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WEB SCAN



*Reviewed by
David J. Rosen*

*Newsome
Associates*

Science Videos for Adults

A group of adult education science teachers and I have been reviewing science instruction videos for adult learners in a LINCS Science Community of Practice Micro-group.¹ We have found several science video websites and many specific instructional videos that, although not specifically made for adult learners, are engaging and suitable for adults who need to learn science, for example, in preparing for a high school equivalency test. Equally important, we have learned about how to use science videos.

Just watching videos, regardless of their quality and engagement, does not necessarily increase knowledge. Even when students say they have learned a lot from watching a video, some research shows they have not. They watch passively, looking for confirmation of what they think they already know. A better way to make use of videos is to begin by asking students what they know, and then recording that on a flipchart or chalkboard, or, for the technology-inclined, using Coggle on an Electronic whiteboard.² Then, after showing the video, return to the flipchart, chalkboard or electronic whiteboard, and ask students what they would like to change, what they have learned or are not as sure about.

Here are some recommended science video collections, and for some of these, some recommended science categories or specific videos:

Annenberg Science Videos

<http://www.learner.org/resources/browse.html?d=6>

- **The Brain: Teaching Modules**
<http://www.learner.org/resources/series142.html>
- **Earth Revealed** <http://www.learner.org/resources/series78.html>
- **The Mechanical Universe...and Beyond (Physics)**
<http://www.learner.org/resources/series42.html>
- **Planet Earth** <http://www.learner.org/resources/series49.html>
- **The World of Chemistry**
<http://www.learner.org/resources/series61.html>

CK-12 Science

<http://www.ck12.org>

CK-12 Foundation is a non-profit that creates and aggregates high quality curated STEM content. The web site has sections for teachers and for students. It offers videos, audio files, images, text, quizzes and interactive learning objects

- **Earth Science** <http://www.ck12.org/earth-science/>
- **Life Science** <http://www.ck12.org/life-science/>
- **Physical Science** <http://www.ck12.org/physical-science/>
- **Biology** <http://www.ck12.org/biology/>
- **Chemistry** <http://www.ck12.org/chemistry/>
- **Physics** <http://www.ck12.org/physics/>

Curriki <http://www.curriki.org>

Davidson University Science Videos Collection

<http://www.bio.davidson.edu/courses/movies.html>

Education on Demand

<http://edexcellence.net/wordpress/education-on-demand>

Science Video categories

- Dinosaurs and other prehistoric animals
- Fish and other aquatic animals
- Insects
- Frogs and other amphibians
- Reptiles
- Birds
- Mammals
- Human evolution
- Earthquakes and volcanoes
- Outer space
- Systems of the human body

Gooru Learning <http://www.goorulearning.org>

Hewitt Drew-it! Physics series channel on YouTube

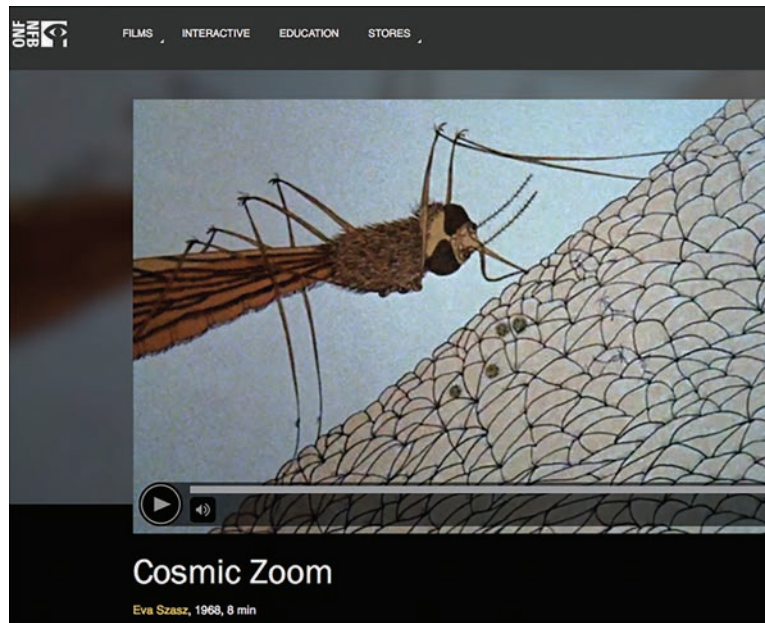
https://www.youtube.com/results?search_query=hewitt+drew+it+channel

