

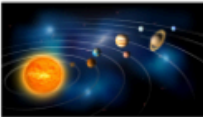
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Crash Course Astronomy #30: White Dwarfs & Planetary Nebulae

Name: _____ Date: _____

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1. When a low-mass star like the Sun dies, it becomes a _____ and slowly fades over time.
2. The Sun generates energy by fusing _____ into helium in its core.
3. Once the Sun's core is mostly carbon, _____ stops, ending the star's energy production.
4. A _____ is the small, dense remnant left behind after a low-mass star expels its outer layers.
5. The immense pressure resisting the collapse of a white dwarf is called _____ pressure.
6. White dwarfs are extremely _____; a cubic centimeter can weigh a million grams.
7. The high gravity on a white dwarf is due to its extreme _____ in a small volume.
8. The hot gas surrounding a new white dwarf can glow and form a _____.
9. The glow of a planetary nebula is caused by radiation from the central _____.
10. Despite their name, planetary nebulae have nothing to do with _____.
11. The shapes of planetary nebulae can be influenced by _____ star systems.
12. Planets swallowed by a red giant may cause it to _____ more rapidly.
13. The green color of many planetary nebulae is due to glowing _____ gas.
14. Planetary nebulae are short-lived, typically lasting only a few _____ years.
15. The Sun probably won't form a visible planetary nebula because it isn't _____ enough.

Crash Course Astronomy #30: White Dwarfs & Planetary Nebulae KEY

1. When a low-mass star like the Sun dies, it becomes a **white dwarf** and slowly fades over time.
2. The Sun generates energy by fusing **hydrogen** into helium in its core.
3. Once the Sun's core is mostly carbon, **fusion** stops, ending the star's energy production.
4. A **white dwarf** is the small, dense remnant left behind after a low-mass star expels its outer layers.
5. The immense pressure resisting the collapse of a white dwarf is called **electron degeneracy** pressure.
6. White dwarfs are extremely **dense**; a cubic centimeter can weigh a million grams.
7. The high gravity on a white dwarf is due to its extreme **mass** in a small volume.
8. The hot gas surrounding a new white dwarf can glow and form a **planetary nebula**.
9. The glow of a planetary nebula is caused by radiation from the central **white dwarf**.
10. Despite their name, planetary nebulae have nothing to do with **planets**.
11. The shapes of planetary nebulae can be influenced by **binary** star systems.
12. Planets swallowed by a red giant may cause it to **spin** more rapidly.
13. The green color of many planetary nebulae is due to glowing **oxygen** gas.
14. Planetary nebulae are short-lived, typically lasting only a few **thousand** years.
15. The Sun probably won't form a visible planetary nebula because it isn't **hot** enough.

15 Questions

Answer Key Included

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