Name: _____ **Date:** _____

Answer Key: Cosmic Creators: Kindergarteners Craft Stellar Galactic Systems

Advanced learners synthesize astronomical concepts to model galaxy shapes and identify the vast composition of our expanding universe.

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1. If you were building a brand new 'Sombrero' galaxy, what three main ingredients would you need to mix together in space?

Answer: B) Stars, big clouds of gas, and dust

Galaxies like the Sombrero are massive collections held together by gravity, consisting primarily of billions of stars, interstellar gas, and cosmic dust.

2. True or False: The universe is like a growing balloon that keeps getting bigger and pushing galaxies further apart.

Answer: A) True

The universe is constantly expanding, a concept often compared to a balloon inflating, which causes the space between galaxy clusters to increase.

3. Imagine you are an artist painting the 'Andromeda' galaxy. To make it look like a giant spinning fan, what shape should you draw?

Answer: C) A curvy spiral

Andromeda is a spiral galaxy, characterized by long, curvy arms that wrap around a bright center, resembling a cosmic pinwheel or fan.

4. If the Universe is a giant house, and galaxies are the different rooms, what are the people living inside the rooms supposed to be?

Answer: A) The planets and stars

This analogy helps students synthesize scale; galaxies contain solar systems, which include stars and the planets that orbit them.

5. True or False: Every single star you see in the night sky belongs to one giant neighborhood called a galaxy.

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Answer: A) True

Stars do not just float alone in the void; they are grouped together in massive structures called galaxies.

6. A galaxy that looks like a messy pile of glitter with no specific shape is called an _____ galaxy.

Answer: B) Irregular

Irregular galaxies lack a distinct symmetrical shape like spirals or ellipses, often appearing disorganized due to galactic collisions or young star formation.

7. Why can't we see the very edge of the whole universe with our eyes?

Answer: C) Because it is so incredibly vast and still growing

The observable universe is limited by the speed of light and the age of the universe; its sheer size and expansion mean there is much we cannot yet see.

8. Our home galaxy is the Milky Way. If we looked at it from far away, it would look like a ___.

Answer: B) Flat pancake with a bulge

The Milky Way is a barred spiral galaxy, which has a relatively flat disk (like a pancake) with a thicker central bulge where many stars live.

9. True or False: A galaxy can have a trillion stars, which is more than all the grains of sand on a beach.

Answer: A) True

This comparison illustrates the immense quantity of stars within a single galaxy, helping students grasp astronomical numbers.

10. If two galaxies drifted toward each other and bumped into one another, what would most likely happen?

Answer: C) They would dance and join together to make a bigger galaxy

When galaxies interact or 'collide,' gravity pulls them together, causing them to merge into a larger, often more complex galactic structure over millions of years.