

AFTER THE STORY

Be sure that all envelopes (with their bones) and Skeletal Resource Manuals get returned to the team tray (or other holding site).

Now have every team share with the whole class what they figured the creature to be, and see how many were the same, and how many different interpretations were made. This lesson is, in this way, very similar to the "Palpating Pachyderms" lesson which they may have done earlier, and if so, it might be interesting to see if anyone remembers what past activity this lesson brings to mind (a little re-cycling never hurts!).

You may want to discuss their answers to the questions at this time. Is there general consensus on what the creature was? If so, discuss what the most telling clues were, and what influenced them most. (Did the conclusions of others have any influence???) Is this the way that scientists work?

If there is NOT consensus, discuss what solution seems "best", and why it seems best; what criteria are being used? What factors are influencing this decision? This would be a good place to consider what would make a "fair test", and discuss the elements of what is involved in how scientists select the "best" hypothesis out of competing ones (see the General Information" page on this site).

In any case, if you happen to know, or even suspect, what the creature was, do NOT tell your students! They will clamor to know, but you have to tell them that science is NOT in the business of KNOWING; just coming as close as we can to the MOST LIKELY solution is the best we can do. (We have purposely not told you what the creature is for this very reason.) Tell them this is what really happens in science...we often don't have all the pieces, and may never ever find them, so we simply rely on our "best" interpretation based on the clues we do have. Leave them with whatever they figured out (just as in the "Mystery Boxes" lesson, and the "Great Volume Exchanger" lesson). An incidental product of this mystery is that word does not reach other classes as to what the unknown creature is, and spoil the experience for them.

Below are some reasonable answers to the last few questions on the worksheet:

6. If this "Fossil Find" scenario is typical of the work of scientists, what features of the nature of science does it demonstrate?

ANS. its uncertainty, and that teamwork is more efficient.

7. From looking at the fossil and the resource manual, what could you say about how and where this animal lived?

ANS. probably on land, perhaps able to fly.

8. Is it possible for scientists to do studies about things that happened millions of years ago? Explain.

ANS. Yes. All sorts of clues, from fossil bones, pollen, leaves, ripple marks in sandstone, volcanic rocks, etc., scientists can do an amazingly accurate reconstruction of life and activity in the distant past.

9. On the back of this sheet, list what you see as the 3 goals of this experience.

ANS. a. Show the uncertainty of science.b. Show how it helps to work together to solve problems.c. To see how scientists develop hypotheses from observation, then test those hypotheses.d. Gave us some "experience" working with "fossil bones".