Teacher Answer Key

Case Study

1. Researchers found a migrating patch of conductive molten metal in the outer core that influenced magnetic pole movement.

2. Pilots needed frequent chart updates, while Arctic communities observed altered Aurora Borealis locations and had to recalibrate compasses.

Multiple Choice

1. B

2. C

3. A

Matching

1-E, 2-A, 3-D, 4-B, 5-C

Fill-in-the-Blank

1) outer, 2) currents, 3) inner

Short Answer (Sample Responses)

Q1: The tremendous pressure at Earth's center forces iron into a solid state, outweighing the effect of high temperature.

Q2: They study magnetic signatures in ancient rocks, which lock in the orientation of Earth's field at the time of their formation.

Q3: Navigation systems could become less reliable, satellites might face more radiation exposure, and certain animal migrations could be disrupted.