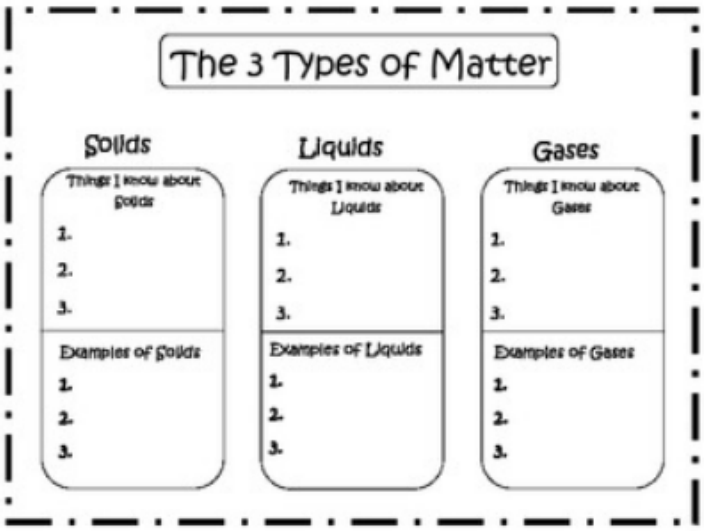
LESSON PLAN TEMPLATE

Name: Stephanie Bizeur **Date:** March 22, 2022

Title	States of Matter
Grade Level/Subject	Grade 5 Science
	TEACHING AND LEARNING OBJECTIVES
Big Idea: List the broad concept/topic or theory to be introduced	All matter exists in one of three states. Each state has defining properties.
A. Essential Questions (Overarching/Topical) **B. Desired Results – List/Label the standards/benchmarks to be achieved in this lesson** **C. Knowledge and Skills** Standard 1.a Essential Element 1.a.4	Students will understand the Big Idea well enough to respond to the following Essential question(s): (overarching and topical) What are the three states of matter? How can we identify the states of matter? B. State Standard(s) covered (labeled) 5-PS1-1. Use a particle model of matter to explain common phenomena involving gases, and phase changes between gas and liquid and between liquid and solid. Clarification Statement: • Examples of common phenomena the model should be able to describe include adding air to expand a balloon, compressing air in a syringe, and evaporating water from a salt water solution. State Assessment Boundary: • Atomic-scale mechanisms of evaporation and condensation or defining unseen particles are not expected in state assessment. 5-PS1-3. Make observations and measurements of substances to describe characteristic properties of each, including color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility. Clarification Statements: • Emphasis is on describing how each substance has a unique set of properties. • Examples of substances could include baking soda and other powders, metals, minerals, and liquids. State Assessment Boundary: • Density, distinguishing mass and weight, or specific tests or procedures are not expected in state assessment.

	C. Mastery Objective (SWBAT): Students will be able to identify the three states of matter and key details associated with them (shape and volume)
Language Objective Include plans to support comprehension for English language learners. WIDA Standards Standard 1.a, SEI a Essential Element 1.a.4	To support the learning of language for English Language Learners, students will be given sentence frames to organize their sentences for written responses during the science stations as well as the interactive notebook responses. Red (struggling learner): Students will be expected to complete assignments using sentence starters to create simple sentence. Students who are unable to create written response may draw visual representations. Blue (average learner): Students will be expected to complete assignments using sentence frames to create more complex sentences. Green (advanced learner): Students will be expected to complete assignments using sentence frames to create longer complex sentences as well as responses that cite information.
	ASSESSMENT
Pre-Assessment How will the learning be measured? Formative Assessment Traditional Assessment Performance Assessment Student Self-Assessment Standard 1.b Essential Element 1.b.2	Attach (or describe, depending upon assignment) the final product to be used for assessing performance. Include the rubric or detailed plan for evaluating student's understanding. _X_Assessment attached X_Rubric attached
Resources for this lesson **Include Technology**	List resource that provides background information and optional resource for extended learning. - Chromebooks

