

Section 14.3 The Formation of Stars – Answer Key

- 1) Define inter-stellar medium. **Inter-stellar medium is the space between the stars and the material it contains.**

- 2) Define solar nebula theory. **The solar nebula theory is the theory that many astronomers believe how solar systems formed.**

- 3) How old do scientific calculations suggest the sun is? **Scientific calculations suggest that the sun is approximately 5 billion years old.**

- 4) How old do scientific calculations suggest the planets that orbit the sun are? **Scientific calculations suggest that planets that orbit the sun are approximately 4.6 billion years old.**

- 5) What is another theory that suggests how planets were formed? **Another theory that suggests how planets were formed is the catastrophic theory.**

- 6) Which theory has the most support today? **The theory that has the most support today is the solar nebula theory.**

- 7) Where is some of the oldest rock in the world found? **Some of the oldest rock in the world is found in the Canadian Shield.**

- 8) What happened to rocks and dust that had not fallen into the sun? **Those pieces of rocks and dust hit the planets and their moons.**

9) What does the solar nebula theory suggest about the number of planets in the Milky Way galaxy? **The solar nebula theory predicts that planets should be fairly common because they are by-products of star formation.**

10) Define extra solar planets. **Extra solar planets are planets that orbit stars other than our sun.**

11) Give an example of a planet that is not in our solar system. **There is a planet about 2.5 times the size of Jupiter that has been found orbiting a star near the big dipper.**

12) How does the discovery of extra-solar planets support the solar nebula theory of star formation? (opinion)

Since planets are by-products of star formation, the fact that we have discovered planets outside of our solar system, this supports the solar nebula theory.