

PART 2: DOCUMENT BASED QUESTION

1. Paleozoic (1 point)

2. Get precise dates on the ash layers using radiometric dating techniques to “sandwich in” possible dates for your outcrop (1 point)

Match the fossil assemblage found in your outcrop to one found elsewhere that is sandwiched between ash layers that can be dated (1 point)

3. No, there is not diversity (1 point)

Only stationary and floating organisms, none that can move and propel themselves in any way (1 point)

4. Fossils A and D (0.5 points each, 1 point total)

Anything reasonable about why being colonial is advantageous (1 point)

5. Fossil A: carbonization (0.5 points)

Fossil C: Imprint or external mold (0.5 points)

6. Fossil B (1 point)

7. Wrong (1 point)

Organism had tentacles that it would use to capture little things moving by (1 point)

Ignore #8, the accuracy is dubious

8. Depth: Deep, probably relatively off shore (0.5 points)

Light levels: Likely had light reaching to the bottom because of diversity of life (0.5 points)

Energy: low energy because of small grain size (0.5 points)

0.5 points = gimme!

9. Likely could move a little bit albeit not far, cite blobby shape (1 point)

Probably soft bodied with muscles of sorts that would propel its motion (1 point)

-or- It couldn't move because I do not see any legs, and it seems soft-bodied and unable to control its own motion (2 points)