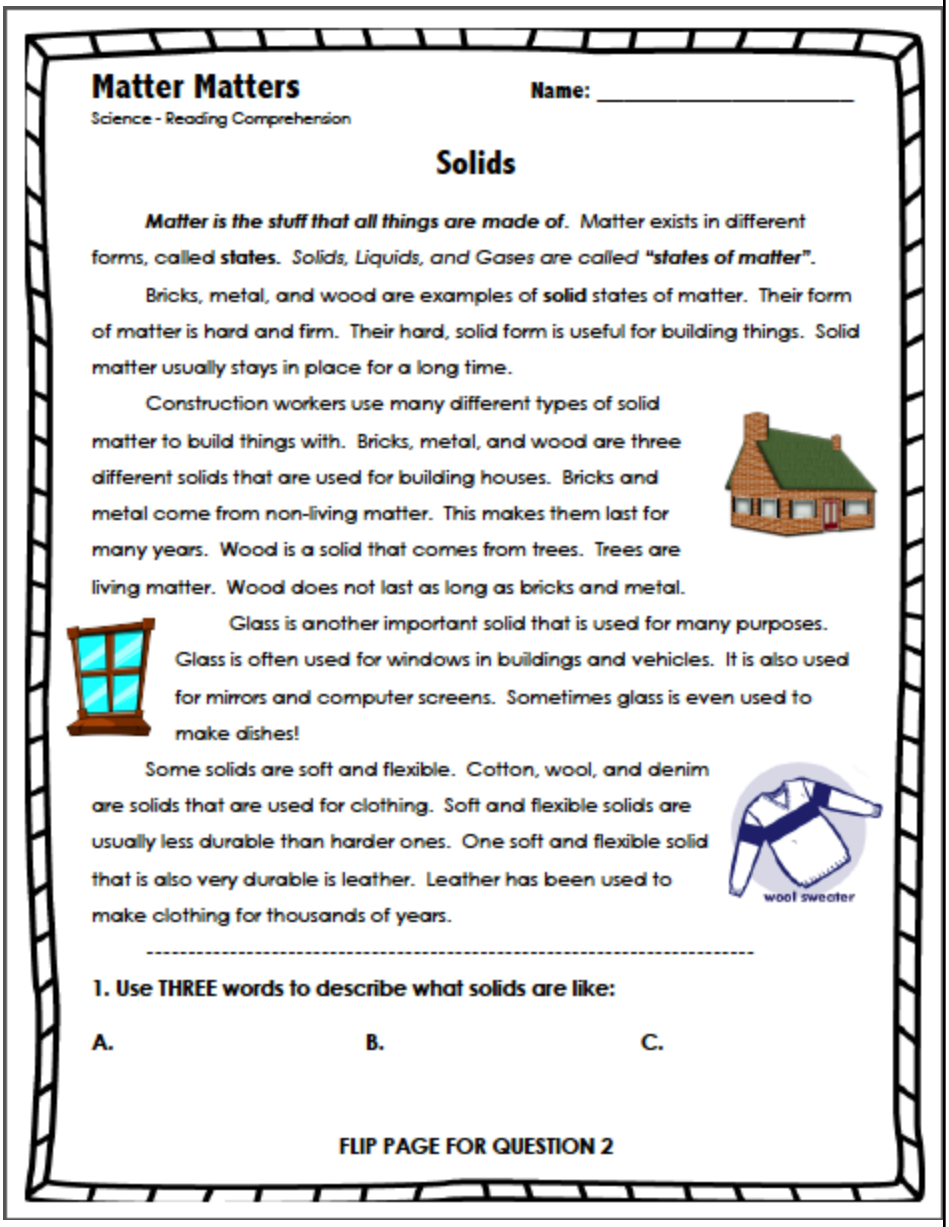
Standard 2.a and 2.d Essential Element 2.a.3 and 2.d.2	- Envelope with sort cards - Graphic organizers - Art supplies
Time allocated for this lesson	75 minutes
Classroom management or layout considerations needed for this lesson Standard 2.b, 2.f and SEI d Essential Element 1.a.4, 2.b.1, 2.a.3	There are 2 students in the class on an IEP. One student is diagnosed with ADHD and the other student is diagnosed with a Sensory Impairment (Vision). Lesson will include both whole group and independent components. To allow students who have a disability or are a ELL student a printed copy of the book will be provided. A chromebook will be provided for students that have difficulty reading or writing. Students who need extra support will work in a small group with the teacher instead of working independently. Student with vision impairment will be seated no more than 5 feet from the board and all materials will be provided to them in 18 point font. Chromebook will be provided for vision impaired student, if they chose, to help with their writing.
Learning Plan	**LESSON DELIVERY**
Step by step plan- Beginning Execution Ending Transitions between Lesson Segments Consideration of Use of WHERETO as a guide Evidence of accommodations and/or modifications (504, IEP, ELL, etc below) Standard 1.a, 1.b, 2.a, 2.b, 2.c, 2.d, 2.f, SEI.a, SEI.b, SEI.c, SEI.d	Insert (or attach) sequence of learning activities here. 1. Students will gather on the carpet. 2. The teacher will begin class by stating “previously in class we learned about matter. Turn and talk with a neighbor next to you and discuss some things that we learned about matter.” The teacher will write sentence starters on the board for the students to use during the discussion. For example: a. After the lesson on matter we learned that _____. b. When studying matter we discovered _____. c. I agree with _____ point and would like to add that we learned _____. 3. This discussion will last for about two minutes. While the discussion is going on the teacher will be walking around the room listening to the responses students have. The teacher will then bring the class back together and ask a few students to participate and share what they discussed. Once the class has all agreed that matter is in all things the teacher will hold up a bottle of water. The teacher will ask the students

