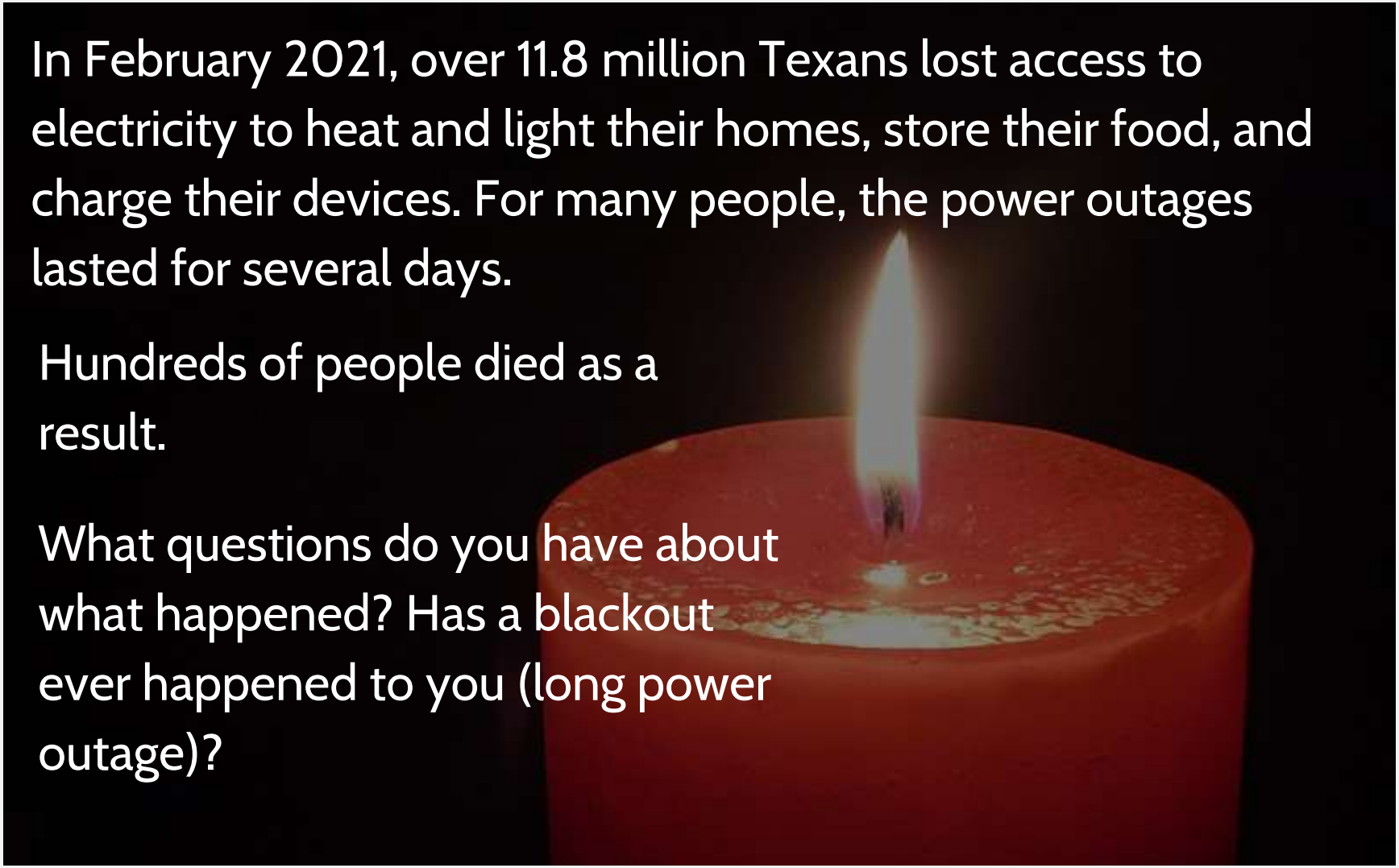
Slide A

Warm Up- 9/4



In February 2021, over 11.8 million Texans lost access to electricity to heat and light their homes, store their food, and charge their devices. For many people, the power outages lasted for several days.

Hundreds of people died as a result.

What questions do you have about what happened? Has a blackout ever happened to you (long power outage)?

