

I. Purpose: How can fossils show change over time?

Background: A fossil is any remains of a once-living organism. Fossils may be only the outline of some plant, animal, or protist that is preserved in rock. Sometimes it is possible to find entire skeletons of animals. Fossils are often used by scientists as evidence of change. Fossils show what living things looked like millions of years ago. They also help show how these once-living things have changed over time. Examine the diagrams below. They are the hind (back) foot of four horse species. Only the foot and toe bones are shown. Eohippus, Miohippus, and Pliohippus are all fossil horses. These horses lived millions of years ago. Equus is the present-day horse. Notice that all the horses have only three-foot bones. They are lettered B, C, and D. Foot bones A and E have already been “lost” through change. Bones B and D are shaded so you can find the same bones in each diagram easily.

II. Materials: metric ruler lab write up

III. Procedure:

1. Measure the total length of each foot in millimeters. Record in Table 1. —
2. Count the total number of bones in each foot. Record in Table 1. —
3. Count the total number of toes of each foot. Record in Table 1. —
4. Count the total number of toe bones of each foot. Record in Table 1. —
5. Count the total number of foot bones of each foot. Record in Table 1. —
6. Count the total number of ankle bones of each foot. Record in Table 1. —
7. Count the total number of heel bones of each foot. Record in Table 1. —