Essential Elements 1.a.4, 1.b.2, 2.a.3, 2.b.1, 2.d.2	to describe what is inside the bottle. After several descriptions the class will come to the conclusion that it is a liquid. The teacher will explain that it is a liquid because the water continuously changes shape within the bottle. Then the teacher will ask what happens when the teacher puts the bottle of water inside the freezer. The class will then conclude that the water will become a solid. The teacher will explain that when the water is frozen it is a solid because it does not change shape. Finally the teacher will ask what happens to the water when it is boiled. The class will then conclude that the water will become a gas. The teacher will explain that a gas has no definite shape or size. 4. The teacher will tell the class "to help understand the states of matter we are going to complete 5 stations". 5. Students will then be divided into groups of three or four based on strategic groups. Within these groups the students will be instructed to complete the 5 stations. **Science Stations** **Topic:** States of Matter Differentiation: **Station 1**: Watch It https://www.youtube.com/watch?v=jmm1J2yI9tk **Station 2:** Write It  This video will give them an in depth explanation about the various states of matter. While completing the interactive assignment the students will record three examples from the activity onto their graphic organizer. They will then be

asked to identify three things that they know about each state this can either be taken from the discussion at the beginning of class or from the video they watched.

Differentiation: Sentence starters will be given for the graphic organizer

Station 3: Read It
Article Matter Matters



Matter Matters

Name: _____

Science - Reading Comprehension

Solids

Matter is the stuff that all things are made of. Matter exists in different forms, called **states.** *Solids, Liquids, and Gases are called* ***"states of matter".***

Bricks, metal, and wood are examples of **solid** states of matter. Their form of matter is hard and firm. Their hard, solid form is useful for building things. Solid matter usually stays in place for a long time.

Construction workers use many different types of solid matter to build things with. Bricks, metal, and wood are three different solids that are used for building houses. Bricks and metal come from non-living matter. This makes them last for many years. Wood is a solid that comes from trees. Trees are living matter. Wood does not last as long as bricks and metal.

