

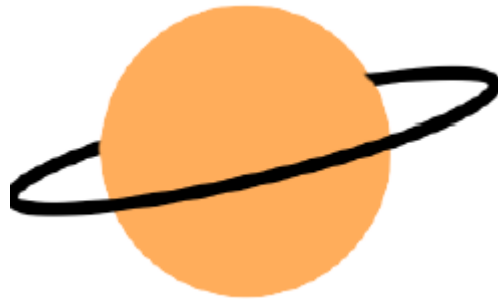
RSCS

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

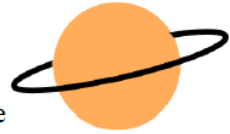
# **SCIENTIFIC NOTATION SPACE PROJECT**



Name \_\_\_\_\_

Date \_\_\_\_\_

## Scientific Notation Space Project



You are going to create a fictional planet in our solar system. First, come up with some fun facts about your planet:

- 1) What is your planet's name? \_\_\_\_\_
- 2) Draw a sketch of the aliens who live on your planet. What are they called? \_\_\_\_\_

3) What color(s) is your planet? \_\_\_\_\_

4) How many moons does your planet have? \_\_\_\_\_

5) If an alien from your planet came to earth, would they be friendly or not? Briefly describe the interactions they might have with earthlings:

---

---

---

---

---

---

6) Sketch your planet. Include rings (if there are any) and moons (if there are any):

Now you will come up with facts for your own planet, but there are some restrictions:

- 1) The mean radius of your planet must be between Mars' and Jupiter's. Write the radius of your planet (miles) in standard form and in scientific notation:

Standard form: \_\_\_\_\_

Scientific notation: \_\_\_\_\_

- 2) The volume of your planet must be between Neptune's and Jupiter's. Write the volume ( $\text{mi}^3$ ) of your planet in standard form and in scientific notation:

Standard form: \_\_\_\_\_

Scientific notation: \_\_\_\_\_

- 3) The mass of your planet must be between Neptune's and Saturn's. Write the mass (kg) of your planet in standard form and in scientific notation:

Standard form: \_\_\_\_\_

Scientific notation: \_\_\_\_\_

- 4) The surface area of your planet must be between Mars' and Jupiter's. Write the surface area (square miles) of your planet in standard form and in scientific notation:

Standard form: \_\_\_\_\_

Scientific notation: \_\_\_\_\_

- 5) The length of the orbit around the sun must be between Jupiter's and Saturn's. Write the length of your planet's orbit around the sun (miles) in standard form and in scientific notation:

Standard form: \_\_\_\_\_

Scientific notation: \_\_\_\_\_

Now you are going to compare your planet to some of the other planets in our solar system (there is space provided under the

- 1) The radius of my planet is \_\_\_\_\_ times the radius of Mars
  
  
  
  
  
  
  
  
  
  
- 2) The volume of my planet is \_\_\_\_\_ times the volume of Neptune
  
  
  
  
  
  
  
  
  
  
- 3) The mass of my planet is \_\_\_\_\_ times the mass of Neptune
  
  
  
  
  
  
  
  
  
  
- 4) The surface area of my planet is \_\_\_\_\_ times the surface area of Jupiter
  
  
  
  
  
  
  
  
  
  
- 5) The length of the orbit around the sun of my planet is \_\_\_\_\_ times the length of the orbit around the sun of Saturn
  
  
  
  
  
  
  
  
  
  
- 6) It turns out that your planet is inhabited by teeny-tiny creatures. On a scientific mission to your planet, astronauts bring back five of them. They get weighed, and the chart below shows the weight of each. Create names for the 5 animals, and complete the chart below, filling in missing information.

Creature's Name	Animal's Weight (kg)	Scientific Notation
	0.00045 kg	
		$2 \times 10^{-4}$ kg
	0.00192 kg	
		$9.9 \times 10^{-5}$ kg
	0.001008 kg	

# Project Rubric

Page	Item	Points Possible	Points Earned
Packet	Pages 2 and 3 of the packet are complete and correct	5	
Front Cover	Colorful, neat and welcoming. Your name is on it.	2	
	Name and picture of your planet	3	
Fun Facts	Contains at least 5 fun facts about your planet, such as the number of moons, the names and characteristics of the aliens, and other odd facts.	5	
	Neat and colorful, with at least one picture of an alien	5	
Important Facts (standard form)	Contains the 5 important facts about your planet (from page 3 of this packet) written in standard form. (orbit size around sun, mean radius, volume, mass, and surface area)	10	
	The facts fulfill the requirements on page 3 of this packet.	10	
Important Facts (scientific notation)	Contains the 5 important facts (from page 3 of this packet) written <b>correctly</b> in scientific notation.	20	
Planet's Creatures	Lists 5 creatures with names and weight in standard form and <b>correctly</b> in scientific notation. This information should come from page 3 of this packet.	15	
	Includes at least one drawing of a creature.	5	
History of Planet (Bonus)	Write a brief history of your planet. Include interactions with earthlings, etc. (This is for bonus points.)	+5	
Overall	It is obvious you worked hard on this project.	5	
	Your packet is complete and correct.	10	
	You showed creativity and imagination with this project.	5	
<b>Total</b>		<b>100</b>	