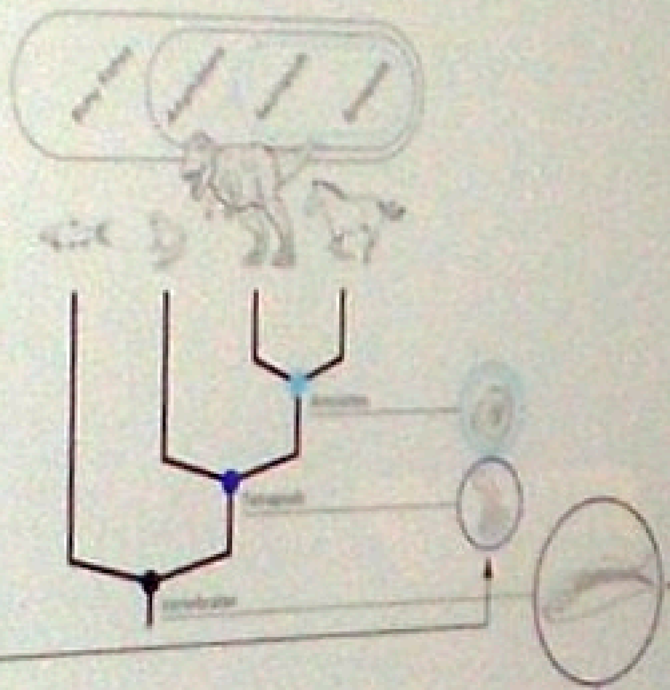
Why are the halls arranged to show evolutionary relationships?

These halls exhibit animals, both living and extinct,
that represent the evolutionary history of vertebrates.
All living things have evolved as a result of inherited changes and diversification
over vast periods of time. Understanding this is essential to our understanding
of the world around us and where we fit in it.
People trace their family history by compiling a family tree. In a similar way,
evolutionary history can be reconstructed by compiling evolutionary trees.
At this museum, evolution is a major area of research.
Therefore, we decided to organize these halls
as an evolutionary tree of vertebrates.

What is the best way to reconstruct evolutionary history?

To build evolutionary trees,
a method called cladistics is used,
in which scientists look for patterns
of features in different animals.
The distribution of features
forms a set of nested groups,
with smaller groups contained
within larger ones.
For example, the group "tetrapods"
(animals with 4 limbs)
is contained within the larger group
"vertebrates" because tetrapods,
like other vertebrates,
have a backbone and a braincase.
The backbone and braincase
are advanced features
for the group called vertebrates.
Each group, or clade,
is recognized
by a set of such advanced features
inherited from
a common ancestor.
A clade contains all the descendants
of the common ancestor.

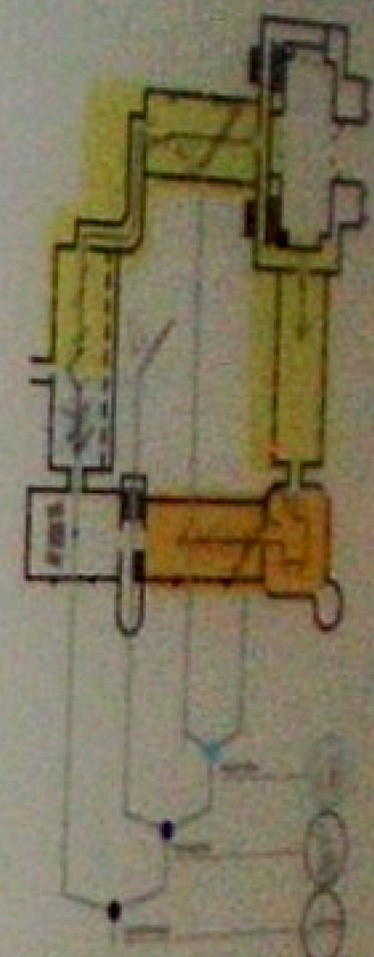


What is an advanced feature?

[illegible]

What is a cladogram?

[illegible]



How do the halls represent evolutionary relationships?

[illegible]

Why use cladistics?

[illegible]