4th grade Donut Sort Lesson Plan

Teacher   **Date**

School   **SLE #** PS.5.4.1: Demonstrate multiple ways to classify objects, NS.1.4.2: Refine questions that guide scientific inquiry; NS.1.4.8: Develop a hypothesis based on prior knowledge and observations; NS.1.4.11: Generate conclusions based on evidence, NS.1.4.1: Communicate observations orally, in writing, and in graphic organizers, NS.1.4.3: Conduct scientific investigations individually and in teams

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Objectives:
Content: I will demonstrate multiple ways to classify objects.
I will refine questions that will guide scientific inquiry.
I will develop a hypothesis based on prior knowledge and observations.
I will generate conclusions based on evidence.

Language: I will use the terms classify, physical property, demonstrate, refine, scientific inquiry, develop, hypothesis, evidence, generate, and conclusion while working with my group.

Assessment: The teacher will be able to assess knowledge based on completed dichotomous key. The teacher may also choose to assess students' participation based on rubric.

Technology/Materials: 4 distinctively different donuts per group of 4 students, 4 sandwich bags, paper to create dichotomous key, paper plates and napkins (optional), example of dichotomous key (can be found in most science books, but a sample is provided for you)

Vocabulary: classify, physical property, demonstrate, refine, scientific inquiry, develop, hypothesis, evidence, generate, conclusion

Bloom's: ☐ Remembering ☐ Understanding ☐ Applying ☐ Analyzing ☐ Evaluation ☐ Creating

Questions: What does it mean to classify? Describe some ways you classify objects. Describe some properties that you could use when classifying objects. If you were given a donut, what characteristics would you look at while trying to classify it?

High Yield Strategies: ☐ Identifying similarities & Differences ☐ Summarizing & Note Taking ☐ Cooperative Learning ☐ Reinforcing Effort & Providing Recognition ☐ Setting Objectives & Providing Feedback ☐ Generating & Testing Hypotheses ☐ Cues, Questions & Advanced Organizers ☐ Homework & Practice ☐ Nonlinguistic Representations

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Instructional Strategies:

   Set: Activate prior knowledge by asking questions above. Allow students some opportunity to tell you about different objects they have classified (ie clothes, hats, shoes, etc).

   Model: Show the students an example of a dichotomous key. Walk the students through the key and help them understand how to use it. Next, show the students the donuts that they will be sorting and classifying.

   Guided Practice/Strategies: See model.

     Intervention Strategies: Remodel as necessary. Walk around the room during the activity to help guide students through activity. Ask questions about their choices and their keys.
      Accommodations & Modifications (IEPs) See individual IEPs. Shorten assignment as needed.

   Independent Practice/Activities: Allow students to work together to complete their dichotomous key. When students are done, allow them to trade keys and donuts with another group to use to classify donuts. Have the students draw the different donuts that they classified and label them with the names of the donut and also the student names.

    Enrichment Activities: Allow students to create a dichotomous key for other objects such as candy.

Closure: Have students write about the following questions:
1. What were the main characteristics you looked at when classifying the donuts?
2. Could you classify the donuts in more than one way?
3. Do you think that scientists could classify plants or animals in more than one way? What problems do you think would arise from having plants or animals classified in more than one way?

Homework: Allow students to complete their dichotomous key and/or drawing of donuts.