Glass is another important solid that is used for many purposes. Glass is often used for windows in buildings and vehicles. It is also used for mirrors and computer screens. Sometimes glass is even used to make dishes!

Some solids are soft and flexible. Cotton, wool, and denim are solids that are used for clothing. Soft and flexible solids are usually less durable than harder ones. One soft and flexible solid that is also very durable is leather. Leather has been used to make clothing for thousands of years.

wool sweater

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1. Use THREE words to describe what solids are like:

A. **B.** **C.**

FLIP PAGE FOR QUESTION 2

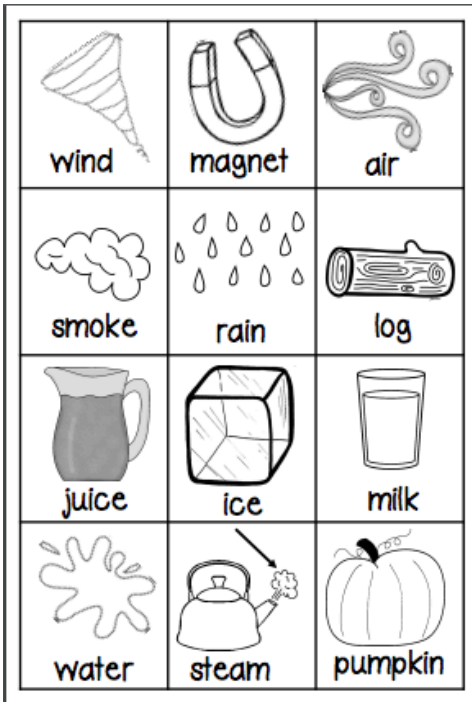
Differentiation: For the student with visual impairment, a copy of this article with increased font size will be used.

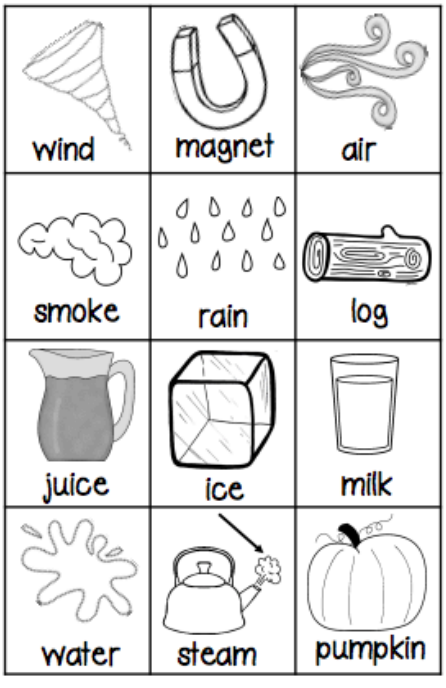
	Station 4: Sort it

Name: _____ States of Matter

Cut out the pictures, sort them under the correct state of matter and glue.

