

Sunny Sandbox Exploration Lesson Plan

Context (InTASC 1,2,3)

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Created:

Lesson Topic: Sunny Sandbox (Science)

Grade Level: Kindergarten

Duration: 30 minutes

Kit Contents: http://odin-primo.hosted.exlibrisgroup.com/nmy:nmy_all:ODIN_ALEPH007757054

Desired Results (InTASC 4)

Purpose: The purpose of this lesson is to describe a problem and come up with possible solutions.

North Dakota Science Content Standards:

- Science Standards: Students use the process of science inquiry.
 - 2.1 (Kindergarten) Use senses to make observations about the world around them.
- Science Standards: Students understand the basic concepts and principles of physical science
 - 3.1 (Kindergarten) Identify materials that make up an object.
- Science Standard: Students understand the basic concepts and principles of earth and space science.
 - 5.2 (Kindergarten) Identify objects in the sky.

Objectives:

Students will:

1. Describe a problem.
2. Construct a solution.
3. Read for a purpose.

Assessment Evidence (InTASC 6)

Evidence of meeting desired results:

- Observation of insightful answers to discussion questions
- Discussion about if the covering worked or not (hand signals)
- Recorded observation of anchor chart reflection questions

Learning Plan (InTASC 4,5,7,8)

Instructional Strategy: (Check all that apply)

Direct Indirect Independent Experiential Interactive

Technology Use(s): (Check all that apply)

Student Interaction Align Goals Differentiate Instruction Enhance Lesson

Collect Data N/A

Hook and Hold:

- Open the following YouTube video and hit pause on the screen that says “Mr. Son (3-8 seconds in): <https://www.youtube.com/watch?v=AkBLpD9EYbM>. With this displayed on the screen, ask a reader to read that for the class. Remind students that you will watch the video once to listen to the song and then we will sing it together. Give students time to practice the song by listening to and reading along on the screen. Once students have practiced and sang the song, pause or emphasize the lyrics “Hiding behind the tree”. Ask students, “what happens when the sun hides behind the tree?” (it gets cold, there is shadows, it’s not as bright, etc.)

Materials:

- Sunny Sandbox Kit (page 13 and supplies for activity)
- Sunny Sandbox Teacher’s guide
- Device with internet connection and projector
- Sunny Sandbox poster
- Anchor chart with questions

Procedures:

1. Once you have facilitated the discussion on what happens when the sun hides behind a tree, take time to do a shared reading on the “Sunny Sandbox Exploration”, a poster found within the kit. A digital version of the story poster can be found at: hand2mind.com/hosstem/sunnysandbox, under the Interactive Whiteboard activity towards the bottom of the page.
2. On this page, you can read about sun and shadows as a class and also the Sunny Sandbox story. There is an interactive piece where students can drag items to build shadows as well. Use in any capacity you wish.
3. Have students follow along and point to the words are you are reading them.
4. Explain the vocabulary word “engineers” as a person who uses science and math to solve problems and help people. Display this on the whiteboard or word wall.
5. Divide students into small groups 2-3 students and explain that you have a problem. You need help making the sand less hot for Sam so he can play without getting hurt.
6. Distribute a copy of page 13 in the Teacher’s Guide (Sunny Sandbox Problem) to each group. This will outline the goals and directions for creating the sandbox cover. The rules include:
 - The covering should make a shadow that covers most of the sandbox.
 - The covering should keep the sandbox dry when it rains.
7. Students will use the materials listed on page 13 to construct a sandbox covering in small groups (Teacher’s guide contains a wide variety of other activities to use with this kit).
8. Coverings will be shared when all groups have completed the project. Have students give thumbs up or thumbs down hand signals to indicate if their covering solved the problem or not.
9. The following questions and recorded answers on an anchor chart will guide assessment of students’ learning:
 - Where does light come from?
 - What makes shadows?
 - How are shadows helpful?

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- Which is warmer, the sand in the sunlight or the sand in the shade?

Summary: Teacher-directed statement: “In today’s lesson, we learned that a sun makes the sand hot and a covering will help keep the sandbox more cool and dry. Look for shadows as you are walking outside this week.”

Resource: Sunny Sandbox Teacher’s Guide

Reflection (InTASC 9)**Reflect On:**

- *Preparation*
- *Planning*
- *Teaching*
- *Student Engagement and Participation*
- *Evidence of Student Learning*

Standards

Council of Chief School Officers. (2011, April) *Interstate Teacher Assessment and Support Consortium (InTASC) model core teaching standards: a resource for state dialogue*. Washington DC. Retrieved from http://www.ccsso.org/documents/2011/intasc_model_core_teaching_standards_2011.pdf

North Dakota Department of Public Instruction. (2011) *North Dakota Science content standards*. Bismarck, ND. Retrieved from <https://www.nd.gov/dpi/uploads/87/science.pdf>

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