Exit Ticket and Home Learning

With your family

Ask your friends and family if they have ever experienced a blackout. If so, what was it like? What do they think caused the blackout?

Keep track of your and your interviewees' ideas on a piece of paper in your notebook.

On your own

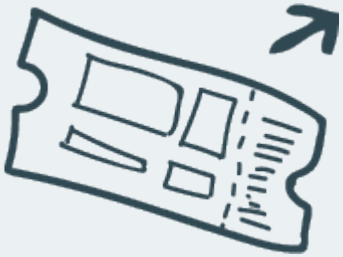
How do you think your community gets power? How is this different or the same as Texas?

Slide H

Warm Up- 9/6 (in your notebook)

With your family

Ask your friends and family if they have ever experienced a blackout. If so, what was it like? What do they think caused the blackout?



On your own

How do you think your community gets power? How is this different or the same as Texas?

Slide E

What happened in Texas?

With your jigsaw group

Each person will have ***2 minutes*** to share the summary of their article.

When you are finished, spend ***5 minutes*** discussing as a group:

1. How did a winter storm in Texas become fatal?
2. What do you think it was like to experience this?
3. Are there any articles that contradict each other? How?
4. Why do you think electricity is described as an “essential” utility?
5. What are the dangers for a community that loses electricity?

➔ Be ready to share your ideas with the class.

