Teacher Answer Key

Case Study

1. The predictive model flagged the area because it had a combination of factors associated with prehistoric settlement: proximity to a creek confluence, well-drained soil, and a gentle south-facing slope. These environmental features matched patterns from known archaeological sites in the region.

2. Without the GIS model, the construction crew might have bulldozed through the site without knowing it was there. The predictive model allowed the CRM team to identify the risk in advance, survey the area, find the site, and reroute the highway to avoid destroying it.

Multiple Choice

1. B

2. A

3. D

Matching

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

Fill-in-the-Blank

1) Information, 2) cultural, 3) Open Context

Short Answer (Sample Responses)

Q1: GIS allows archaeologists to overlay multiple data layers and run statistical analyses to identify patterns. For example, a GIS could determine whether all bronze objects at a site cluster near hearths, something that would require manually comparing hundreds of artifact locations on paper maps.

Q2: Predictive modeling uses the locations of known sites and environmental factors to identify areas likely to contain undiscovered sites. It is useful for targeting survey efforts, but it may miss sites in unusual locations because the model is based only on where sites have already been found.

Q3: GIS democratizes knowledge by making archaeological data digitally accessible to researchers anywhere in the world through open-access platforms. This is important because it breaks down barriers that previously kept archaeological information locked in institutional archives, allowing broader participation in research