

Fossil Test 2





1. Identify this organism (it is 1mm in diameter)
2. The shell or _____ of this organism is made of _____
3. How do these one-celled organism feed?
4. Describe the biological and geological importance of these organisms.
5. Would this organism survive the carbonate compensation depth (CCD) at 4,000 to 5,000 m? Explain.



6. Identify the genus for these organisms.
7. What is the connection this organism has to one of the seven wonders of the world?



8. What is the genus for this organism?
9. What do these organism have in common with the specimens from number 6?



10. In *Astraeospongia* the _____ of the sponge are often preserved in the fossil record.
11. _____ can be made of _____ or calcium carbonate.
12. Sponges are _____ feeders and provide homes for many organisms.
13. Sponges are an important part of the reef community, but they were important reef building organisms during the _____ period along with bryozoans.
14. The boring sponge _____ is important in the degradation and breakup of shells and coral reefs.



15. The name Cnidaria refers to the organisms _____ or stinging cells found on their tentacles.
16. Most fossil cnidarians lived their life in the _____ body form rather than the medusa body form.
17. The old name for rugosids, tetracorals, refers to the early development of the organisms _____.
18. How many organisms are represented by the above specimens?
19. Rugose corals became extinct by the end of the _____ period, some may have evolved into modern corals represented by the order _____.
20. Rugose and tabulate corals were the important reef builders during the _____ and _____ periods.
21. During the _____ period the reef niche was essentially vacant.

22. _____ or dorsal valve



23. _____ or ventral valve



24. Brachiopods and bryozoans are called lophophorates because of their fan-like filter feeding device the _____ or _____.

25. Some brachiopods attach themselves to a hard substrate with a fleshy stalk called the _____.

26. *Rafinesquina* sat convex side up with their hinge partially buried to anchor them and gently lifted the ventral valve to _____ feed.



27. Bryozoans are colonial organisms. Individual animals are called _____.

28. *Archimedes* is considered an index fossil for the _____ period.

29. Why do bryozoans prefer clear water?

30. Bryozoans were important reef builders during the _____ and _____ periods.



31. Ute Indians use to make amulets out of the common trilobite _____, from the House Range of Western Utah. They called it timpe khanitza pachavee or “little water bug in stone house”.
32. Trilobites were the most diverse invertebrate group during the _____ period. They evolved so quickly during this time period that they are the biostratigraphic standard for the period.
33. In early stages of development trilobites were _____ and as adults they were probably benthic detritus feeders.



34. This Baltic amber also called _____ is the fossil _____ of the pine tree *Pinus succinifera*.
35. The Greeks called amber _____, the Romans succinus, and the modern Arabic word came from ambergris, which described a waxy substance taken from the intestines of the sperm whale.
36. Why do pines produce resin?
37. Amber washes up from the Baltic Sea after storms. Non-fossil tree resins would not wash up so easily, why?

38. The best fossilization occurs when there is rapid burial and anoxic conditions to prevent scavenging, no reworking currents and little or no diagenetic alteration to destroy fossils. What does this statement mean?



39. Extraordinary fossil deposits that preserve soft tissues are called _____, the German word for _____. These deposits produce some of the most important fossils. Examples include:



40. Middle Cambrian _____ in British Columbia, which formed from _____.

41. Upper Jurassic _____ in Southern Germany. Fine lime mud washed from the ocean into a shallow, stagnant lagoon, which was low in organic activity (white color) and hostile to life.

42. The Devonian aged _____ in Germany was formed by storm sediments deposited in deep marine waters.

1. Foraminifera (Foram)
2. test, CaCO₃
3. These amoeba-like organisms feed with cell extensions called pseudopodia
4. Biological Importance-key part of the food chain, opportunistic feeders. Geologic Importance-used for correlation of Mesozoic and Cenozoic strata, fusulinids for late Paleozoic, Oxygen-Carbon isotopes in shells give clues to climate and ocean currents, oil companies use benthic forams to “read” depositional environments.
5. No, below CCD calcite dissolves.
6. *Nummulites*
7. The Pyramids of Egypt are made of nummulitic limestone.
8. *Fusulina*
9. They are both foraminiferans
10. spicules
11. spicules, silica
12. filter
13. Permian
14. *Cliona*
15. nematocysts
16. polyp
17. septae
18. *Halysites* (left)—many organisms, Horn Coral (right)—one organism
19. Permian, Scleractinia
20. Silurian, Devonian
21. Carboniferous
22. Brachial
23. Pedicle
24. lophophore, brachium
25. pedicle
26. filter
27. zooid
28. Mississippian
29. Bryozoans are filter feeders and may have their zooecium clogged in murky waters.

30. Ordovician, Mississippian
31. *Elrathia kingii*
32. Cambrian
33. Pelagic
34. Succinite, resin
35. electron
36. In response to trauma, either physical or biological. Some trees produce more resin during rapid growth.
37. Tree resins such as frankincense, myrrh, and copal are denser.
38. fast burial, no or little oxygen, not eaten, no transport, little alteration as material turns to rock.
39. Lagerstätten, “mother lode”
40. Burgess Shale, deep marine avalanches or turbidites
41. Solnhofen Limestone
42. Hunsrück Slate