

Cladogram Notes

Teacher Notes

A cladogram is a scientific diagram that shows how organisms have evolved through time and the groups that have formed when organisms develop new traits.

A trait is a characteristic or feature of an organism. An *advanced* trait is just a trait that has evolved more recently than a less advanced trait.

A common ancestor is a direct relative that two animals descended (evolved) from. For example, you and your siblings share your father as a common ancestor. You and your cousins share your grandmother as a common ancestor.

A node is a point on a cladogram where two branches split. Each node represents a common ancestor for all creatures that branch off from that node. Because they share a common ancestor, these animals also share a common trait.

What can we learn from a cladogram?

1. We can trace an organism's evolution, one adaptation at a time. This tells us which adaptations occurred first, next, etc.
2. We can look at groups of animals that share a common ancestor and a common trait.
3. We can look at groups of animals and find their common ancestor.
4. We can see how closely related one animal is to another.

How is a cladogram similar to a family tree?

1. Cladograms show common ancestors for groups of animals.
2. The more recent the common ancestor is for two animals, the more closely related the animals are. When two animals share a *recent* common ancestor, they are very closely related. When they only share an *earlier* common ancestor, they are not closely related.