**Introduction**

**Analyzing and** **Comparing the Planets**

• The planets of the solar system are divided into two groups: the inner and outer planets. These 2 groups have different characteristics.

**Task**

• It is your task to identify the general characteristics of the inner &

outer planets in our solar system.

**The Process**

• You will search the Internet to complete the worksheet. Here are a few websites to get you started.

[http://www.windows.ucar.edu/tour/link=/our\_solar\_system/solar\_system.htm](http://www.windows.ucar.edu/tour/link=/our_solar_system/solar_system.html)l

[starchild.gsfc.nasa.gov/docs/StarChild/StarChild.htm](http://starchild.gsfc.nasa.gov/docs/StarChild/StarChild.html)l

[space.jp](http://space.jpl.nasa.gov/)l.nasa.gov

**Pluto –no longer a planet??**

1. Pluto is no longer considered a planet. What is its new category?

2. Describe Pluto’s size as compared to the other planets.

3. Pluto’s orbit around the sun is very different than the other planets. Describe how it is different.

4. Pluto is in an area of space called the

Belt and astronomers believe that Pluto is

belt object (KBO). Is Pluto the largest of the KBO objects? (**use windows to the universe website)**

5. What is Pluto made of?

6. Does Pluto have an atmosphere? If so what is it made of?

Is it thick or thin?

7. How many moons does Pluto have?

8. Does Pluto have rings?

9. Pluto is no longer considered a planet because it is very different than the other outer planets. Write a paragraph describing 5 ways Pluto is different that the outer planets ( compare size, what it is made of, # of moons, rings, atmosphere, orbit, etc..) Use the data on the other side of your paper.

***Inner vs. Outer Planets***

1. List the 8 planets in order from the sun.

2. List the 4 inner (terrestrial) planets

3. List the 4 outer (jovian) planets

4. What lies in between Mars and Jupiter?

5. **Collect data about the planets:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Planet  (fill in-with planets closest to sun & go out) | Distance from the Sun?  **USE astronomical units (AU’s)** | Revolution period (time to go around the sun) | Rotation Period (time to spin on axis-1 day) | Is it an **inner** or **outer** planet? | Does  it have rings? | # of moons  ? (If none  put 0) | What is the temperature? (high & low temp.) | Is it made of **rock** or **gas** | Does it have a **THICK** or *thin* atmosphere? |
| Mercury |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

**Analyze your planet data:**

6. Which planets are closest to the sun? **inner or outer** (Choose one of these answers)

7. Which planets have a short Revolution period? **inner or outer**

a.Which planets have a long Revolution period? **inner or outer**

8. Which planets have a short Rotation period? **inner or outer**

a.Which planets have a long Rotation period? **inner or outer**

9. How many planets have rings? List them

10. Are these planets with rings **inner or outer planets?**

11. List the planets with more than 3 moons

a.Are these **inner or outer planets?**

12. Which planets are made of rock? **inner or outer**

a.Which planets are made of gas?  **inner or outer**

13. Which planets have a thin atmosphere? **inner or outer**

a.Which planets have a thick? **inner or outer**

**Conclusion**

14. List 4 characteristics that all of the Outer Planets share:

15. List 4 characteristics that all of the Inner Planets share: