the water was corroding the metal car parts. If workers at the GM plant did a pH test, what type of water do you think they would have found? Why?
- What factors might cause water quality to test differently in different locations?
There might be an issue with the pipes in certain areas. There might also be different types of pollutants in different areas of town.

Identify ten locations around town where you will check the PH levels.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Why should we take the time to do this project?

Other towns have run into trouble with their tap water. This project allows us to take what we learned from the Flint case, apply what we know from science, and make a difference in our community!

Instructor's Note:

thinkLaw lessons and projects are always designed to be flexible. You can ask thinkers to test less than 10 sites or more than 10 sites! If thinkers are working in groups, they can split up the locations they want to test.

You can also decide how you want the thinkers to handle testing. Do you want them to take the ph strips to the location or collect a water sample to test in class?

Thinkers should be sure to carefully label their samples to be sure they don't get them mixed up.

Instructor's Note:

This question provides an opportunity to explicitly discuss the importance of active citizenship and

critical thinking. It's important that we take the lessons from the legal cases that we analyze and apply them in real life! It's more than just a class assignment! Our thinkers are stakeholders in the community!

Instructor's Note:

Once thinkers have their test strips, they should compare the colors to the ph test chart to determine the ph level of the water.

Thinkers should check each strip and record the location next to the number.

You may print the charts in color, project the chart from the PowerPoint slide, or use the charts that come with the ph strips for color comparison.

Instructor's Note:

Once the ph levels have been determined, one option is to draw or print out a map of the town to mark the different locations that the class tested with the color that came from the result.

	Results	Location
acidic	0	
	1	
	2	
	3	
	4	
neutral	5	
	6	
	7	
	8	
alkaline	9	
	10	
	11	
	12	
	13	
	14	



Thinkers should record their locations on the chart next to the color/number that matches the test strip.

	Results	Location
acidic	0	
	1	
	2	
	3	
	4	The Gas Station
neutral	5	
	6	School, My House
	7	
	8	McDonalds, The Library
alkaline	9	
	10	
	11	
	12	
	13	
	14	

Probing Questions:

- What surprised you about your test results?
- Are you interested in testing more locations? Why or why not?
- What do you think is the most logical next step?

Instructor's Note:

As the class shares their results, note if there are different individuals or groups that had different numbers for the same locations. If so, ask the following probing questions.

- Why do you think there might be different results for the same location?
- Do you think any locations should be retested? Why or why not?

Instructor's Note:

As an extension, you could also have students test the ph levels of other beverages as a point of comparison to the water.

Name _____

How's the Water?

Phase 3: Action Planning

What are your initial thoughts about the results?

Initial thoughts can include questions. What questions do students have after completing their water testing? Do they think they should do more testing?

Do you think the water quality in your town is within the EPA's range for safe drinking water?

- Yes
- No

Why or why not?

You will write a letter to your local water department. You will choose one of two letters:

- A letter thanking the water department for their work.
- A letter to express concern about certain spots with questionable ph levels.

Use the following graphic organizer to help you plan your letter.

Salutation	Dear _____,
-------------------	-------------

Instructor's Note:

Matching the ph strips by color might lead to some disagreements about which category a location should be placed in. Allow thinkers to defend their selection to the class. If there is a disagreement between two colors, have the class vote to break the tie.

Instructor's Note:

Reminder, the EPA says drinking water should be between 6.5-8.5 to be considered safe.

Instructor's Note:

The project might show that there are some concerns about certain locations in town. The project might also show that all locations fell between the acceptable range. Thinkers can write letters to the local water

department with either result. If thinkers feel that the water levels are safe and consistent, they should write a letter to the water department thanking the workers for their vigilance and hard work. If the students have some concerns, they should write a letter to the local department to encourage workers to conduct further testing in specific locations for water quality.

We've provided a table for thinkers to organize the content of their letter and a template to write a rough draft of a business letter. These documents are available in the Google Drive in the "Projects" folder. The documents are available as electronic, editable PDF's and as Word/Google Documents. If you would like your thinkers to provide additional information that is not included on the original documents, you may edit the Word Document before printing copies for your class!

Instructor's Note:

Thinkers do not need to answer these questions in complete sentences. They should just jot down the ideas that they want to include in their letter.

Instructor's Note:

If the thinkers have concluded that some of the ph levels were off, they should recommend the water department further test the site. Remember, the ph level test does not specifically identify what is causing the levels of the water to be off.

Introduction	Who are you? Where do you go to school? What grade are you in?
Project Explanation and Results	What project did you complete? Why did you complete this project? How did you complete this project? What results did you find?
Call to Action	What do you want them to do? Keep up the good work? Investigate water in a certain part of town?
Conclusion	Thank them for their work and include your closing.

