

Enhancing Science Creativity in the Classroom: Using the Best Web Resources/Videos

Description

Would your students be interested in Adam Savage's (a.k.a. Myth Buster) fascination with the dodo bird? Have they ever explored the nature of a candle flame? Do your students wonder why cats always land on their feet? Do they ponder the difference between horns and antlers? Do your students speculate about the possibility of building a real Death Star (Star Wars)? As teachers, you can use various science web resources/videos as a way to draw students into the creative process. An annotated list of outstanding resources to use in science lesson planning and instruction will be demonstrated.

[Center for Gifted Studies](http://www.valdosta.edu/colleges/education/psychology-and-counseling/center-for-gifted-studies/welcome.php)

<http://www.valdosta.edu/colleges/education/psychology-and-counseling/center-for-gifted-studies/welcome.php>

Content Resources



Reffel, J. A. (2013, November). *Enhancing Science Creativity in the Classroom: Using the best web resources/videos*. Paper presented at the annual meeting of the National Association for Gifted Children (Creativity Night), Indianapolis, IN.

Resources for Teachers/Parents of Gifted Learners and Gifted Learners too!

General

Who owns the moon? Please see “Who owns the moon? (Vsauce) (12:03): <http://www.youtube.com/watch?v=Bbgz4yY-xX0>

[Vsauce](http://www.youtube.com/user/Vsauce) - Amazing Facts & The Best of the Internet <http://www.youtube.com/user/Vsauce>

Creativity

Are you interested in Adam Savage’s (a.k.a. Myth Buster) fascination with the dodo bird? Please see “Adam Savage: My obsession with objects and the stories they tell” (TED) (15:34) http://www.ted.com/talks/adam_savage_s_obsessions.html

Astronomy

Do you speculate about the possibility of building a real Death Star (Star Wars)? Please see “What if the Death Star was real?” (Deep Sky Videos) (7:41): <http://www.youtube.com/watch?v=HDLOKAm9Cbs>

[Deep Sky Videos](#) - Exploring deep space - one video at a time.

Why is glass transparent? Please see “Why is glass transparent?” (sixtysymbols) (5:56): http://www.youtube.com/watch?v=Omr0JNyDBI0&list=TLWDAhSQO2pb6RyviV4AU4yDJcbKYOq_JN

[Sixty Symbols](#) - Cool videos about physics and astronomy

How big is the universe? Please see “The Scale of the Universe 2” by Cary Huang: <http://htwins.net/scale2/>

Biology and Ecology

Why is carbon a tramp? Please see “That's Why Carbon Is A Tramp: Crash Course Biology” (CrashCourse) (12:33): http://www.youtube.com/watch?v=QnQe0xW_JY4

[Crash Course](#) - the educational series from the Vlogbrothers! Hank Green will teach you Biology.

What is the history of life on earth? Please see “The History of Life on Earth - Crash Course Ecology” (CrashCourse) (13:37): <http://www.youtube.com/watch?v=sjE-Pkjp3u4>

[Crash Course](#) - the educational series from the Vlogbrothers! Hank Green will teach you Ecology.

Chemistry

What’s the “barking dog” in chemistry? Please see “Barking Dog (slow motion) - Periodic Table of Videos (Periodic Videos) (6:40): http://www.youtube.com/watch?v=c3fJRRCAIdk&feature=c4-overview-v1&list=PL9eEsN9D48mf4GGDAn1_zr-rmXv_Wmjuz

[Periodic Videos](#) - Your ultimate channel for all things chemistry. There is a video about each element on the periodic table.

What are atoms? Please see “The Nucleus: Crash Course Chemistry (CrashCourse) (10:12): <http://www.youtube.com/watch?v=FSyAehMdpYI>

[Crash Course](#) - the educational series from the Vlogbrothers! Hank Green will teach you **Chemistry**.

