Cosmology Worksheet

Name: _____

1. **Match** the term with its definition:

   a. _____ Star   A. Ice chunk orbiting a star

   b. _____ Quasar   B. Collection of stars held together by gravity, orbiting a supermassive black hole.

   c. _____ Galaxy   C. Huge collection of hydrogen gas and dust

   d. _____ Dark Matter   D. Large spherical body orbiting a star

   e. _____ Black Holes   E. Large spherical body NOT orbiting a star, travelling alone through interstellar space.

   f. _____ Planets   F. Large spherical body of plasma, fusing hydrogen into helium, releasing energy.

   g. _____ Nebula   G. A point of infinite mass in an infinitely small volume.

   h. _____ Comets   H. A larger, older point of infinite mass in an infinitely small volume, which ejects energy.

2. **Outline** the three components that make up the Universe.

3. **a) Outline** what the Big Bang Theory is.

   b) **Outline** the two main pieces of evidence that support the Big Bang Theory.

4. How old is the Universe? **Describe** how time and space are related in the Universe.

5. **Explain** the three possible geometry models of the Universe. Include gravity and dark energy in your explanation.

6. **Explain** the <u>history</u> and <u>future</u> of the Universe in your own words.

Self	Level	Level descriptor Criterion A: Knowing and understanding
	0	The student **does not** reach a standard described by any of the descriptors below.
	1-2	• **state** scientific knowledge • apply scientific knowledge and understanding to **suggest solutions** to problems set in **familiar situations** • **interpret** information to make **judgments**
	3-4	• **outline** scientific knowledge • apply scientific knowledge and understanding to **solve problems** set in **familiar situations** • **interpret** information to make **scientifically supported judgments**
	5-6	• **describe** scientific knowledge • apply scientific knowledge and understanding to **solve problems** set in **familiar situations** and **suggest solutions** to problems set in **unfamiliar situations** • **analyse** information to make **scientifically supported judgments**
	7-8	• **explain** scientific knowledge • apply scientific knowledge and understanding to **solve problems** set in **familiar and unfamiliar situations** • **analyse** and **evaluate** information to make **scientifically supported judgments**