How Stuff Works <http://www.howstuffworks.com/> (Choose Health and/or Science)

Jefferson Lab Science Series <http://education.jlab.org/scienceseries/archive.html>
Science Series Video Archives—79 science videos

Khan Academy Science Videos <https://www.khanacademy.org/#library-section>

National Film Board of Canada Sciences Films <https://www.nfb.ca/>
Search for “Science” and specifically for “Cosmic Zoom”



Nature (PBS Video) <http://video.pbs.org/program/nature/>

NEOK-12 <http://www.neok12.com/>
Good videos on enzymes, proteins, carbohydrates and digestion

Nova (PBS Video) <http://video.pbs.org/program/nova/>

OER Commons Video Resources in OER STEM Science User Group

<https://www.oercommons.org/groups/oer-stem-science-user-group/47/>

(Search for these videos and others)

- 1964 Alaska Earthquake
- Monarch Butterfly Migration
- Botany of Desire—Monoculture
- Physics—Introduction to Waves
- Health—How do cancer cells behave differently from healthy ones?
- Reactions in Chemistry
- Biology: Taxonomy and the tree of life
- Sex determination: more complicated than you thought
- How simple Ideas lead to Scientific Discoveries

Healthcare and Medicine (from OER Commons)

- **Khan Academy Science Videos.** Over 200 to choose from
- **Viruses** <https://www.oercommons.org/courses/biology-viruses>

Smithsonian Channel <http://www.smithsonianchannel.com/sc/web/home>

TV411 <http://www.tv411.org/science>

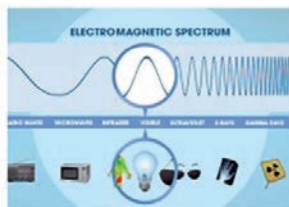
A collection of free, professional quality online “video magazine” articles on science for adult basic skills learners with the theme of cooking.

TV411 WHAT'S COOKING?



Video: Bacteria

See how microbes add zest to dip and how to control them.



Video: Heat

Peek into a hot oven and a microwave and watch molecules dance.



Video: Carbohydrates

Break down carbs to see what they're made of while learning to make a tasty Zucchini Succotash.

Untamed Science <http://www.untamedscience.com/> Biodiversity and biology topics

Veritasium

<http://www.youtube.com/user/1veritasium>

<http://www.pinterest.com/carlosportela/veritasium/>

Nearly 175 videos, apparently uncategorized. Described in Wikipedia as follows: “Veritasium is an educational science channel on YouTube created by Derek Muller. . . . The videos range in style from interviews with experts such as Physics Nobel Laureate, 2011, Brian Schmidt,[1] to science experiments, dramatizations, songs, and interviews with the public to uncover misconceptions about science, a hallmark of the channel.”

WatchKnowLearn.org <http://www.watchknowlearn.org/Category.aspx?CategoryID=86>

Science videos in these categories: Astronomy and Space, Earth Science, Chemistry, Environmental science, Life sciences, Physics, Scientific inquiry, Scientists and inventions, Underwater volcanoes, Science-Current events science documentaries

We Are New York <http://www.nyc.gov/html/weareny/html/home/home.shtml>

Adult English language learning videos, some of which have health-related themes.

David J. Rosen is an education consultant in the areas of adult education, distance education, and technology.

¹LINCS is the U.S. Department of Education/OCTAE-sponsored Literacy Information and Communications System. Among its services are free public adult education discussion forums in sixteen topic areas. For more information, see <http://www.lincs.ed.gov> Also, a complete list of the science videos is available at <http://tinyurl.com/pe5hb4a>

²For more information about Coggle, a free mind-mapping app, see my Tech Tips for Teachers blog article at <http://techtipsforteachers.weebly.com/blog/watch-a-video-and-make-a-mind-map-with-coggle>