

Team member's \_\_\_\_\_, \_\_\_\_\_

### Grade Rubric How Many Licks

Design and build a machine to answer the question, "How many licks does it take to get to the center of a Tootsie Roll Pop?"

**1. Identify the Problem/Product Innovation:**

- 25 \_\_\_\_\_ Preparing a clear definition of the problem. (pg. 329 stage 1)
- 25 \_\_\_\_\_ Listing the constraints or limitations that the solution must meet. (pg. 329 stage 2)

**2. Investigate issues related to the problem by:**

- 20 \_\_\_\_\_ Looking in stores and catalogs to find how other people solved similar problems (competitive analysis). (pg. 330 Stage 3)
- 20 \_\_\_\_\_ Prepare sketches or make photocopies of what you find.

**3. Develop several solutions (Brainstorming) to the problem by:**

- 20 ea 100 total \_\_\_\_\_ 5 Different Design Solutions
- 10 ea 50 total \_\_\_\_\_ Quality of Sketching
- 20 \_\_\_\_\_ Highlighting ideas that you think could be used for your final design.

**4. Evaluate -- Analyze Potential Solutions:** (pg. 332- 335 Stages 5-6)

- 20 \_\_\_\_\_ Listing the strengths of the design.
- 20 \_\_\_\_\_ Listing the weakness of each design.
- 20 \_\_\_\_\_ Selecting the best design.

**5. Make a dimensional sketch of the solution you have selected for the design problem.**

(pg. 336 Stage 8)

- 50 \_\_\_\_\_ Include the sketch in your design portfolio.
- 50 \_\_\_\_\_ Prepare a list of materials, supplies, and tools that you will need to make the selected design.

**6. Implementing your design** (pg. 336 Stage 9)

- 200 \_\_\_\_\_ Build your machine and test the functionality.  
If you have flaws with your design, you must return to step 4 and redesign until your machine works.

**7. Evaluate your design by:** (pg 337 Stage 10)

- 33 ea 100 total \_\_\_\_\_ Conducting the tests. 3 test runs needed.
- 20 \_\_\_\_\_ Describing how your machine functioned during the testing.
- 10 \_\_\_\_\_ Did you have to redesign? Explain in portfolio
- 50 \_\_\_\_\_ Summarizing the results of the test.

Team Total Correct \_\_\_\_\_/800

Name \_\_\_\_\_

Name \_\_\_\_\_

## Tootsie Roll PowerPoint Grading Rubric

### Your PowerPoint must include:

- 25 \_\_\_\_\_ Introduction slide.
- 20 \_\_\_\_\_ Overview of presentation
- 25 \_\_\_\_\_ Identify the Problem/Product Innovation
- 20 \_\_\_\_\_ Investigate issues related to the problem
- 10 \_\_\_\_\_ Pictures of other projects like this (not to include projects from PHS)
- 50 \_\_\_\_\_ Take us through the design process
- 50 \_\_\_\_\_ 5 sketches
- 20 \_\_\_\_\_ 1 refined sketch
- 30 \_\_\_\_\_ Final drawing
- 50 \_\_\_\_\_ Why did you choose this design
- 15 \_\_\_\_\_ Pictures of your final design
- 20 \_\_\_\_\_ Implementing your design
- 50 \_\_\_\_\_ Results of your machine
- 30 \_\_\_\_\_ 3 or more Pictures showing your final design at work
- 50 \_\_\_\_\_ Evaluate your design by
- 20 \_\_\_\_\_ Describe how your machine functioned during the testing
- 20 \_\_\_\_\_ Did you have to redesign
- 10 \_\_\_\_\_ What went well in the process (from beginning during gear practice till the end
- 10 \_\_\_\_\_ What would you do differently in the future (when in a group and on your machine
- 20 \_\_\_\_\_ What would you do next time to improve your machine even further
- 10 \_\_\_\_\_ 3-5 minutes
- 25 \_\_\_\_\_ Slides easy to read
- 10 \_\_\_\_\_ Background of slides appropriate
- 30 \_\_\_\_\_ Each member participated equally
- 30 \_\_\_\_\_ Use of Props
- 50 \_\_\_\_\_ Presentation well rehearsed with smooth delivery that holds audience attention.
- 50 (25 ea) \_\_\_\_\_ Dress Professional each person
- 50 (25 ea) \_\_\_\_\_ Talks to the audience not the screen.
- 50 (25 ea) \_\_\_\_\_ Watch you body language (hands, moving back and forth)
- 50 (25 ea) \_\_\_\_\_ Voice (not monotone, loud enough for all to hear)
- 30 \_\_\_\_\_ Ready on time
- 20 \_\_\_\_\_ Mechanics (no spelling errors)

\_\_\_\_\_ / 950 possible

(Turn in a copy of you presentation 1 day before your presentation)

Comments:

## Tootsie Roll Presentation Evaluation Form

Speaker(s) \_\_\_\_\_  
Printed Outline 6 per page \_\_\_\_/50

### Introduction 1-5

- \_\_\_\_\_ Gained audience attention
- \_\_\_\_\_ Preview (Provides an overview)
- \_\_\_\_\_ Smooth transition to body

### Body 1-5

- \_\_\_\_\_ Main points clear
- \_\_\_\_\_ Idea Development
- \_\_\_\_\_ Transitions were smooth
- \_\_\_\_\_ Organized, well-planned
- \_\_\_\_\_ Language clear/accurate
- \_\_\_\_\_ Focused on main issues rather than going off topic

### Conclusion 1-5

- \_\_\_\_\_ Prepared audience for ending
- \_\_\_\_\_ Reinforced central idea
- \_\_\_\_\_ Referenced main points
- \_\_\_\_\_ Presentation adapted to the audience
- \_\_\_\_\_ Concluded speech with a concluding statement, not a "uhh.....the end."

### Delivery 1-5

- \_\_\_\_\_ Physical (poise, gestures, mannerisms)
- \_\_\_\_\_ Eye contact (looked at whole audience comfortably)
- \_\_\_\_\_ Vocal (rate, volume, pitch, didn't uhhhmmm so much)
- \_\_\_\_\_ Pace / Speed appropriate
- \_\_\_\_\_ Enthusiasm
- \_\_\_\_\_ Met time limit

### Dress 25

- \_\_\_\_\_ Speaker was dressed appropriately.

### Delivery 25

- \_\_\_\_\_ Evidence of preparation and practice displayed

### Graphics 1-5

- \_\_\_\_\_ Background appropriate
- \_\_\_\_\_ Text readable
- \_\_\_\_\_ Graphics appropriate

### Teaching Ability 1-5

- \_\_\_\_\_ I was able to learn the topic from the presentation

Comments:

Total grade:

/220