

Lesson Objective or Purpose:

By the end of class, students will understand the premise of Pete the Cat and the Supercool Science Fair, identify the main characters, and begin constructing their volcanoes.

Date(s) 9.20.24

Target Audience/Grade Level:

Kindergarten - 2nd Grade

TEKS:

ELAR 1.7.A - Describe the main character(s) and their traits; Science 1.2.B - Plan and conduct simple descriptive investigations

Differentiation Strategies:

Offer support to students who need help with fine motor skills while building their volcanoes.

- **Provide additional visual aids, such as diagrams of volcanoes.**

Exit Ticket or Assessment:

Ask each group to share one interesting fact they learned about volcanoes today.

School day support:

- **Science:** Begin learning about volcanoes and how they work.
- **Writing:** Students will record their predictions about how their volcano will erupt later in the week.

Student Voice:

Students discuss their ideas about what makes science fairs fun and share their thoughts on what they think will happen when their volcanoes erupt.

College/Career Readiness:

Introduce the idea of working as a team to solve problems, similar to how scientists and engineers collaborate in real-world scenarios.

SEL:
Focus on building excitement for the science fair and working collaboratively in small groups to start the volcano project.

Lesson Steps + Time Approximations	INSTRUCTOR	SCHOLAR
Pre-lesson activity – what needs to happen before YOUR lesson Ex: Sign In Homework/snack/water and bathroom break (10 - 15 minutes)	• Script your lesson • What strategies will you employ • Specify exactly <i>how</i> you will deliver the lesson • Time each step, add in how much time spent • What will YOU do during this time	• Students are the ones doing the thinking • Student actions during strategies • Appropriate academic struggle • Student VOICE is considered
Intro to Lesson (5-10 minutes)	Activity: Introduce the book <i>Pete the Cat and the Supercool Science Fair</i>. Read the first half of the book aloud, stopping to discuss key points. Ask students: • “What kinds of science projects would you like to create?” • “What do you think will happen with Pete’s science project?”	Students listen to the story and share their predictions and ideas for science projects.
New Vocabulary (3 – 5 minutes)	Words: Science Fair, Volcano, Eruption • Activity: Students create a foldable with each vocabulary word. On one side, they write the word, and inside they draw a picture and write a definition in their own words.	Students complete their vocabulary foldables, adding illustrations that represent the new words.
Student Activity/ Student Practice (30-45 minutes)	• Divide students into small groups of three. Provide materials such as cardboard, empty water bottles, tape, paper mache, crumpled up paper, newspaper, paint. Show them how to use the water bottles as the center of their volcano, using	Students collaborate in small groups to begin constructing the base of their volcanoes. Each student contributes ideas and helps build.

	the other materials to create the volcano structure around the cup. - Encourage students to brainstorm as a team about how they want their volcano to look. - Provide large pieces of construction paper or poster board. Ask each group to start designing a poster for their volcano science project. They can draw what they think the eruption will look like and label the different parts of their volcano (e.g., "lava," "crater," "eruption"). - Encourage creativity, and let them add fun details like a name for their science project.	Students use art materials to design their science fair posters, working together to come up with creative names and colorful designs.
Exit Ticket/Assessment: how do you know what kids have learned (3-5 minutes)	Ask each group to share one interesting fact they learned about volcanoes today.	Students reflect on their learning and share their knowledge with the class.
Lesson Closing (3-5 minutes)	Recap the day's activities and encourage students to think about what will happen next when they continue building their volcanoes.	Students share their thoughts and prepare for tomorrow's activities.
Classroom Closeout- What needs to happen before you LEAVE class Ex: clean up, backpacks, put chairs back etc. (10 minutes)	Clean up materials, organize supplies, and remind students of what they'll do tomorrow.	Students clean up their workspace and reflect on what they enjoyed about the day.

Lesson Objective or Purpose:

By the end of class, students will have finished constructing their volcanoes and learned about chemical reactions.

Date(s) 9.23.24

Target Audience/Grade Level:

Kindergarten - 2nd Grade

TEKS:

Science 1.5.A - Classify matter based on physical properties such as texture, state of matter, and temperature

Differentiation Strategies:

- **Offer hands-on guidance for students who need additional support with building.**
- **Use visual aids to explain chemical reactions.**

Exit Ticket or Assessment:

[Ask students to share one thing they learned about chemical reactions today.](#)

School day support:

- **Science:** Students will learn about chemical reactions and how the materials they use will affect the outcome of their volcano project.
- **Art:** Students will continue decorating their volcanoes.

Student Voice:

Students collaborate within their groups, taking turns to decide how to decorate and complete their volcanoes.