Slide F

Warm Up- Open up the Outage Maps on GC

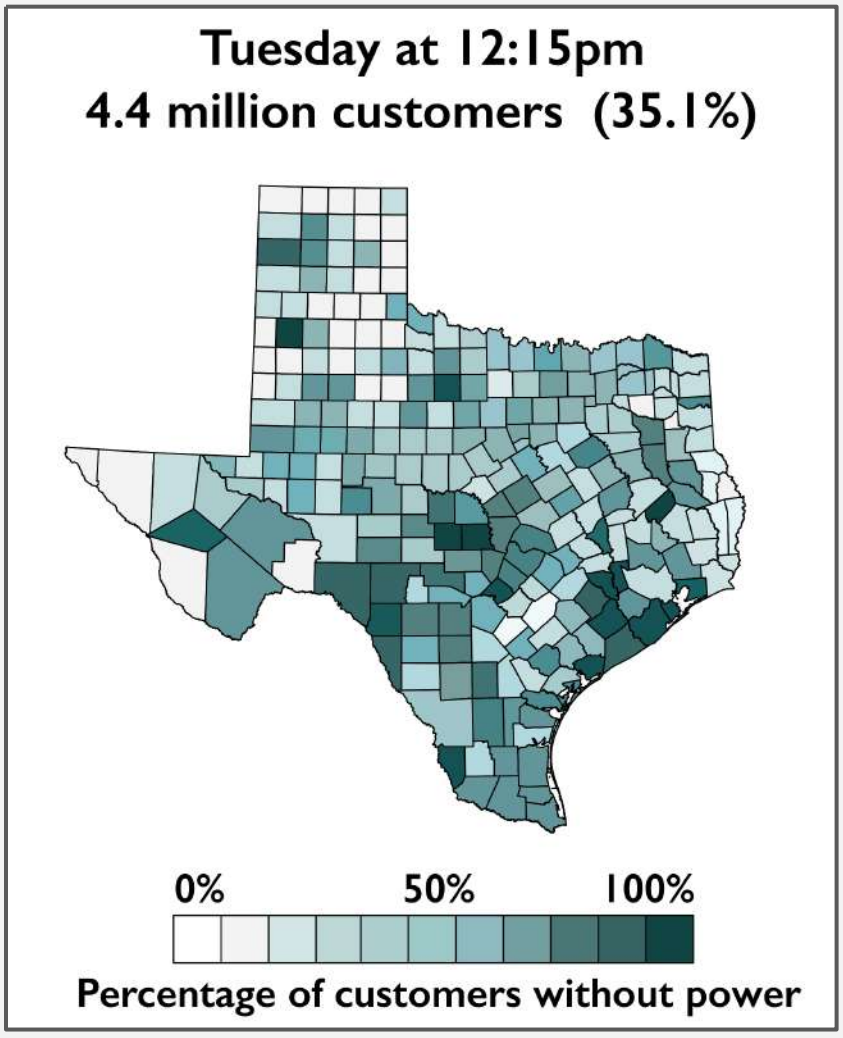
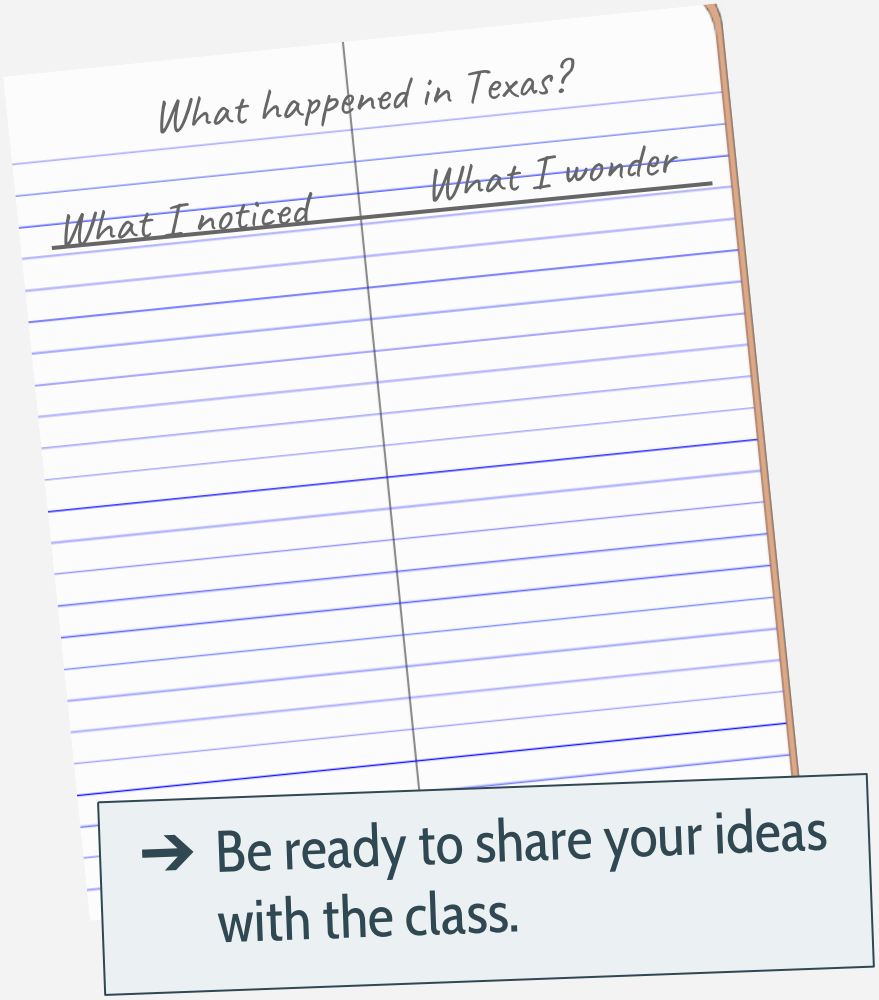


Image created using data from poweroutages.us



➔ Be ready to share your ideas with the class.

Slide G

What happened in Texas?

Turn and Talk

Why did this happen in some places and not others?

With your class

What could we do to gather more stories about related phenomena?

