

Lesson Plan Title

Chemical and Physical Changes with Tableau

Grade Level

5th Grade

Subject Area

Science

MSCCRS Performance Standards

- **P.5.5C.1** Analyze and communicate the results of chemical changes that result in the formation of new materials (e.g., decaying, burning, rusting, or cooking).

- **P.5.5C.2** Analyze and communicate the results of physical changes to a substance that results in reversible change (e.g., changes in states of matter with the addition or removal of energy, changes in size or shape, or combining/separating mixtures or solutions)

Art Form

Theatre

MSCCR Creative Arts Standards

- **TH: Cr1.1.5** Generate and conceptualize artistic ideas and work.

a. Identify physical qualities that might reveal a character's inner traits in the imagined world of a drama/theatre work.

b. Propose design ideas that support the story and given circumstances in a drama/theatre work.

c. Imagine how a character's inner thoughts impact the story and given circumstances in a drama/theatre work.

- **TH: Pr5.1.5** Develop and refine artistic techniques and work for presentation.

a. Choose acting exercises that can be applied to a drama/theatre work.

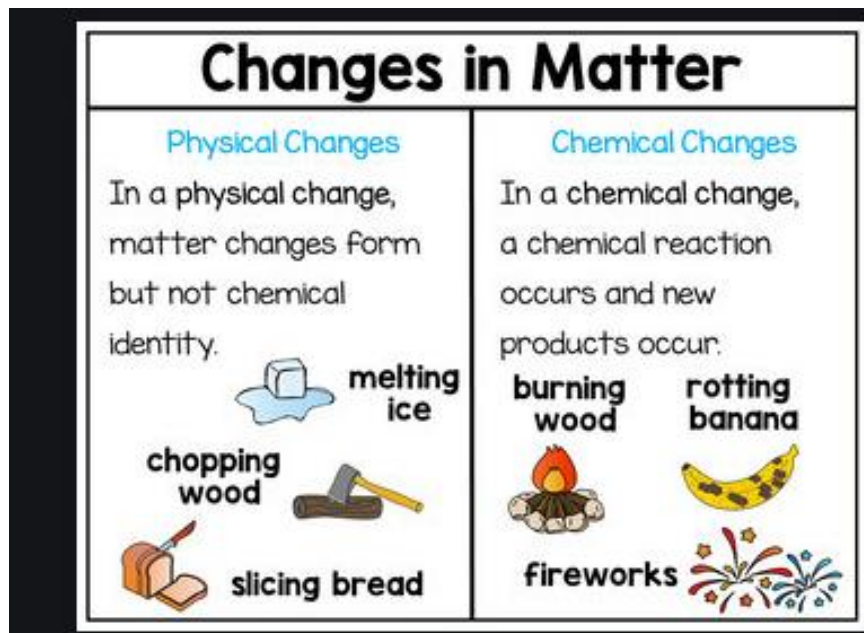
b. Demonstrate the use of technical elements in a drama/theatre work.

- **TH: Re7.1.5** Perceive and analyze artistic work.

a. Explain personal reactions to artistic choices made in a drama/theatre work through participation and observation.

Duration

1 Hour



Materials

Anchor Charts: Chemical/Physical Changes (see download links below)

Tableau Preparation Sheet (see download links below)

Suggested Prompts for Dramatization of Chemical & Physical Changes (see download links below)

Markers

Index Cards

Pencils

Objectives

Students will be able to:

- Use their body and movement to dramatize the changes of an object involved in chemical or physical change.
- Create a 2-part tableau and incorporate dialogue that helps communicate the story and understanding of chemical and physical changes
- Justify artistic choices using gained knowledge of both physical and chemical changes

Theatre Arts Vocabulary

Tableau: A “living picture” in which actors pose and freeze in the manner of a picture or a photograph

Dialogue: A conversation between two or more persons

Scenario: The outline of action in a play

Thought-tracking: Drama technique in which individuals participating in tableau, or members of the class observing a tableau, are invited to speak the thoughts or feelings of a portrayed character aloud

MSCCRS Physical and Chemical Changes Vocabulary

State of Matter

Physical change

Chemical Change

Reversible Change

Irreversible Change

Molecule

Shape

Color

Hardness

Texture

Lesson Description

Essential Questions:

- How can theatre and visual arts strategies be used to create works of art that assess students' understanding of what constitutes a physical change versus a chemical change?
- How can moving through two tableaux be used to dramatize materials as they undergo physical or chemical changes?
- How can the artistic process of indigo dyeing be used to model and classify both physical and chemical changes?

