Name _____ Date _____ Period _____

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Objects in our Solar System

Directions – Complete the 2 activities to compare characteristics some of the objects that are found in our solar system.

Activity 1 – Can You Classify?

Use the cards provided to fill in the data tables and help you make sense of objects found in our solar system. Your groups of cards should include Objects A, B, C, D, E, F, G, H, J, and L (I know it's out of order, I like to mess with your brains a little)

		Characteristics of Objects			
Object	Distance From the Sun in AU	Orbit around Sun	Primary Composition	Diameter	Temperature
A					
B					
C					
D					
E					
F					
G					
H					
J					
L					

1. List in order, objects with the smallest distance from the sun to the largest distance.

2. Compare the distance from the Sun to the objects orbit around the sun. Explain in complete sentences what you notice (Use the data table, don't guess, what do the numbers show?)

3. What objects are made of gas?

4. What objects are made of rock?

5. Compare the objects composition to their diameter. Explain in complete sentences what you notice. (Use the data table, don't guess, what do the numbers show?)

Activity 2 – Solar System Model

Use the data table below to create a scale model of the solar system showing the average distance of the planets from the sun. For this activity, Earth, which is 1.00 AU (astronomical units) from the Sun, will be represented as 2.54 cm on the scale. Use this measurement to calculate the scaled distances for the remainder of the planets.

For example to calculate Mercury: $\frac{2.54\text{ cm}}{\text{AU}} \times 0.39\text{ AU} = .99\text{ cm}$

Planet	Distance from the Sun (AU)	Distance from the Sun (cm)
Mercury	0.39	
Venus	0.72	
Earth	1.00	2.54
Mars	1.52	
Jupiter	5.20	
Saturn	9.54	
Uranus	19.18	
Neptune	30.06	

1. Cut out the following diagrams of the Sun and planets, along with the data table and the pocket template.

2. Take the Sun and tape a piece of string to the back, making sure the string is long enough for the entire model.

3. Beginning with Mercury, measure out the calculated distance from the Sun and marked string. Place glue on back of planet cut-out and wrap around point on string, making sure to put the fold of the cut-out along the string Press glued sides together so it holds in place on model

4. Repeat step 3 with the remainder of the planets making sure to measure from the SAME point on the Sun for each planet in order to make your scale model as **accurate** as possible.

5. When your model is complete, paste the sun down and the pocket on the space below. Place the extra string with the planets glued in the pocket, so it does not fall off the worksheet.

Glue Sun Here

Glue Envelope Here