Solid	Liquid	Gas

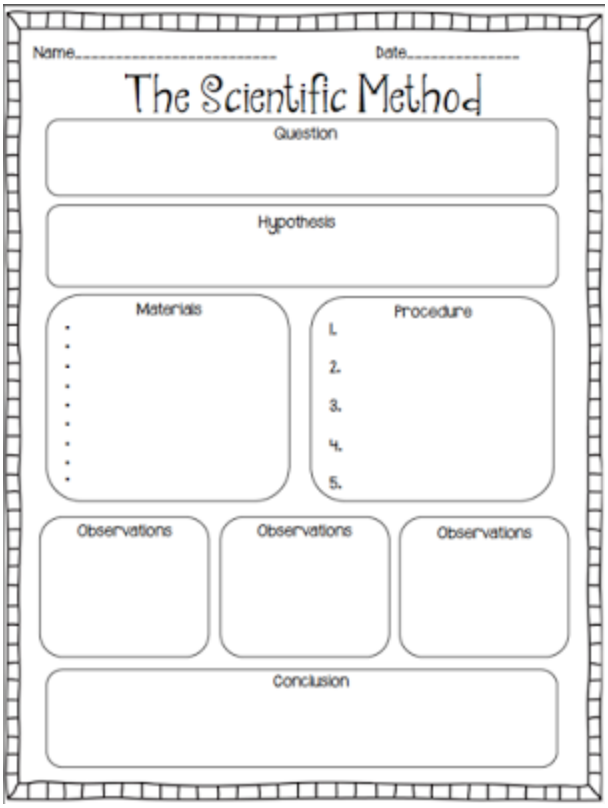




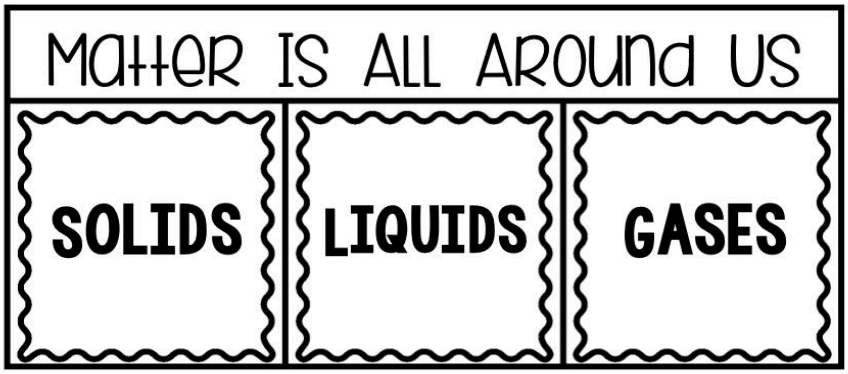
Station 5: Research/Experiment
Oobleck
Research Question: Do you think the mixture will create a solid or a liquid?

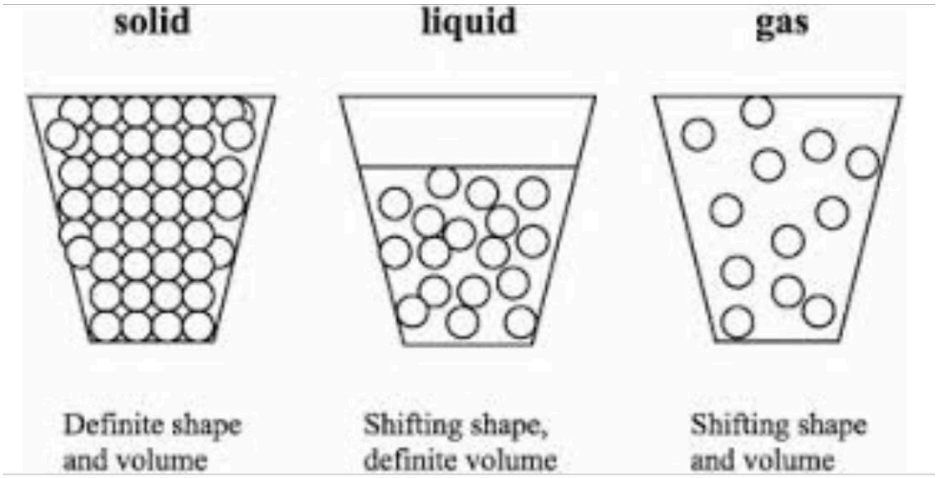
Students will create a hypothesis about their experiment.
Hypothesis sentence frame: I think the mixture will be a solid/liquid/both/neither.

After writing a hypothesis, the students will create the mixture. Each group will create ONE mixture. Students will write observations about the mixture. After making observations and collecting data about what they notice, the students will write their conclusion for the experiment. Students will fill out Scientific Method data sheet.



