

Name/Title: States of Matter Tag

Academic content: Science

Purpose of Event: To help children better understand the states of matter as it relates to science.

Prerequisites: Students should have learned about how matters change form prior to this activity. A solid becomes a liquid with treated with heat. A liquid becomes gas when treated with heat. Gas stays the same when treated by heat. Gas becomes liquid when treated by cold. Liquid becomes a solid when treated by cold. A solid remains the same when treated by cold.

Suggested Grade Level: 1-2

Materials Needed: 2 handheld foam tagging balls, one blue and one red, 6 signs to hang on wall denoting a state of matter, gas, liquid and solid.

Physical activity: Chasing and Fleeing

Description of Idea

Students will gather with teacher and remind/discuss how matter changes and what causes that change. The teacher can remind the students, or ask the students to tell her/him from their previous knowledge. Teacher then tells the students that they will be playing a tag game to show that they understand the properties of matter and how they change.

Hang 3 signs each with a state of matter on each end of the playing area. Choose two students to be the first taggers and give them one of the tagging balls. The child with the red ball will be heat, while the child with the blue ball will be cold. Assign remaining students to a state of matter and have them stand beneath the sign of their matter. It is best NOT to have students using running as a locomotor movement. Choose locomotor movements such as skipping, galloping, etc.

The teacher will say one of the states of matter and the children who are assigned to that matter must try to move across the gym avoiding the taggers. If they make it safely across without being tagged, they again stand beneath the sign indicating their state of matter.

If a child is tagged by the red ball and heat changes their state of matter, they must go stand under the sign which is titled for their new state of matter. For example, if the child begins as liquid and is tagged by heat (red ball) s/he becomes gas and stands under that sign.

If a child is tagged by the blue ball and cold changes their state of matter, they must go stand under the sign which is titled for their new state of matter. For example, if the child was liquid and tagged by cold s/he will become a solid.

If the state of matter would not change due to the cold or heat, the child remains with his/her

same state and stands beneath that sign. For example, a solid does not change when treated with cold.

I have the students who are tagged come tell me who tagged them (heat or cold) and how their matter would change prior to standing beneath a sign to assess whether they know how it changes when acted upon by heat or cold.

Switch taggers often so that all get a chance to decide how matter changes when acted upon by heat and cold.

Variations:

The teacher can name forms of matter, rather than stating the matter outright. For example, s/he can say water, lemonade, or soda for liquids.

Assessment Ideas:

You can assess their knowledge by allowing them to choose which sign to stand under when tagged by heat or cold, or by asking them what their matter changes into after being tagged.

Submitted by **Patricia Morton** in Granger, IN. Thanks for contributing to PE Central! **Posted on PEC: 7/7/2016.**

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