

Tootsie Pop Lesson Plan 4th Grade

Teacher

Date

School

SLE # NS.1.4.1: Communicate observations

orally, in writing, and in graphic organizers, NS.1.4.3: Conduct scientific investigations individually and in teams: lab activities and field studies, NS.1.4.9: Identify variables that affect investigations, NS.1.4.8: Develop a hypothesis based on prior knowledge and observations, NS.1.4.11: Generate conclusions based on evidence

Objectives:

Content: I will be able to communicate observations orally, in writing, and in graphic organizers.

I will be able to identify variable that affect investigations.

I will be able to conduct scientific investigations individually and in teams.

I will be able to communicate the results of scientific investigations.

I will be able to develop a hypothesis based on prior knowledge and observations.

Language: I will be able to use the terms evidence, data, collect, results, conclusion, variable, and cause and effect while working with my group.

Assessment: The teacher will be able to assess the students' knowledge based on completed graph and journal writing.

Technology/Materials: Tootsie Pops, chart paper, pencil, data sheet/tally sheet

Vocabulary: evidence, data, collect, results, conclusion, cause and effect, variable

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

Questions: Who has eaten a Tootsie Pop and got to the center of it? Describe how you got to the center of the Tootsie Pop. Predict how many licks it will take to get to the center of a Tootsie Pop. Describe how we could test our prediction. What is considered a lick? How will we be able to determine if we have reached the center?

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

Instructional Strategies:

Engagement: Activate prior knowledge by asking the questions above. Work with the students to create the procedures for testing the Tootsie Pop. Have students write the procedures on a piece of chart paper for everyone to see. Explain that anyone who bites their Tootsie Pop to get to the center will have to throw away their candy and watch the rest of the class finish activity. Allow students to make predictions on how many licks it will take to get to the center. Record their predictions to look at later.

Exploration: Allow students to begin testing their Tootsie Pops. Instruct them to stop every 25 licks and write down observations about their Tootsie Pop. Is there a color change? Is there a shape change? Can you see some of the chocolate center?

Explanation: Teacher can discuss with the students why the Tootsie Pop was dissolving. Introduce the term "dissolve" if necessary. Allow the students to brainstorm ideas about what is helping the Tootsie Pop dissolve.

Elaboration: Have students count up their tally marks when done. In groups of 4 or 5, allow students to create a bar graph with their data to share with the class.

Intervention Strategies: See ELL levels in curriculum map.

Accommodations & Modifications (IEPs) Group work, shortened assignment, and modify as needed.

Evaluation: Have students share their graphs with the class.

Closure: Have the students write in their journals about the following:

What did you learn from the experiment?

What were some of the difficulties you faced throughout the experiment?

Was your prediction right about how many licks it would take?

What would you do differently the next time?

Homework: None