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| **Where Do Chemical Elements Come From? - By Carolyn Ruth**  **Question Sheet** |
| 1. What is a supernova? |
| 1. What are the two things that stars emit/release during the explosion? |
| 1. Where were elements formed according to paragraph 3? |
| 1. What is a young star primarily composed of? |
| 1. Use the information in paragraph 2 to fill in the blanks with what element forms next?  A. 2 Protons+ 2 Neutrons=  |  | | --- | |  |   B. Helium nucleus + Helium nucleus=   |  | | --- | |  |   C. Beryllium + Helium=   |  | | --- | |  |   D. Carbon + Helium=   |  | | --- | |  | |
| 1. True or False:  Nuclear reactions that form elements heavier than iron do not release energy; instead, they consume energy. |
| 1. From paragraph 6, in your own words describe what happens when a star cannot support the crushing forces of gravity? |
| 1. What are the two special conditions that exist in the supernova that allow for the formation of elements heavier than iron? |
| 1. How many Earth masses of iron did the supernova observed in 1987 eject? |
| 1. When does the “s” process start? |
| 1. What are isotopes? |
| 1. How many protons does an isotope of nickel have? How many neutrons can an isotope of nickel have? (this should be a range) |
| 1. What is an interstellar cloud? |
| 1. What are the gasses and their percentages in the interstellar cloud? |
| 1. What are silicates? |
| 1. How have all the elements on Earth (except for hydrogen) formed? |
| 1. What are we made of? |
| 1. What is the main idea of the reading? |
| 1. What are 3 pieces of evidence that support your main idea? |
| 1. What are two things you learned from this reading? |