College/Career Readiness:

[Discuss how teamwork in science projects helps everyone learn more and how problem-solving is key in scientific careers.](#)

SEL: Focus on teamwork and supporting each other through the construction process.

Lesson Steps + Time Approximations	INSTRUCTOR • Script your lesson • What strategies will you employ • Specify exactly <i>how</i> you will deliver the lesson • Time each step, add in how much time spent • What will YOU do during this time	SCHOLAR • Students are the ones doing the thinking • Student actions during strategies • Appropriate academic struggle • Student VOICE is considered
Pre-lesson activity – what needs to happen before YOUR lesson Ex: Sign In Homework/snack/water and bathroom break (10 - 15 minutes)	Activity: Start with a review of the book. Read the next part of Pete the Cat and the Supercool Science Fair and ask: • “What do you think will happen with Pete’s volcano?” • “How do you think volcanoes work?”	Students listen and share their predictions about the science fair and how volcanoes erupt.
Intro to Lesson (5-10 minutes)	Explain what a chemical reaction is and introduce baking soda and vinegar as the key ingredients for the volcano eruption. Show a small demonstration of the reaction.	Students observe the reaction and share their thoughts on how it could be used in their volcanoes.
New Vocabulary (3 – 5 minutes)	Words: Chemical Reaction, Carbon Dioxide, Lava • Activity: Students create a vocabulary foldable for these new terms, drawing pictures and writing definitions in their own words.	Students complete their vocabulary foldables and add pictures to represent the new words.
Student Activity/ Student Practice (30-45 minutes)	Provide each group with paint, markers, and tissue paper to finish decorating their volcanoes. Students can add lava flows, rocks, and other creative touches to their volcanoes. • Circulate the room to help with construction and offer guidance where needed. • Give each student a piece of cardstock and markers to create their own “Science Fair Participant” badge. They can	Students work in groups to finish building and decorating their volcanoes. Students create their own science fair badges, focusing on personal expression and creativity.

	draw their volcano or their favorite science-themed designs on the badge. Attach a string or yarn to turn it into a necklace. • Encourage students to personalize their badge with their name and the name of their volcano.	
Exit Ticket/Assessment: how do you know what kids have learned (3-5 minutes)	Ask students to share one thing they learned about chemical reactions today.	Students reflect on the day's lesson and share what they learned with the class.
Lesson Closing (3-5 minutes)	Recap the key concepts of volcano building and chemical reactions, and remind students that tomorrow they will make their volcanoes erupt.	Students reflect on their learning and get excited for the eruption experiment.
Classroom Closeout- What needs to happen before you LEAVE class Ex: clean up, backpacks, put chairs back etc. (10 minutes)	Clean up materials and remind students of tomorrow's eruption experiment.	Students help clean up and reflect on their volcano's progress.

Lesson Objective or Purpose:

By the end of class, students will conduct their volcano experiment, observe the chemical reaction, and compare their results to their predictions.

Date(s) 9.24.24

Target Audience/Grade Level:

Kindergarten - 2nd Grade

TEKS:

Science 1.4.B - Make predictions based on observable patterns in nature

Differentiation Strategies:

- Offer step-by-step guidance for the experiment to ensure all students can participate.
- Provide extra help for students with fine motor difficulties.

Exit Ticket or Assessment:

School day support:

- Science: Students engage in the scientific method and observe real-world reactions.
 - Writing: Students record their observations and compare them to their initial predictions.

Student Voice:

Students work in groups to perform their experiment and discuss their observations with their peers.

College/Career Readiness:

Discuss how scientists use experiments to test ideas and learn new things, and how curiosity and experimentation are important in many careers.

SEL: Focus on excitement and curiosity. Discuss how experiments can lead to unexpected results and how that's part of learning.

Lesson Steps + Time Approximations	INSTRUCTOR • Script your lesson • What strategies will you employ • Specify exactly <i>how</i> you will deliver the lesson • Time each step, add in how much time spent • What will YOU do during this time	SCHOLAR • Students are the ones doing the thinking • Student actions during strategies • Appropriate academic struggle • Student VOICE is considered
Pre-lesson activity – what needs to happen before YOUR lesson Ex: Sign In Homework/snack/water and bathroom break (10 - 15 minutes)	Activity: Review the steps of the experiment with the students. Have them review their predictions from yesterday and discuss what they think will happen during the eruption.	Students share their predictions and get excited for the experiment.
Intro to Lesson (5-10 minutes)	Review the materials and steps for the eruption experiment. Make sure each group has the materials they need (baking soda, vinegar, food coloring, cups).	Students listen and prepare to follow the steps of the experiment.
New Vocabulary (3 – 5 minutes)		
Student Activity/ Student Practice (30-45 minutes)	• Guide students through the steps of the experiment: 1. Add baking soda to the volcano's center. 2. Mix vinegar and food coloring in a cup. 3. Pour the vinegar mixture into the volcano and watch the eruption. • Let each group repeat the experiment and observe different outcomes by adjusting the amount of baking soda or vinegar.	Students conduct the experiment in groups, watching the eruption and making notes on how the reaction works. Students draw their volcano eruption and reflect on the experiment by writing down their observations.

