

Lesson Plan Title

Is it a Solid or a Liquid?

Grade Level

Kindergarten

Subject Area

Science

MSCCRS

P.K.5A Students will demonstrate an understanding of the solid and liquid states of matter.

P.K.5A.1 Generate questions and investigate the differences between liquids and solids and develop an awareness that a liquid can become a solid and vice versa.

PK.5A.2 Describe and compare the properties of a different material (e.g., wood, plastic, metal, cloth, paper) and classify these materials by their observable characteristics (visual, aural, or natural textural) and by their physical properties (weight, volume, solid or liquid, and sink or float).

Art Form

Dance

MSCCR Creative Arts Standards

DA: Cr1.1.K Generate and conceptualize artistic ideas and work. EXPLORE

- a. Respond in a movement to a variety of stimuli (for example, music/sound, text, objects, images, symbols, observed dance).
- b. Explore different ways to do basic locomotor and non-locomotor movements by changing at least one of the elements of dance.

- *Enduring Understanding:*
Choreographers use a variety of sources as inspiration and transform concepts and ideas into movement for artistic expression.
- *Essential Question(s):*
Where do choreographers get ideas for dances?

DA: Cr3.1.K Refine and complete artistic work. REVISE

- a. Apply suggestions for changing movement through guided improvisational experiences.
- *Enduring Understanding:*
Choreographers analyze, evaluate, refine, and document their work to communicate meaning.
 - *Essential Question(s):*

How do choreographers use self-reflection, feedback from others, documentation to improve the quality of their work?

Duration

1 Hour or 30 minutes over 2 days.

Materials

- a book, a pencil and a shoe (or similar items)
- a full water bottle, a milk container (from the lunchroom) and a bottle of glue (or similar items)
- a candle and some chocolate chips (or similar items)
- music (listed under resource)
- chart paper
- scarves (optional)

Objectives

Students will understand the difference between solids and liquids.

Students will understand that matter can change from a solid to a liquid and vice versa.

Students will create/choreograph movement to illustrate solids and liquids.

Science Vocabulary

Solid

weight

Liquid

Volume

Vice versa

Matter (things around us that we can feel, see, touch, and or taste)

Dance Vocabulary - addressed in video

Body

Action

Space

Time

Energy

Lesson Description

Action: Tell the students to watch the video to review the 5 elements of dance. Tell them that we will be using some of these dance moves in a few minutes.

<https://www.pbslearningmedia.org/resource/d7fcd19b-ee9b-4d90-a550-833fbe22865c/the-five-elements-of-dance/>

Question: What are the five elements of dance? What did you notice? What did you like? What did you see for the first time?

Action: Place in front of the students a book, a pencil and a shoe.

Question: How are these alike?

Allow time for discussion.

Answer: These are solids. A solid is matter that has a definite shape. A solid has weight, which means we can weigh how heavy or light it is.

Action: Next place in front of the students a bottle filled with water, a milk container (from the lunchroom), and a bottle of glue.

Question: How are these alike? Allow time for discussion.

Question: What will happen if we pour these out?

Answer: Yes, they would spill!

Answer: These are liquids. A liquid is matter that has volume, which means it takes the shape of the container that holds it.

Action: Make a list of at least 10 things that are solids and 10 things that are liquids.

Action: Now, place in front of the students a candle, the bottle of water, and some chocolate chips.

Question: How are these alike?

Allow for discussion.

Answer: These are things that can change from a solid to a liquid or vice versa.

Question(s): What would happen if: I light the candle? Put the bottle of water in the freezer? Put the chocolate chips in a microwave?

Allow time for discussion.

Action: Go back to the list and, one by one, decide if the solid or liquid can change. If so, then place a star next to that item.

Action: We are going to listen to 2 songs; briefly play each song and discuss it.

Question: Does the music make you think of liquids or solids?

Action: Now, we are going to create movements that reflect solids and liquids.

Action: Practice some movements to show:

Body - use the whole body or just the head, torso, arms or legs

Action - any movement of the body or body parts

Space - a lot of space or a small area, low medium or high, in a line

Time - a pulse or free-flowing

Energy - heavy or light

Action: Break students into groups of 4-5 to create a movement to represent a solid and a liquid. (They may use scarves which are optional). Play the two types of music while they are creating their movements.

Allow students time to create their movements. After a few minutes, allow them to share with their classmates.

Action: Review the definition of a solid and a liquid and remind them that some solids can change into a liquid and vice versa.

Action: As the teacher, you take their creative movements and sequence them into a dance that begins as a solid then changes into a fluid and back and forth using music with varying tempo.

Action: Encourage students to practice, practice, practice their movements!

Action: Repeat these movements as often as needed throughout the year and have the students tell you the definition of a solid and a liquid and how they are alike and/or different.

Recommended Resources

Relaxing music and soft rain for liquid movements:

<https://www.youtube.com/watch?v=6E3MMKzBn1g>

Classical music for solid movements:

https://www.youtube.com/watch?v=rypHeVr_X7c

Dance with varying tempo:

<https://www.youtube.com/watch?v=WlywT8fKVZA>

Extended Learning Activities

- When introducing 3D shapes, have the students relate to what they know about the definition of a solid.
- Find out if solids are soluble (dissolve in water) or non-soluble (will not dissolve in water).
- Explore original movement and dance concepts through activities such as follow-the-leader and mirroring.
- Learn another child's movement sentence. Encourage students to vary their dynamics, timing, and spacing.
- Return to the essential questions in the MSCCR Arts Learning Standards.
- Allow students the opportunity to perform for peers.

- Allow students the opportunity to justify their creative decisions.

Applicable Assessment Strategies:

- *Performance Assessment* - Students may compare and contrast two dances.
- *Creative Process* - Allow students the opportunity to self-critique one's performance.
- *3-2-1 Strategy* - Students identify 3 things they discovered, 2 interesting things, and 1 question they still have.
- *Peer Assessment* - "I noticed..."
"I like the way...because..."

Sources

N/A

Tips

Have all the necessary items on hand before beginning this lesson!

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