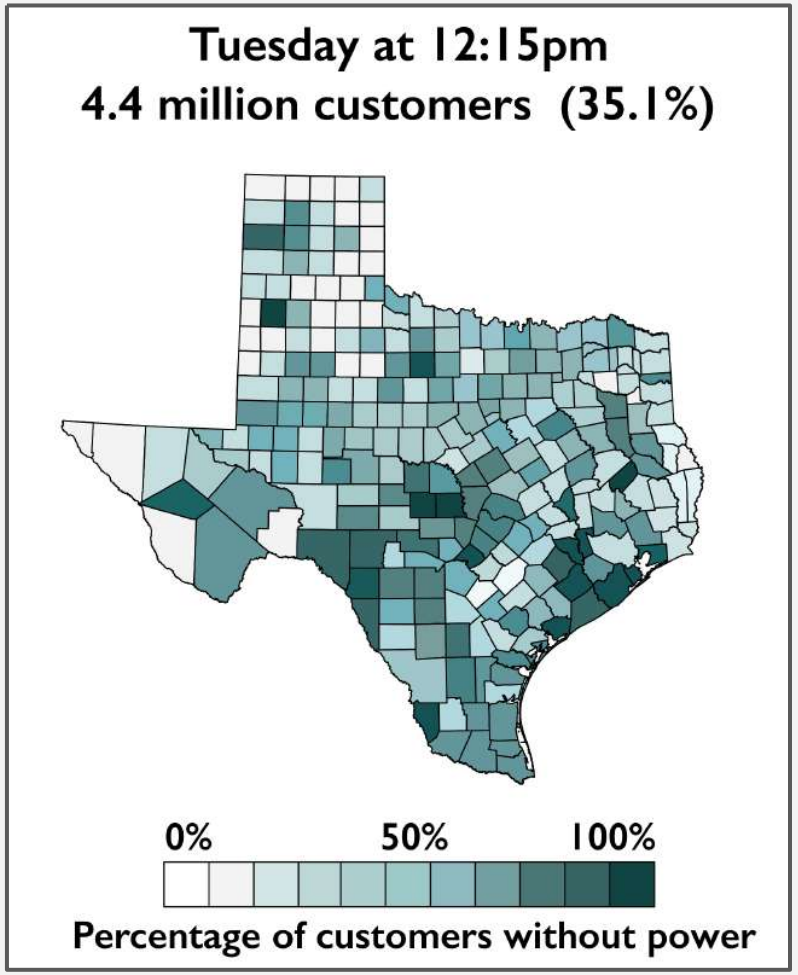


Image created using data from poweroutages.us

Warm Up 9/5

Take out your Community Stories assignment from yesterday.

Creating a Model

What should we include in a model of a scientific phenomenon or problem?

Warm Up 9/6

- Take out your Initial Model from yesterday.
- On the back, answer question 2 by adding to your model
- Answer Questions 3 and 4

Initial Model

On your own

Make a model to help show and explain...

Why might some buildings in a community experience a blackout, while others don't?

When you are done, use your model to answer the questions at the bottom of the handout.

Gallery Walk: Seeking Consensus

With your class

Browse your classmates' models:

- If something is similar to what you included, record this in your notebook and place a small check (✓) near it.
- If something is different, or you do not understand it, record this in your notebook and place a question mark (?) near it.

Slide M

Developing Community Agreements

Respectful *Our classroom is a safe space to share.*
Equitable *Everyone's participation and ideas are valuable.*
Committed to our community *We learn together.*
Moving our science thinking forward *We work together to figure things out.*

Turn and Talk

How could developing class agreements in each of these 4 categories be helpful?

Slide N

Developing Community Agreements

Respectful

Our classroom is a safe space to share.

Equitable

Everyone's participation and ideas are valuable.

Committed to our community

We learn together.

Moving our science thinking forward

We work together to figure things out.

Turn and Talk

What is 1 concrete thing we can commit to that will help us work together to figure things out?

Initial Consensus Model

With your class

Develop a record of what we agree on and where we have competing ideas across the initial energy transfer models.

Initial Consensus Energy Transfer Model

With your class

What general systems do we agree that energy is moving through to get from the source to the buildings?

Use sticky notes to label 2-4 systems that your class identified. Remember that each system can have multiple subsystems or components.

