

About <u>Science Prof Online</u> PowerPoint Resources

• Science Prof Online (SPO) is a free science education website that provides fully-developed Virtual Science Classrooms, science-related PowerPoints, articles and images. The site is designed to be a helpful resource for students, educators, and anyone interested in learning about science.

• The SPO Virtual Classrooms offer many educational resources, including practice test questions, review questions, lecture PowerPoints, video tutorials, sample assignments and course syllabi. New materials are continually being developed, so check back frequently, or follow us on Facebook (Science Prof Online) or Twitter (ScienceProfSPO) for updates.

• Many SPO PowerPoints are available in a variety of formats, such as fully editable PowerPoint files, as well as uneditable versions in smaller file sizes, such as PowerPoint Shows and Portable Document Format (.pdf), for ease of printing.

• Images used on this resource, and on the SPO website are, wherever possible, credited and linked to their source. Any words underlined and appearing in blue are links that can be clicked on for more information. PowerPoints must be viewed in slide show mode to use the hyperlinks directly.

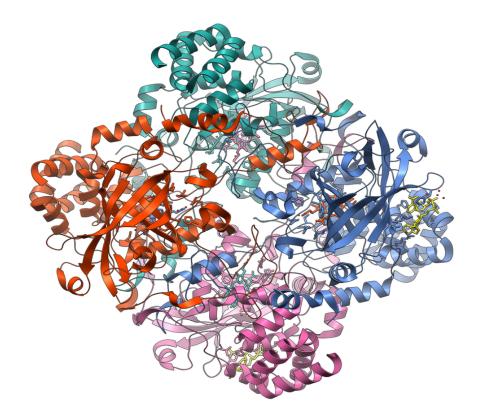
• Several helpful links to fun and interactive learning tools are included throughout the PPT and on the Smart Links slide, near the end of each presentation. You must be in *slide show mode* to utilize hyperlinks and animations.

• This digital resource is licensed under Creative Commons Attribution-ShareAlike 3.0: http://creativecommons.org/licenses/by-sa/3.0/

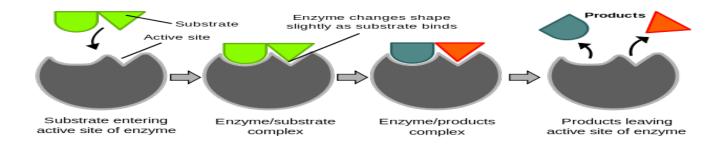
Alicia Cepaitis, MS Chief Creative Nerd Science Prof Online Online Education Resources, LLC <u>alicia@scienceprofonline.com</u> Tami Port, MS Creator of Science Prof Online Chief Executive Nerd Science Prof Online Online Education Resources, LLC <u>info@scienceprofonline.com</u>

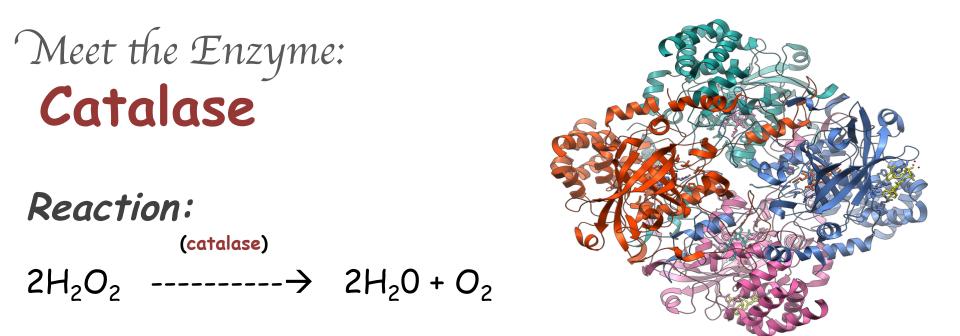
From the Virtual Biology Classroom on ScienceProfOnline.com

Image: Compound microscope objectives, T. Port



Meet the Enzyme: Catalase





Catalase is an enzyme found in nearly all living organisms exposed to oxygen. It is an important enzyme in protecting cells from oxidative damage.

Catalase catalyzes the decomposition of hydrogen peroxide to water and oxygen.

Catalase is big, a tetramer of four polypeptide chains, each over 500 amino acids long. Iron is its cofactor.

Meet the Enzyme: **Catalase**

Reaction:

Bacterial sample added to hydrogen peroxide. What are the bubbles made of?

(catalase) $2H_2O_2 \xrightarrow{} 2H_2O + O_2$

Q: What do you think would happen if these potatoes were put into hydrogen peroxide, instead of water?

