

Topic 5: Ecosystem Services

I. Two-Minute History

The vocabulary of biology contains many words (and combinations of words) that have particular meanings in the context of biological science. However, since many of these words come from ancient languages such as Latin, Greek, and Sanskrit, knowing the definitions of the roots can help you understand related words throughout the English language. You can even make a good guess at the meaning of words in many other modern European languages, since most of them either are directly related to Latin or were heavily influenced by it. A great example is the Latin word *natura* -- check out the similarities among these different languages:

English: nature

French: nature

German: Natur

Italian: natura

Portuguese: natureza

Spanish: naturaleza

II. Learning Latin Roots

natural

English definition: occurring in the ordinary course of the external world

Latin root: *natura* = nature, innate quality (from *nativus*, born)

Related Latin words: *naturaliter* (naturally), *naturalis* (by birth)

carbon

English definition: a nonmetallic element found naturally (as diamonds or graphite) or as a particle of coal, petroleum, etc.

Latin root: *carbo* = ember, coal

Related Latin words: *carbonarius* (charcoal burner), *carbunculus* (small piece of coal)

sequestration

English definition: a setting apart of something

Latin root: *sequestrare* = to hand over to a trustee (from *sequi* = to follow)

Related Latin words: *sequester* (a trustee), *sequestrator* (someone who hands something over)

III. Recognizing Roots

One difficult part of learning to recognize Latin roots is sorting out which English words are related to a root and which are "false cognates" -- words that look like the root but are not actually related to it. You can never assume that because the order of the letters is the same, the words are related. For example, the following two words both look like they could be related to *carbo*. But one is an imposter!

carbarn - a building where cars are housed

carbide - a hard material made of carbon and heavy metal

When determining roots, you always have to put the word in context, and then think about whether or not that word could be related to the root. Knowing what the word means helps, but if you don't know the word, you can still try to figure out its root based on how it is used in a sentence.

IV. Etymology Exercises

Use context to determine if the highlighted word in each sentence is related to *carbo*.

1. I eat a lot of **carbohydrates** every day -- especially those made by plants such as wheat and sugar.
2. The French army equipped its soldiers with **carbines**, which fired repeatedly and were helpful especially to riders on horseback.
3. I ate a delicious **carbonade** the other night at the steakhouse - I love eating meat cooked over a fire!
4. **Carbonated** beverages like sodas are tasty because of all the gas in them - tickles the tastebuds!
5. "The Blue **Carbuncle**" is a famous Sherlock Holmes detective story involving a stolen diamond.
6. The **carboy** held a lot more liquid than most other containers.
7. I ate a delicious yogurt with **carob** pods -- they're a pretty good substitute for chocolate!