6. After completing the stations the students will return to their seats.
7. The teacher will then state to the class "as we discussed at the beginning of class we determined that all things have matter in them." The teacher will tell the class that matter has particles inside that move around and depending on the state each one is in determines how much the particles move.

	8. To help students understand the states of matter and the motion of particles they will watch a Brainpop video called States of Matter. Once they have completed the video the class will create a flipbook. As they create a flipbook the teacher will write on the board creating her own flipbook. The teacher will also draw visual examples on the board for students. This flipbook will be placed in their interactive science notebook. The first page will have the name of the state of matter written on it. The second page of the flipbook will have facts listed about each state. The teacher will ask for examples from the class for each state. Students will give responses using sentence starters such as "You can identify that an object is a liquid because it has no definite shape" or "You can identify that an object is a solid because its shape never changes" or You can identify an object is a gas because it has not definite shape or size." The third page will show a visual drawing of the movement of the particles in each state. 



9. During discussion and group work time the teacher will walk around the room and observe the students as they categorize the states of matter. The teacher will not participate within the discussions so that the students feel free to share ideas and clarifications can be made when the class comes back together. At the end of class both the

	graphic organizer and the notebook will be collected to evaluate their understanding and progress on the topic.

Diverse Learners Checklist

Diverse Learners		
Learner Factors: Differentiation, Modifications, and Accommodations: (What will you do to allow students with different abilities, learning styles, 504, IEP, etc. to succeed during the lesson? Check off all that apply)		
¨ Adjust Grouping Formats ¨ Oral, Pointing, Signed Responses ¨ Give Additional Examples ¨ Write Homework List ¨ Give Daily Progress Report ¨ Use of Brail or Large Print ¨ Give Student Copy of Directions ¨ Provide an Alternate Reading Level for a Reading	¨ Extend Time of Selected Work ¨ Reread Directions ¨ Use Assistive Devices to Respond ¨ Post visual picture or schedule ¨ Give Verbal Reminders ¨ Use of Interpreter ¨ Give Verbal Cues to Emphasize Main Ideas ¨ Use Page Markers	¨ Give More Frequent Breaks ¨ Handout Hard Copy of Board Notes ¨ Word Processor/Computer ¨ Seating Near Advanced Students ¨ Use Graphic Organizer ¨ Increase the Number of Review Activities ¨ Pair Students

Standard 1.a, 1.b, 2.a, 2.b, 2.c, 2.d, 2.f, SEI.a, SEI.b, SEI.c, SEI.d

Essential Elements 1.a.4, 1.b.2, 2.a.3, 2. b.1, 2.d

Rubric

Science Notebook Rubric

Student: _____

CATEGORY	Wow! (4)	Good. (3)	Almost. (2)	Poor. (1)	SCORE
Neatness & Organization	Handwriting is neat. Notebook is organized in an easy-to-understand format.	Handwriting is usually neat. Notebook is organized in an easy-to-understand format.	Handwriting is not very neat. Notebook organization is not easy to understand.	Handwriting is sloppy and hard to read. Notebook organization is difficult to follow.	
Content Accuracy	Written responses demonstrate an understanding of science concepts and proper vocabulary use.	Written responses demonstrate an understanding of some science concepts and proper vocabulary use.	Written responses demonstrate a limited understanding of science concepts and proper vocabulary use.	Written responses demonstrate an inaccurate understanding of science concepts and proper vocabulary use.	
Required Elements	Table of contents is up-to-date, pages are numbered, no pages have been skipped, and titles are included.	Table of contents is up-to-date, mostly all pages are numbered and include a title, no skipped pages.	Table of contents is not up-to-date, missing some page numbers and/or titles, a few skipped pages.	Table of contents has not been updated, pages are not numbered/titled, several skipped pages.	
Illustrations & Diagrams	Illustrations and diagrams are clear, accurate and labeled.	Illustrations and diagrams are usually clear, accurate and labeled.	Some illustrations and diagrams are clear, accurate, and labeled, with some missing.	Illustrations and diagrams are sloppy/unclear or missing.	

