

Name(s): \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

**“How Many Licks Does it Take to get to the Center of a Tootsie Pop”**

**Objective:** Follow the Scientific Method to discover how many licks it takes to get to the center of a tootsie pop.

**Step 1** (Question): What is the problem you are trying to solve? \*This should be obvious\*

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**Step 2** (Observations):

Take a picture (Paste it here) or draw a picture of your tootsie pop (unwrapped) **before** you begin the experiment.

- Describe how the tootsie pop feels.  
\_\_\_\_\_
- Describe how the tootsie pop smells.  
\_\_\_\_\_
- Describe how the tootsie pop tastes.  
\_\_\_\_\_
- Describe any sounds the tootsie pop makes.  
\_\_\_\_\_

**Step 3** (Hypothesis): Create a hypothesis.

If \_\_\_\_\_  
then it would take \_\_\_\_\_ Licks to get to the center of the Tootsie Pop.

**Step 4** (Carry out an experiment to test your hypothesis):

**Procedure/Steps:**

- 1) Obtain one Tootsie Pop.
- 2) As a class determine the following before you begin the lab:
  - a) What is a lick?

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- b) What is the center of a Tootsie Pop?

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3) You must provide a step-by-step set of specific directions so that some one could repeat your work:

- a) Do not put the whole sucker in your mouth.
- b) Lick one spot every time.
- c) Only lick. Do not move the sucker back and forth over your tongue.
- d) You have reached the center when you taste the tootsie roll, AND when you see it.

**Begin Licking**

**Step 5** (Data Collection): Analyze and interpret your results:

How many licks did it take you to get to the center of the Tootsie Pop? \_\_\_\_\_ licks

Make new observations:

Take a picture (or draw a picture) of your tootsie pop **after** you have reached the center.

Below record the name & number of licks it took each member of your **group** to reach the center of the tootsie pop.  
Calculate your group average. Show all calculations. **Group** average = \_\_\_\_\_ licks

**\*\*Below record the number of licks it took each of your **classmates** to reach the center of the tootsie pop.\*\***  
**\*\*Calculate the class average. Show all calculations. Total **class** average = \_\_\_\_\_ licks\*\***

**Step 6** (Draw Conclusions)

Was your hypothesis correct? YES or NO  
How far off were you? \_\_\_\_\_ licks

Answer the question from **Step 1**.

- Describe how the tootsie pop feels.  
\_\_\_\_\_
- Describe how the tootsie pop smells.  
\_\_\_\_\_
- Describe how the tootsie pop tastes.  
\_\_\_\_\_
- Describe any sounds the tootsie pop makes.  
\_\_\_\_\_

**Step 7** (Communicate Results)

Did this experiment work to answer your question? Explain.

Have you proven precisely how many licks it takes to get to the center of a Tootsie Pop? Explain.