**Cosmos Episode 6 Worksheet                        Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per. \_\_**

<http://evolution.about.com/od/Cosmos-Teaching-Tools/fl/Cosmos-Episode-6-Viewing-Worksheet.htm> **Directions:** Answer the questions as you watch episode 6 of Cosmos: A Spacetime Odyssey

1.  About how many atoms does Neil deGrasse Tyson say that he’s made up of?

2. How many hydrogen and oxygen atoms are in one molecule of water?

3.  Why do the water molecules move faster when the sun hit them?

4.  What has to happen to the water molecules before they can evaporate?

5. How long have tardigrades been living on Earth?

6. What are the “holes” in the moss called that take in carbon dioxide and “exhale” oxygen?

7. What does a plant need in order to break water into hydrogen and oxygen?

8. Why is photosynthesis the “ultimate green energy”?

9. How long can a tardigrade go without water?

10. When did the first [flowering plants evolve](http://evolution.about.com/od/LifeOrigins/tp/Periods-of-the-Mesozoic-Era.htm)?

11. What did [Charles Darwin](http://evolution.about.com/od/Darwin/p/Who-Is-Charles-Darwin.htm) conclude about the orchid based on his idea of [Natural Selection](http://evolution.about.com/od/Overview/g/Natural-Selection.htm)?

12. How much of Madagascar’s rain forests have been destroyed?

13. What is the name of the nerve that is stimulated when we smell something?

14. Why do certain scents trigger memories?

15. How does the number of atoms in every breath we take compare to all the stars in all the known galaxies?

16. What idea about nature was first expressed by Thales?

17.  What was the name of the ancient Greek philosopher who came up with the idea of atoms?

18. What is the only element that is flexible enough to create different structures necessary to sustain life?

19. How did Neil deGrasse Tyson explain that the boy did not really touch the girl?

20. How many protons and electrons does an atom of gold have?

21.  Why is the Sun so hot?

22. What is the “ash” in the Sun’s nuclear furnace?

23. How are heavier elements, like iron, made?

24. How much distilled water is in the neutrino trap?

26. What law of Physics made it possible for Neil deGrasse Tyson not to flinch when the red ball came swinging back at his face?

27. How did Wolfgang Pauli explain the “breaking” of the law of conservation of energy in radioactive isotopes?

28.  Why can we not go further back than 15 minutes into January 1 on the “cosmic calendar”?

29. About what size was the universe when it was a trillionth of a trillionth of a trillionth of a second old?

Write a brief summary of what was the most interesting information you learned and why the information is important to know.