

Biology Concept Cartoons

To view cartoons, please click on the image itself.

[Cell Division and Genetics](#)

[Diffusion and Osmosis](#)

[Metabolism, Energy and Matter](#)

[Natural Selection](#)

Concept cartoons are single-panel images showing several characters explaining a situation. One of the characters provides a scientifically accurate answer, and the others make statements that are incorrect, but typically include common student ideas. The first science concept cartoons were created by Stuart Naylor and Brenda Keogh in the late 1990's for use in teaching physics. Kathleen Fisher and Dianne Anderson created biology concept cartoons related to natural selection in 2002. Since then, the collection has grown, based on the work of Dr. Dianne Anderson and many biology graduate students at Point Loma Nazarene University. In 2014, the artwork for the original cartoons was redone and brand new cartoons on various biology topics were added. The collection continues to grow and some Spanish-version cartoons are being added.

Teachers can use concept cartoons to probe the ideas held by students, and then can adjust instruction to help to move students to scientific understanding. Concept cartoons are used by teachers as warm-up activities, as starters for small group discussions, or even as homework to do with family members. One particularly effective in-class method is to provide each individual student with a copy of the cartoon, and ask them to indicate the answer they feel is the best, as well as to explain (in writing) why the other answers are not. Then the small group comes to a consensus and students make a note if they change their answer, and finally the whole class discusses the cartoon and comes to a decision as to the best answer.

This cartoon collection, as well as the explanations for the cartoons, is continually shaped and improved by user feedback! Please send your comments to Dr. Dianne Anderson at dianneanderson@pointloma.edu.