Total: ____/16 ____%

Unit Plan Section

Day 1: How Can Matter be Identified?
Lesson Topic: Properties

MA Standards Covered: 5-PS1-3. Make observations and measurements of substances to describe characteristic properties of each, including color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility.

Brief overview of what you would do for this lesson:
5 E's
Engage: Watch Brainpop video on matter
Explore: In groups, students will be given bags of items and will write down descriptive words for each item in the bag.
Explain: Definition of matter, properties. Fill in Science Notebook.
Extend: Students will be given items and will have to sort them based on properties (ex. magnetic, water soluble, hardness etc.)
Evaluate: Monitor throughout observations, collect Science Notebooks

Modifications and/or accommodations for 2 students with disabilities.
Enlarged font on materials list, close seat to watch video, and enlarged font for Science Notebook for student with visual impairment.
Sentence starters for science notebook.
Breaks between activities.

Day 2: How Does Matter Change?
Lesson Topic: Physical and Chemical Changes

MA Standards Covered: 5-PS1-1. Use a particle model of matter to explain common phenomena involving gases, and phase changes between gas and liquid and between liquid and solid.

Brief overview of what you would do for this lesson:
Engage: Teacher will model ripping/shredding/crumpling paper as visual of physical changes. Explain/write definition of physical and chemical changes.
Explore: Observe stations of different chemical or physical changes: food coloring in water, melting ice cube, baking soda and vinegar, baking soda and calcium chloride. Record data.
Explain: Go over stations and findings
Extend: Sort and explain cards with examples of chemical and physical changes
Evaluate: Exit ticket describing and giving examples of chemical and physical changes.

Modifications and/or accommodations for 2 students with disabilities.

Larger font on exit tickets and sort and explain cards.
Able to complete stations with partner for extra support.

Sentence starters on exit ticket.

Day 3: What are Solutions and Mixtures?
Lesson Topic: Solutions and Mixtures

MA Standards Covered:
5-PS1-4. Conduct an experiment to determine whether the mixing of two or more substances results in new substances with new properties (a chemical reaction) or not (a mixture).

Brief overview of what you would do for this lesson:
Students will complete stations during the lesson
Read it: Mixtures and Solutions Article
Write It: Reading Comprehension questions
Watch it: https://www.youtube.com/watch?v=jA0PzblYPUM
Research it: Research common household mixtures
Explore it: Students will do a mixture and solution. Pouring sugar or Iced tea packets into water bottles

Modifications and/or accommodations for 2 students with disabilities.
Article will be enlarged for vision impaired student.
Sentence starters will be provided to answer comprehension questions

Day 4: What are States of Matter?
Lesson Topic: States of Matter

MA Standards Covered: 5-PS1-3. Make observations and measurements of substances to describe characteristic properties of each, including color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility. Clarification Statements: • Emphasis is on describing how each substance has a unique set of properties. • Examples of substances could include baking soda and other powders, metals, minerals, and liquids

Brief overview of what you would do for this lesson:
See above lesson plan.

Day 5: How does Matter Change State?
Lesson Topic: Changing State
MA Standards Covered: 5-PS1-1. Use a particle model of matter to explain common phenomena involving gases, and phase changes between gas and liquid and between liquid and solid.

Brief overview of what you would do for this lesson:
5 E's.
Engage: https://www.youtube.com/watch?v=EwzkYTfHFbo

Explore: Complete phase change experiments. Boiling water, melting ice, freezing water.
Explain: Students add flipbook pages about each phase change into their science notebooks
Extend: Changing states of matter worksheet
Evaluate: Exit ticket explaining how matter change stages

Modifications and/or accommodations for 2 students with disabilities.

Seating closer to video for student with visual impairment.

Sentence starters for Science Notebook entries.

Sentence starters for exit ticket.

Option to work with a partner for States of Matter worksheet.