Guidance for beginning lesson:

- Introduce the art form of Tableau with a warm-up: Silent Tableau
- Students will form small groups. Groups will be asked to form various shapes within their groups silently. (Example: circle, crescent moon, diamond)
- Go over the Principles of Tableau (see download links below: Anchor Charts-Chemical & Physical Changes)
- Groups will then be asked to form various scenarios within their groups silently. Dialogue will be added into the silent scenes through thought-tracking. Groups will practice forming 2-part tableaux of a particular scenario.

***Examples: On a picnic and it begins to rain; students are playing with a ball in the living room until someone hits a lamp and it breaks; group of friends wait to yell "surprise" for a surprise birthday party

- Review the Science Concept: Physical vs. Chemical Changes

***Model by tearing up a piece of paper. Ask class if this was a physical or a chemical change. As a class, create an anchor chart that lists the characteristics that classify a physical vs. a chemical change. (see download links below: **Anchor Charts-Chemical & Physical Changes, slide #2**)

- Divide class into small groups and assign a particular chemical or physical change on an index card. (see download links below: **Suggested Prompts for Dramatization of Chemical & Physical Changes**)
- Groups will discuss their change and determine together whether it is physical or chemical.
- Then they will form a 2-part dramatization of the scenario undergoing the change. The two tableaux will dramatize how the change occurred and the cause and effect of the change.
- Direct students to use the **Tableau Preparation Sheet** (see download links below) to help with the next step.
- In each scenario, students will create dialogue that helps support the type of change that occurred.

- After the groups have had time to rehearse, groups share out their tableaux in a non-formal class performance. The goal is for the audience to be able to determine the materials that changed and whether it was a physical or chemical change based on the performance.

Recommended Resources

Expanded Lesson Ideas: <https://artsnowlearning.org/project/module-5-chemical-physical-changes/>

Tableau Tutorial for Teachers: <https://www.youtube.com/watch?v=aHooiRHMkr0&t=31s>

Tableau Intro Video for Students: <https://www.youtube.com/watch?v=d13zVA-dkdq>

Tableau Preparation Worksheet:

<https://drive.google.com/file/d/162BaH4T7IAMbmwuGyTN7DEH6U7ZpRIOe/view?usp=sharing>

Suggested Prompts:

<https://drive.google.com/file/d/1oKKbTMsw5CmxVh26QVICbjQ0Uhv47s1p/view?usp=sharing>

Anchor Charts - Chemical & Physical Changes:

<https://drive.google.com/file/d/1C8dGDZk9Z9WmbbA8AlwgzqMlxKs2Yuz5/view?usp=sharing>

Technology Resources: <https://www.thinglink.com>

Extended Learning Activities

Take digital pictures or videos for integration on a final group presentation of a Thinglink

(<https://www.thinglink.com/>). The class can work in groups to create a Thinglink example of their physical or chemical change. They may link their digital pictures or videos to a place in the artwork.

Other content to include on the Thinglink should be the definition of the physical or chemical change, other examples of the physical or chemical change, why the change is important, and a definition of a tableau.

Sources

<https://artsnowlearning.org/project/module-5-chemical-physical-changes/>

Tips

- Use cueing methods when directing tableaux in your classroom: “3-2-1- Freeze” and “Actor’s Neutral.”

- Make your expectations for the tableau science task explicit and go over these before the group work begins. Write them up so that students can refer back to them if they need to during their group working time.

Adapted by:

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