	After the experiment, have students draw a picture of their volcano erupting. They can label the different parts and write about what they observed. This activity reinforces the science concepts while allowing for creativity.	
Exit Ticket/Assessment: how do you know what kids have learned (3-5 minutes)	Ask each group to share one observation from their experiment.	Students reflect on the experiment and share their observations.
Lesson Closing (3-5 minutes)	Recap the experiment and discuss the importance of observing and learning from the results, even if they were different from the predictions.	Students reflect on the day's lesson and what they learned about chemical reactions.
Classroom Closeout- What needs to happen before you LEAVE class Ex: clean up, backpacks, put chairs back etc. (10 minutes)	Clean up the materials and remind students that tomorrow they will create presentation boards for their science project.	Students help clean up and prepare for tomorrow's presentation.

Lesson Objective or Purpose:

By the end of class, students will have decorated their presentation boards, presented their volcano projects, and participated in a science-themed art activity.

Date(s) 9.25.24

Target Audience/Grade Level:

Kindergarten - 2nd Grade

TEKS:

ELAR 1.6.B - Retell or present the major events of a story or project

Differentiation Strategies:

- **Provide additional support to students who need help organizing or decorating their presentation boards.**
- **Offer alternative creative options for students who may need extra help with fine motor tasks.**

Exit Ticket or Assessment:

Ask each student to share one thing they are most proud of about their volcano project or presentation board.

School day support:

- **Writing:** Students will write brief summaries or captions for their presentation boards.
- **Art:** Students will design and decorate their presentation boards and participate in a science-themed art activity.

Student Voice:

Students will decide how to design their boards and express their ideas creatively during the art activity.

College/Career Readiness:

Discuss how sharing results and presenting ideas are critical in many careers, from science and engineering to business and the arts.

SEL:

Focus on self-expression, teamwork, and celebrating progress. Encourage students to reflect on their work and share what they enjoyed most about the science project.

Lesson Steps + Time Approximations	INSTRUCTOR • Script your lesson • What strategies will you employ • Specify exactly <i>how</i> you will deliver the lesson • Time each step, add in how much time spent • What will YOU do during this time	SCHOLAR • Students are the ones doing the thinking • Student actions during strategies • Appropriate academic struggle • Student VOICE is considered
Pre-lesson activity – what needs to happen before YOUR lesson Ex: Sign In Homework/snack/water and bathroom break (10 - 15 minutes)	Activity: Review the progress students made with their volcano projects and talk about the final touches they will add to their presentation boards. Ask students how they would like to decorate their boards and what they are excited to share during their mini presentations.	Students reflect on their progress and share ideas about their presentation boards.
Intro to Lesson (5-10 minutes)	Explain that students will spend 30 minutes decorating their boards before presenting their volcano projects to the class. Review what needs to be included: hypothesis, materials, steps, and results.	Students listen and prepare to complete their presentation boards.
New Vocabulary (3 – 5 minutes)		
Student Activity/ Student Practice (30-45 minutes)	Provide students with materials like markers, crayons, glue, scissors, and construction paper, pencils, erasers. Encourage them to use their creativity to make the board colorful and engaging. • Walk around the room to offer guidance as students work on their boards. Allow each group to briefly present their volcano project to the class. Have them describe their hypothesis, materials, and	Students decorate their presentation boards, adding the final touches with their materials. Students present their volcano projects in groups, speaking clearly and confidently.

	results, and talk about their favorite part of the project. Have students create “Science Fair Medals” using construction paper, markers, glitter, and yarn. They can design medals that represent what they learned during the volcano project (e.g., “Super Scientist” or “Best Eruption”). After they finish their medals, they can wear them proudly as a celebration of their hard work.	Students create their own Science Fair Medals, designing them creatively and reflecting on their achievements.
Exit Ticket/Assessment: how do you know what kids have learned (3-5 minutes)	Ask each student to share one thing they are most proud of about their volcano project or presentation board.	Students reflect on their work and share their thoughts with the class.
Lesson Closing (3-5 minutes)	Recap the day's activities and celebrate the hard work that students have done this week.	Students reflect on their progress and celebrate their achievements.
Classroom Closeout- What needs to happen before you LEAVE class Ex: clean up, backpacks, put chairs back etc. (10 minutes)	Clean up and organize supplies, and remind students about the fun science and art activities planned for tomorrow.	Students help clean up and prepare for the final day of science-themed fun.

