

Rollin' Through the Solar System Reflection Questions Answer Key

Instructions: Complete the questions below. You will need to refer back to your toilet paper model solar system and the sketch of the solar system you created at the beginning of this activity.

1. Completely unroll your toilet paper solar system model. In the box below, sketch your model to show the relative distances of the objects in our solar system. Be sure to label the objects with their names.

Students should create a sketch that shows the relative distance from the sun of the eight main planets and Pluto based on their scaled model. They should show that the inner planets are relatively close together as compared to the outer planets.

2. Compare the sketch you created above and the sketch you created at the beginning of this lesson. Describe the differences you see in your two models.

Possible answer: *At the beginning of this lesson, I thought all of the planets were evenly spaced out. After creating my toilet paper model, I see that the inner planets are close together and the outer planets are very far apart from each other and from the sun.*

3. List at least three things you learned about our solar system by creating the toilet paper scaled model.

Possible answers:

- *I learned that the planets are not evenly spaced. The inner planets are close together, and the outer planets are farther apart.*
- *I learned that planets are very small compared to the sun.*
- *I learned that the inner planets and Pluto are extremely tiny compared to the gas giants. Mercury, Mars, and Pluto are so small on my model, I could barely see them!*

4. Think back to the video clip you saw at the beginning of this lesson about New Horizons sending messages from Pluto. It took this spacecraft *almost nine and half years* to travel from

Earth to Pluto. Based on your scaled model, why do you think it took that long for New Horizons to reach Pluto?

Possible Answer: *Based on my scaled model, I can see that Pluto is very, very far away from Earth. Because Pluto is so far away from Earth, it would take a spacecraft a very long time to arrive.*