What is platinum? Please see “Dynamic Periodic Table” by Michael Dayah: <http://www.ptable.com/>

Mathematics

Why does a larger number of trials give you a more accurate probability? Please see “Basic Probability” (Khan Academy) (8:18): https://www.khanacademy.org/math/probability/independent-dependent-probability/basic_probability/v/basic-probability

Why does $0! = 1$? Please see “Zero Factorial” (Numberphile) (7:36): <http://www.youtube.com/user/numberphile>

[Numberphile](#) - Videos about numbers - it's that simple. Videos by Brady Haran

Physics

Is it possible to travel back in time? Please see “3 Simple Ways to Time Travel (& 3 Complicated Ones)” (MinutePhysics) (3:14): http://www.youtube.com/profile?annotation_id=annotation_930175&feature=iv&src_vid=8CQ3qWgH4B0&user=minutephysics

[Minute Physics](#) - Simply put: cool physics and other sweet science.

How did Dr. Richard Feynman describe the character of physical law? Please see “Project Tuva – Dr. Richard Feynman Lectures” (Project Tuva): <http://research.microsoft.com/apps/tools/tuva/>

[Project Tuva](#) - Dr. Richard Feynman Lectures

Science

Who was Nikola Tesla? Please see “The Case Files” (The Franklin Institute): <http://www.fi.edu/learn/case-files/tesla/>

[Resources for Science Learning at The Franklin Institute](#)

Do you need sleep? Please see “Sleep: Why We Need It and What Happens Without It” (SciShow) (8:37): <http://www.youtube.com/watch?v=pwNMvUXTgDY>

[SciShow](#) - a YouTube program that just might change the way you look at your planet, your universe, and even yourself.

Have you ever explored the nature of a candle flame? Please see “What's In A Candle Flame?” (Veritasium) (2:43): http://www.youtube.com/watch?v=a7_8Gc_Llr8

[Veritasium](#) - The science video blog from atoms to astrophysics!

Do you wonder why cats always land on their feet? Please see “Slow Motion Flipping Cat Physics” (Smarter Every Day) (6:26): <http://www.youtube.com/watch?v=RtWbpyjlqrU>

[Smarter Every Day](#) - I explore the world using science. That's pretty much all there is to it.

Why do things sound scary? Please see “Why do things sound scary?” (It’s Okay to be Smart) (5:44): <http://www.youtube.com/watch?v=1JAym6-h4RE&feature=c4-overview&list=UUH4BNI0-FOK2dMXoFtViWHw>

[It's Okay to be Smart](#) - a blog about science.

What would Einstein see? Please see “Putting on Einstein’s Glasses” (RadioLab): <http://www.radiolab.org/story/putting-einsteins-glasses/>

[RadioLab](#) - Radiolab is a show about curiosity - where sound illuminates ideas, and the boundaries blur between science, philosophy, and human experience.

How do you get a cork out of a wine bottle? Please see “Cork in the Bottle Trick” (Sick Science!) (0:55): <http://www.youtube.com/watch?v=3cpF-bSuDHk&feature=c4-overviewv1&list=PLJy2Jjr9RsQ5GyBTBrxg4sk491N1wRIL>

Are there some interesting science tricks? Please see “Newton’s Bottle” (Sick Science!) (1:09): <http://www.youtube.com/watch?v=eMYLbMYqbro>

[Sick Science](#) - Videos and cool science experiments from Steve Spangler and [SteveSpanglerScience.com](http://www.stevespanglerscience.com)

Zoology

Do you ponder the difference between horns and antlers? Please see “Horns vs. Antlers” (Brain Scoop) (1:57): <http://www.youtube.com/watch?v=OM7WJpVDi8E>

[The Brain Scoop](#) - I'm Emily, the volunteer Curatorial Assistant for the Philip L. Wright Zoological Museum at The University of Montana, and I'd like to share some of the amazing things we have in the collection with the Internet. Also, featured is The Field Museum in Chicago, IL.