Attachment 2-19; Vocabulary for Activity 2

Along with a wealth of information on understanding evolution, these definitions can be found at the Berkeley website: <http://evolution.berkeley.edu/evolibrary/article/0_0_0/lines_08>

**Evidences of Evolution**

Evidence that gives the Theory of Evolution the scientific data that life has existed for billions of years and has changed over time. There are many types of evidences:

**Fossil evidence**: The fossil record provides snapshots of the past that, when assembled, illustrate a panorama of evolutionary change over the past four billion years. The picture may be smudged in places and may have bits missing, but fossil evidence clearly shows that

**Homologous structures/Homologies**: Similar characteristics due to relatedness are known as homologies. Homologies can be revealed by comparing the anatomies of different living things, looking at cellular similarities and differences, studying embryological development, and studying vestigial structures within individual organisms.

**Biochemical/molecular evidence:** Different species share genetic homologies as well as anatomical ones. Roundworms, for example, share 25% of their genes with humans. These genes are slightly different in each species, but their striking similarities nevertheless reveal their common ancestry. In fact, the DNA code itself is a homology that links all life on Earth to a common ancestor. DNA and RNA possess a simple four-base code that provides the recipe for all living things. In some cases, if we were to transfer genetic material from the cell of one living thing to the cell of another, the recipient would follow the new instructions as if they were its own.