Annotated Examples SCIENCE

1. Prokaryotic vs. Eukaryotic Cells (Annotated)

Paragraph:

Prokaryotic and eukaryotic cells are the fundamental building blocks of life, but their structures and complexity differ greatly. (Main Claim) Prokaryotes lack a nucleus and membrane-bound organelles, with circular DNA suspended in the cytoplasm. (Point of Comparison) Eukaryotes, by contrast, contain a defined nucleus, linear chromosomes, and specialized organelles like mitochondria. (Contrast Point) These structural differences allow eukaryotic cells to support multicellular, specialized organisms while prokaryotes excel in simplicity and adaptability. (Reasoning) Both cell types are vital to life, but their unique designs support distinct evolutionary advantages. (Conclusion)

2. Renewable vs. Nuclear Energy (Annotated)

Paragraph:

Renewable and nuclear energy both reduce carbon emissions, yet they differ in reliability, environmental impact, and long-term sustainability. (Main Claim) Renewables such as wind, solar, and hydro rely on naturally replenishing sources but struggle with intermittency and storage issues. (Point of Comparison) Nuclear energy, by contrast, delivers consistent power but raises concerns about radioactive waste and high construction costs. (Contrast Point) These trade-offs reveal that renewables excel in environmental sustainability while nuclear power remains essential for stable baseload electricity. (Reasoning) Together, the two energy types illustrate the need for a balanced, multi-source energy strategy. (Conclusion)

3. Natural vs. Artificial Selection (Annotated)

Paragraph:

Natural and artificial selection both shape the traits of living organisms, but they differ in purpose and driving forces. (Main Claim) Natural selection occurs when environmental pressures favor traits that improve survival and reproduction. (Point of Comparison) Artificial selection, by contrast, results from human-controlled breeding aimed at producing desirable characteristics. (Contrast Point) While natural selection increases fitness within wild environments, artificial selection can reduce genetic diversity or produce traits unsuited to survival. (Reasoning) Thus, both processes guide evolution, but one follows ecological logic while the other reflects human preference. (Conclusion)