Lesson/Activity Title:

STATES OF MATTER: SKIT TEAM CHALLENGE

Time: approximately 5-10 minutes for directions and discussion; 30-45 minutes for research; 10-15 minutes to prepare and practice skits; 30 minutes for performances

Instructional Goals:

- The student will use the ***PebbleGo Next Science*** online database to research the states of matter (solids, liquids, gases, and plasmas), as well as chemical and physical changes to matter.
- The student will work with a team to incorporate knowledge about the states of matter, and chemical and physical changes, to create a skit highlighting mastery of the basic vocabulary and concepts.
- The student will identify examples of the different states of matter, as well as chemical and physical changes, in other team skits.

Materials/Resources:

- **PebbleGo Next Science** online database
- **States of Matter Notes** handout (one for each student)
- **Skits of Matter Team Challenge Graphic Organizer** (one for each student team)
- **Skits of Matter Team Challenge Graphic Organizer Example**
- **Skits of Matter Team Challenge Tracking Chart** (one for each student)

Procedures/Lesson Activities:

Focus

1. As a class, ask students what they already know about the states of matter. Create a K-W-L chart or brainstorming list highlighting their previous knowledge about the states of matter.
2. Tell students that you will be giving them a team challenge. Before they can work on the challenge, they must research the four states of matter (solids, liquids, gases, and plasmas), chemical changes, and physical changes to ensure they are ready for the challenge.

Teach/Model

3. Give each student a copy of the **States of Matter Notes** handout. Demonstrate how to navigate to the ***PebbleGo Next Science*** database and the articles about matter.
4. Explain your expectations for completing the notes handout. For example, you may ask students to provide definitions for the three properties of matter (shape, mass, and volume) listed at the top of the chart. Additionally, you may want students to include illustrations for the four states of matter along the left side of the chart.
5. Note: There is not a separate article on plasmas in ***PebbleGo Next Science***, but plasmas are discussed in the ***Properties of Matter*** article. You may need to guide students in completing this section of their notes.

Guided Practice

6. Allow students time to complete the **States of Matter Notes** handout, monitoring for accuracy and success.

Independent Practice

7. Divide students into teams of three or four students. Give each team the **Skits of Matter Team Challenge Graphic Organizer**. Read through the directions with the students.
8. Tell students the story from the **Skits of Matter Team Challenge Graphic Organizer Example**. Explain how this skit would be acted out while the other teams worked to identify the unique, logical uses of the states of matter, chemical changes, and physical changes. Tell students that each correct use earns that team a point. The team with the most points may win a special classroom privilege or reward.
9. Show students the **Skits of Matter Team Challenge Graphic Organizer Example** as a model for their graphic organizer.
10. Give students approximately 10-15 minutes to prepare and practice their skits.
11. Have teams perform their skits while other teams track their points. After each skit, check accuracy and explain any areas of confusion. Students will be tracking the usage and points on the **Skits of Matter Team Challenge Tracking Chart**.

Closure

12. Brainstorm the many states of matter, chemical changes, and physical changes illustrated in the team skits. Use this basic knowledge and vocabulary to continue classroom study of the states of matter.

Name: _____

States of Matter Notes

	Shape	Mass	Volume	Examples
Solids				
Liquids				
Gases				
Plasmas				

Chemical Changes	Physical Changes
Examples	Examples

Source Citation:_____

Name: _____

Skits of Matter Team Challenge
Tracking Chart

During each skit, record the uses of each state of matter, as well as chemical and physical changes. Each unique, logical use earns one point for that team.

	Team _____	Team _____	Team _____	Team _____
Solids				
Liquids				
Gases				
Plasmas				
Chemical Changes				
Physical Changes				
Total Points				

Names: _____

Skits of Matter Team Challenge
Graphic Organizer

Create a short 1-2 minute team skit that incorporates every state of matter, as well as examples of chemical and physical changes.

During the challenge, your team will earn a point for each unique, logical use of the states of matter, as well as chemical and physical changes.

Use the graphic organizer below to plan your skit.

Title

Characters

Setting

Beginning

Specific states of matter used:
Specific chemical and physical changes used:

Middle

Specific states of matter used:
Specific chemical and physical changes used:

End

Specific states of matter used:
Specific chemical and physical changes used:

Names: _____

Skits of Matter Team Challenge
Graphic Organizer Example

Create a short 1-2 minute team skit that incorporates every state of matter, as well as examples of chemical and physical changes.

During the challenge, your team will earn a point for each unique, logical use of the states of matter, as well as chemical and physical changes.

Use the graphic organizer below to plan your skit.

Title

Stacy's Birthday Disaster

Characters

Stacy, her mom, her friends

Setting

Stacy's house

Beginning

Stacy and her mother are preparing for her birthday party. They put the cake batter in the oven and use a helium tank to blow up balloons.

Specific states of matter used: Helium (gas); cake batter, bowls, balloon (solids)
Specific chemical and physical changes used: Balloon shape (physical)

Middle

Stacy's friends arrive with gifts. As she opens the door, the sun's light blinds her momentarily. Stacy greets her friends and puts the gifts on a table. She gives them a soda to drink.

Specific states of matter used: Gifts, table, cup (solids); soda (liquid); sun (plasma)
Specific chemical and physical changes used:

End

Stacy's friend mentions a strange smell, like something is burning! Stacy's mom remembers the cake in the oven and runs to get it. The cake is burned and ruined, but everyone tells Stacy that it is okay, they'll just eat the ice cream!

Specific states of matter used: Oven, cake, ice cream (solids)
Specific chemical and physical changes used: Burned cake (chemical)