

NOVA GEMSTONES VIDEO QUESTIONS

NAME _____

https://www.youtube.com/watch?v=xrta-RosV_Q

1. The three factors that created gemstones are _____, _____, and _____.
2. Gemstones are created _____ of miles below the surface of the Earth.
3. Diamonds are made of _____.
4. The two substances that are made of pure carbon are _____ and _____.
5. The differences between diamond and graphite are caused by the number of _____ that each carbon atom forms.
6. Carbon in diamond forms _____ bonds while graphite forms _____ three bonds. This difference is due to the amount of _____ deep inside the Earth.
7. Why is a single atom of carbon so unstable? _____
8. What does every atom want in order to be stable? _____
9. How are diamonds forced to Earth's surface? _____
10. Diamonds are the _____ materials on Earth.
11. When white light enters a faceted diamond at just the right angle, it produces a _____.
12. The Hope diamond is blue because there are some _____ atoms mixed in with the carbon.
13. When white light strikes a boron atom, _____ is absorbed and _____ light passes through.

14. You cannot determine the type of gemstone by its _____.
15. Minerals are _____ in structure and include _____.
16. Sapphires are more rare than diamonds because they are formed in Earth's _____ when _____ collide.
17. Sapphires are made of the mineral corundum which is a compound of the elements _____ and _____.
18. Trace elements such as _____ and _____ give blue sapphire its color.
19. A _____ is a red sapphire whose color is produced by the element _____.
20. _____ are formed when land masses collide.
21. The two different minerals that are commonly referred to as jade are _____ and _____.
22. An opal is made of tiny spheres of _____ packed so closely together that they scatter wavelengths of _____ producing flashes of color.
23. Scientists are using clues in gemstones to solve the mystery of when _____ began.
24. Rough diamonds can be flawed by inclusions, tiny bits of _____ trapped inside.
25. Inclusions in diamonds suggest that plate tectonics began approximately _____ years ago.