

Sample Questions

- A scientific theory is different from a hypothesis, because the theory is _____.
 - very powerful at explaining a large variety of related phenomena
 - mere speculation
 - a guess
 - based on very little data
- Taxonomy predates evolutionary biology.
 - true
 - false
- What key idea of Darwin's thinking came from his reading of an essay by T. R. Malthus?
 - the earth is 70,000 years old
 - struggle for existence when there is overpopulation
 - genetic drift
 - life comes from life
- Groups of lineages within an evolutionary tree that share a common ancestor and contain all of its descendants are said to be _____.
 - unnatural
 - monophyletic
 - paraphyletic
 - polyphyletic
- Evolutionary sciences (as opposed to experimental sciences) rely largely on the _____.
 - experimental method
 - comparative method
 - use of controls
 - occurrence of disturbances
- Which is not an advantage of multicellular life?
 - less surface to volume ratio for gas exchange
 - ability to grow larger
 - prevents instant death if a portion of the cells are injured
 - division of labor
- In sponges, the _____ have beating flagella and collars used to filter out food.
 - choanocytes
 - pinacocytes
 - spongocytes
 - cnidocytes
- How is the absence of the medusa stage in the Anthozoa explained by the molecular phylogeny in Figure 7.1, which is contrary to the classical evolutionary tree based on morphology?
 - A critical developmental gene is suppressed
 - Anthozoa are forgetful creatures and often misplace life stages
 - common ancestor of Anthozoa lost this cnidarian life stage
 - medusa stage evolved in the common ancestor of Scyphozoa, Hydrozoa, and Cubozoa
- The funnel and tentacles of cephalopods are modified from the mollusc's _____.
 - muscular foot
 - mantle and shell
 - visceral mass
 - head
- The Protostomes have radial cell cleavage in early embryological development.
 - true
 - false

