

VOCABULARY

- ***Extraterrestrial** – happening, existing, or coming from somewhere beyond the planet Earth
- ***Cataclysmic** – event is one that changes a situation or society very greatly, especially in an unpleasant way
- ***Supernova** – a star that suddenly increases greatly in brightness because of a catastrophic explosion that ejects most of its mass
- ***Peter out** – gradually comes to an end
- ***Shockwave** – an area of very high pressure moving through the air, earth, or water. It is caused by an explosion or an earthquake, or by an object traveling faster than sound
- ***Miniscule** – extremely small; tiny

COMPREHENSION

1. What is the lightest chemical element?
2. How are the lightest elements made?
3. How are the heaviest elements made?
4. How long does a supernova take to make gold?
5. How long would it take to make a gram of gold with a particle accelerator?
6. What would happen if a supernova occurred close enough to Earth to deposit metals?

Where Does Gold Come From?

LET'S TALK

1. Physicists design experiments to test hypotheses and then execute them in controlled fashion. Astronomers can only observe the results of experiments that nature has performed for them. Which of these approaches to science appeals to you most?
2. Could methods be invented to mine more gold? What about to extract the gold dissolved in the ocean?