

Pam's Camping Adventure Lesson Plan

Context (InTASC 1,2,3)

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Created:

Lesson Topic: Pam's Camping Adventure (Science and Math)

Grade Level: Kindergarten

Duration: 30 minutes

Kit Contents: http://odin-primo.hosted.exlibrisgroup.com/nmy:nmy_all:ODIN_ALEPH007756963

Desired Results (InTASC 4)

Purpose: The purpose of this lesson is for students to explore the strength of a variety of materials.

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.

North Dakota Mathematics Content Standards:

- Measurement and Data: Classify objects and count the number of objects in each category
 - MD.2 (Kindergarten) Directly compare two objects with a measurable attribute to see which object has more of or less of the attribute and describe the difference.
- Counting and Cardinality: Count to tell the number of objects
 - CC.5 (Kindergarten) Count to answer "how many?" questions.

Objectives:

Students will:

1. Make observations about the strength of several objects.
2. Count the number of backpacks each type of pole can hold.
3. Record data on a graph.
4. Compare data on a graph.
5. Read for a purpose.

Assessment Evidence (InTASC 6)

Evidence of meeting desired results:

- Observation of insightful answers to discussion questions
- Oral assessment of counting the objects
- Graph to chart different number of backpacks each pole type held

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:

Display clipart or a photograph of a tent. Ask students, “What does this picture represent?” Have them think-pair-share. One student from each group can share out the answer (camping, summer, parks, fun, etc.). Lead a discussion about how tents are constructed and why the strength of the poles might be important. State the purpose of the lesson, “Today, we will use what we know about tents to test their strength.”

Materials:

- Pam’s Camping Kit (Activity 2 and card 2b for directions)
- Pam’s Camping Teacher’s guide
- Clipart or photograph of tent
- Pam’s Camping Poster
- Pam the Raccoon
- Straws
- Connectors
- Backpacks
- Graph paper for students
- Markers

Procedures:

1. Read “Pam’s Camping Adventure” poster together as a group. Read both sides of the poster. Focus on the vocabulary words and consider posting them to your classroom word wall (floor plan, tested, balance, and weight). Reinforce the idea that scientists need to know these important words when doing their jobs and that they will be scientists today!
2. Draw students’ attention to the third paragraph that talks about the tent’s structure and strength. Show students the backpacks from the Pam’s Camping Kit and say, “The poles have to be strong enough to hold backpacks.”
3. Construct a “sample tent” for students to see. The sample, along with more information, can be seen on card 2b in the kit.
4. Explain to students that there are three different kinds of tent poles (paper, thin plastic, and thick plastic). Allow them to touch and explore the three kinds of poles (straws).
5. Display Pam, the raccoon. Ask, “How can Pam decide which pole to use? Today, we will compare the strength of the poles. We will test to see if the poles can bend without breaking.”
6. Give students a graph where they can record the data by coloring in different squares for the paper, thin, and thick poles respectively. The graph can be found on the back of the Activity 2 page within the kit.
7. Using the “sample tent” insert a paper pole in and make sure it is connected tightly. Test the pole by having a student hang one small backpack (from the kit) on the paper pole.
8. Continue adding packs and have students record the data on their graphs until the pole breaks of the backpacks touch the table.
9. Check in to see if students successfully completed the graph. Remind students that a graph is

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a great way to compare quantities or how many.

10. Repeat steps 7-9 with the thin plastic pole and the thick plastic pole and record data.
11. Once all data is collected, ask students “Which pole held the most packs? Which pole held the fewest packs? Which poles do you think might be the best for Pam to build her tent with?” Listen for insightful answers from students.
12. Review the vocabulary words with students by asking a volunteer to tell you the definition of: floor plan, tested, balance, and weight.

Summary: Teacher-directed statement: “In today’s lesson, we learned that the strength of a tent pole makes a difference in how much it can hold. We will continue to explore and test weight and balance in our next lessons.”

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>

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

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