

Candy Planets

Grade Level: 1, 2, 3, 4, 5

Duration: 40 - 60

Classification: Classroom

Subject(s): Space, Astronomy, Math

Categories (STEM): Science. Math

Keywords: Solar System, Astronomy, Model, Candy, Math

Introduction

- Summary: Students will learn about how models are used in science by constructing one of our solar system made of candy.
- Description: Students will learn more about our solar system and different facts about the planets and how they interact with each other. In the end they may be able to eat their candy solar system.
- Note – this activity is edible if instructor allows.

Online Resource: <https://www.kidzone.ws/planets/>

Materials

Materials	Quantity	Reusable?
Wax Paper	1 Box/30 kids	No
Wooden Popsicle Sticks	1/kid	No
Paper Plate	1/kid	No
White Frosting	1/30 kids	No
Orange Icing	1/30 kids	No
Lemonhead	1 Bag/30 kids	No
Skittles	1 Bag/ 30 kids	No
York Patty	1 Bag/ 30 kids	No
M&M bag	1 Bag/ 30 kids	No
Rulers	1/kid	Yes
Calculators	1/ kid	Yes
Spoon	1/ frosting	No
Writing utensils	1/ kid	Yes
Scratch paper	1/ kid	No

Directions

- Hand out supplies to students and put 1 spoon of frosting on each student's wax paper
- Have students put a small amount of white frosting on one side of the lemonhead using the Popsicle stick and place it in the center of the plate. This represents the sun.
- Continue using white frosting to adhere to the remaining planets while stating some facts about each planet.
 - Mercury: Orange Skittle or M&M
 - Venus: Purple Skittle
 - Earth: Green Skittle or M&M
 - Mars: Red Skittle or M&M
 - Jupiter: Mint with Red M&M or Skittle on top
 - Saturn: Yellow Skittle or M&M with orange icing for rings
 - Uranus: Blue M&M
 - Neptune: Brown M&M
- Each student can keep their solar system. If the teacher says it is okay, they can eat it.
- Use the Solar System Fact sheet to give information about each planet as they make their model. Use the image to show them as an example of how it should look.

Activity Extension

1. Using the calculator and scratch paper, calculate your age in Earth Days. (age x 365).
Divide your earth days by the number of Earth days in a planet's year length to get your new age

Planet	Mercury	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune
Year Length (Earth Days)	88	225	365	687	4380 = 12 Earth Years	10,768 =29.5 Earth Years	30,660 =84 Earth Years	60,225 =165 Earth Years

2. Have students measure the distance from a planet to the sun on their model using the ruler.
3. Have them calculate the circumference (distance traveled around the sun) with the equation $2 * \text{radius} * \pi$ and see which planet traveled the farthest.
4. Compare the distance they calculated to the actual distance on the fact sheet.

Discussion Questions

- Discuss what models are and how they are used in science/engineering
- Which planet do you think would take the longest to go around the sun? **Neptune**
- Which planet do you think is the warmest? **Venus**
- Discuss how the model can make it easier to answer these questions, and brainstorm more ways that the model can teach you about the solar system.

What is happening?

- Students are making a model of the solar system to help them answer questions on the solar system. Calculations can be performed to extend the activity in reference to space.

Applications:

- Majors
 - Astronomy
 - Meteorology
- Jobs
 - Astronomer, Astronauts
- Hobbies
 - Stargazing
- Real world applications
 - Modeling
 - Conversions (units), Circumference, Geometry
 - NASA, The Martian