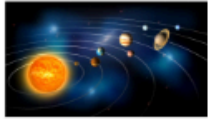


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Crash Course Astronomy #42: The Big Bang Part

Name: _____ Date: _____

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1. The study of the Universe as a whole is called _____.
2. In the early 20th century, the Universe was believed to be _____, meaning it had always existed in its current state.
3. Vesto Slipher found that most spiral nebulae were _____, indicating they were moving away from us.
4. A _____ is a shift in the wavelength of light toward the red end of the spectrum, often due to an object moving away.
5. The farther away a galaxy is, the faster it is _____ from us.
6. Georges Lemaître proposed that the Universe is _____, not static.
7. The idea that the Universe began from an extremely hot and dense point is called the _____.
8. The leftover glow from the early Universe is called the _____.
9. The _____ is the time it takes light to reach us from a distant object, allowing us to look back into the past.
10. As space expands, the light from distant galaxies is _____ to longer wavelengths.
11. The Big Bang model predicts the _____ of elements in the Universe based on fusion after the initial explosion.
12. When we say the Universe is expanding, we mean that _____ itself is expanding.
13. The Universe has no _____; expansion looks the same from every point.
14. By measuring the Universe's expansion rate, we estimate its age to be about _____ billion years.
15. The galaxies themselves aren't moving much — instead, the _____ between them is increasing.

Crash Course Astronomy #42: The Big Bang KEY

1. The study of the Universe as a whole is called **cosmology**.
2. In the early 20th century, the Universe was believed to be **static**, meaning it had always existed in its current state.
3. Vesto Slipher found that most spiral nebulae were **redshifted**, indicating they were moving away from us.
4. A **redshift** is a shift in the wavelength of light toward the red end of the spectrum, often due to an object moving away.
5. The farther away a galaxy is, the faster it is **receding** from us.
6. Georges Lemaître proposed that the Universe is **expanding**, not static.
7. The idea that the Universe began from an extremely hot and dense point is called the **Big Bang**.
8. The leftover glow from the early Universe is called the **cosmic microwave background**.
9. The **lookback time** is the time it takes light to reach us from a distant object, allowing us to look back into the past.
10. As space expands, the light from distant galaxies is **stretched** to longer wavelengths.
11. The Big Bang model predicts the **abundances** of elements in the Universe based on fusion after the initial explosion.
12. When we say the Universe is expanding, we mean that **space** itself is expanding.
13. The Universe has no **center**; expansion looks the same from every point.
14. By measuring the Universe's expansion rate, we estimate its age to be about **13.82** billion years.
15. The galaxies themselves aren't moving much — instead, the **space** between them is increasing.

15 Questions

Answer Key Included

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