

Name _____

The Fiery Heart: How the Sun Produces Energy and Heat

Short Answer Key

1. Nuclear fusion is the process where hydrogen atoms in the Sun's core collide at high speeds, fuse together to form helium, and release energy. It occurs in the Sun's core.
2. In the convective zone, energy is transported by hot gas rising and cooler gas sinking, creating convection currents.
3. The photosphere is the Sun's visible surface and emits light and heat into space, which is crucial for powering our solar system.
4. The Sun's energy impacts life on Earth by driving weather patterns, supporting photosynthesis in plants, and influencing our climate. It also provides renewable energy through solar panels.
5. The Sun will eventually become a red giant, swelling in size, and may engulf some inner planets. Ultimately, it will become a white dwarf, marking the end of its stellar life cycle.