Progress Tracker

On your own

Name: _____ Date: _____

Electricity Progress Tracker

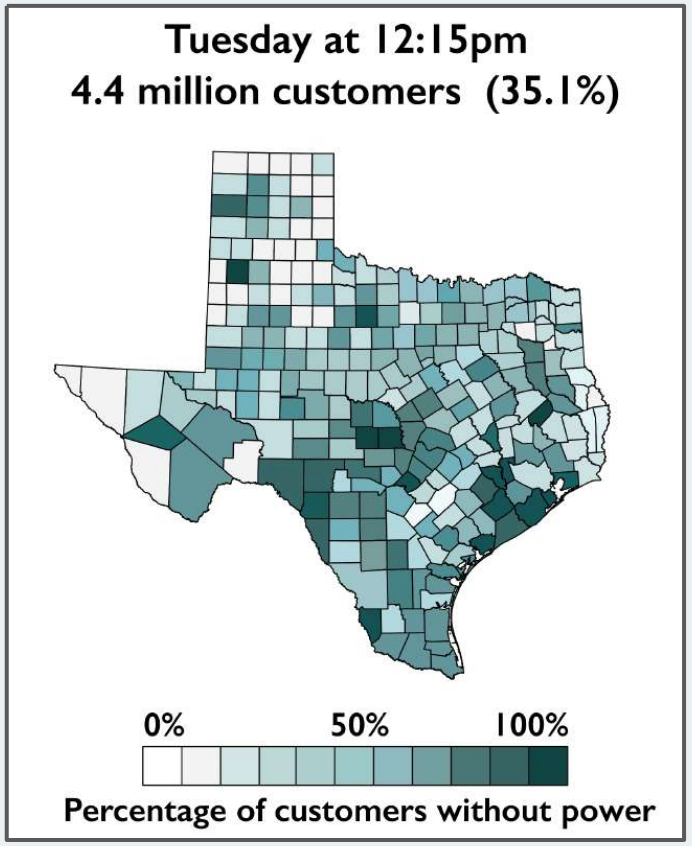
Lesson	What did we figure out?	How did we figure this out?
What question are we trying to answer?	*Make a record with words and pictures of what systems we agreed on in our Initial Consensus Model, and how energy transfer between them.*	*What scientific practices did we use to figure this out?* *What evidence did we get from it?*

Back to Texas

Turn and Talk

Can you use the class' Initial Consensus Energy Transfer Model to **explain the pattern of power outages** we noticed in Texas in February 2021?

What additional data or information would you need in order to explain these patterns?



→ Be ready to share your ideas with the class

Keeping Track of Our Questions

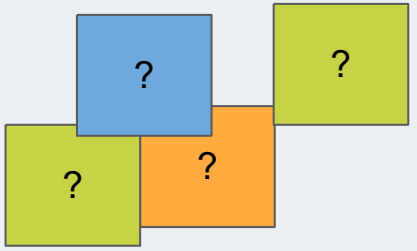
On your own

Write down at least 1 question that you have about:

- Blackouts in Texas, your community, or somewhere else
- Generating electricity in Texas, your community, or somewhere else

Only 1 question per sticky note.

Please add your initials.



Building the DQB

1. Choose a volunteer to go first. This student reads their question and puts it on the DQB.
2. Raise your hand if you have a question that is related or the same. The first volunteer selects the next student whose hand is raised. The student who is called on reads their related question, says why or how it relates, and then moves it onto the DQB with the original question.
3. Repeat step 2 until the class agrees that all related questions are up. Then go back to step 1, and choose a volunteer with a different question to start a new cluster. Continue until everyone has shared 1-3 questions.

Design Brainstorm

With your class

1. What are some things you would want to learn about what happened in Texas to inform and refine solutions for your community?
2. What sorts of investigations could we carry out within our own class to further advance our understanding and answer more of our DQB questions?

➔ Let's make a public record of the data we need, and the investigations we can do.

Reflect on the Anchor Experience

Stop and Jot

- How did it feel to make a model of something you hadn't explicitly learned about yet?
- How did it feel to ask questions in science class and not get the answers right away?
- How did it feel to set community agreements?

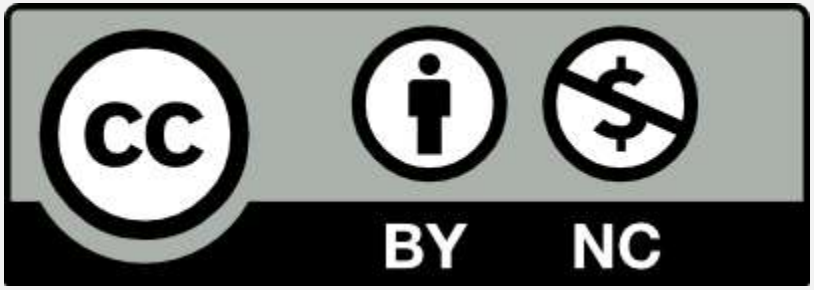
Exploring Our Infrastructure

Home Learning

Let's start by taking a closer look at the systems in place in our community.

Observe the electricity infrastructure that you see in the room you chose and **make a sketch**. *Don't touch anything, just draw it out.*

Licensing Information



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