Lesson Objective or Purpose:

By the end of class, students will have created a comic strip based on the book Pete the Cat and the Supercool Science Fair and completed a lava lamp experiment to explore concepts like density and chemical reactions.

Date(s) 9.26.24

Target Audience/Grade Level:

Kindergarten - 2nd Grade

TEKS:

ELAR 1.6.B - Retell or present major events of a story; Science 1.2.B - Plan and conduct simple descriptive investigations

Differentiation Strategies:

- Provide comic strip templates for students who need additional support with writing or sequencing.
- Use visual aids and provide step-by-step guidance during the lava lamp experiment for students who need help following instructions.

Exit Ticket or Assessment:

Ask students to share one thing they enjoyed about creating their comic strip and one thing they learned from the lava lamp experiment.

School day support:

- Writing: Students will develop a comic strip to retell the events of the story.
- Science: Students will explore density and chemical reactions through a hands-on lava lamp experiment.

Student Voice:

Students express their understanding of the story by creating their own comic strips, adding their personal creative touches to the narrative. They also engage in scientific exploration by conducting the lava lamp experiment.

College/Career Readiness:

Discuss how artists and scientists both use observation, creativity, and experimentation in their careers, and how these skills can apply to future professions.

SEL:

Focus on creativity and teamwork. Encourage students to express their ideas through art and science, while working collaboratively during the experiment.

Lesson Steps + Time Approximations	INSTRUCTOR	SCHOLAR
Pre-lesson activity – what needs to happen before YOUR lesson Ex: Sign In Homework/snack/water and bathroom break (10 - 15 minutes)	• Script your lesson • What strategies will you employ • Specify exactly <i>how</i> you will deliver the lesson • Time each step, add in how much time spent • What will YOU do during this time	• Students are the ones doing the thinking • Student actions during strategies • Appropriate academic struggle • Student VOICE is considered
Intro to Lesson (5-10 minutes)	Begin by reviewing the events of Pete the Cat and the Supercool Science Fair. Ask students to recall what happened during the science fair and discuss how Pete and his friends worked together. • “What did you like most about Pete’s science project?” • “If you could design your own comic strip about Pete’s adventure, what would happen next?”	Students reflect on the story and share their favorite moments, getting ready to create their own versions in comic form.
New Vocabulary (3 – 5 minutes)	Explain that today’s activities will focus on creating a comic strip based on the story and doing a fun lava lamp experiment to explore density and chemical reactions. Show students examples of comic strips and briefly explain the scientific concepts behind the lava lamp experiment.	Students listen actively and get excited for the two creative activities.
Student Activity/ Student Practice	Provide comic strip templates with 4-6 panels and allow students to create their	Students work on their comic strips, using their imagination to tell their

(30-45 minutes)	own versions of the science fair adventure. They can retell the events of Pete the Cat and the Supercool Science Fair or come up with their own new adventures for Pete and his friends. - Encourage students to add dialogue, captions, and fun illustrations of their characters. Activity 2: Lava Lamp Experiment (45 minutes) Materials: - Clear plastic bottles - Water - Vegetable oil - Food coloring - Alka-Seltzer tablets Instructor: - Provide each student or group with a plastic bottle. - Fill the bottle 2/3 full with vegetable oil, then add water until the bottle is nearly full. - Add a few drops of food coloring (students can choose their favorite color). - Drop in an Alka-Seltzer tablet and watch the “lava” bubbles form as the reaction begins. - Explain how the oil and water do not mix due to their different densities, and how the Alka-Seltzer creates carbon dioxide bubbles that carry the colored water through the oil.	version of Pete’s science fair adventure. They draw characters, write speech bubbles, and add their own creative touches. Students participate in the experiment, observing how the water, oil, and Alka-Seltzer interact to create the lava lamp effect. They discuss the reaction and ask questions about why the bubbles move.
Exit Ticket/Assessment: how do you know what kids have learned (3-5 minutes)	Ask students to share one thing they enjoyed about creating their comic strip and one thing they learned from the lava lamp experiment.	Students reflect on the day’s activities and share their favorite moments and discoveries.
Lesson Closing (3-5 minutes)	Recap the key takeaways from the comic strip creation and lava lamp experiment. Celebrate the students’ creativity and curiosity throughout the week.	Students reflect on the week’s lessons and celebrate their learning.

Classroom Closeout- What needs to happen before you LEAVE class Ex: clean up, backpacks, put chairs back etc. (10 minutes)	Clean up materials, organize supplies, and remind students to take home their comic strips and share them with their families.	Students help clean up and proudly take their comic strips and knowledge of the lava lamp experiment home.
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