Cameron Tonkinwise

The Systems Thinking Playbook

Mozzilla foundation

hive

Dream yard

Html popcorn

John paul gee

Bronx science

Styviston high school

<http://www.swimbots.com/>

What is education for? Is standardization good? Talk by Sir Ken Robinson

<http://www.youtube.com/watch?v=zDZFcDGpL4U&feature=player_embedded>

Katie salen

<http://www.edutopia.org/digital-generation-katie-salen-video>

games are designed for success, school doesn’t always seem that way

games do not hold all of the content, they are one piece

very social

stages mean that you have learned what you need to learn to get to where you are now

When do kids loose interest in science:

<http://www.telegraph.co.uk/news/uknews/2700145/Children-losing-interest-in-science-through-their-education-report-claims.html>

Why: they don’t see practical application, don’t feel creative

Hardest to teach: chemical equations/bonding, English, Microbiology, fluid mechanics, climate change x2, current, electricity, magnetism x2, sight words, forces, landforms and oceans, data, STEM

Why they are hard to teach: Don’t understand them themselves, limited instructional supplies, too abstract, previously held misconceptions, too much memorization

Hardest for students: vectors, chemistry, laws of motion, heat and thermodynamics, resource management, forces, natural selection, matter, data structures, STEM, atmosphere

Why it’s hard to learn: it’s new: lots at once, too much math, set in their ways, too many steps, too abstract, not visible, scale

What do you like to teach: Periodic table, physics, ecosystems, forces/energy, light, cell theory, electrostatics, international cultures, solar energy, kingdoms, algorithms, astronomy,

Why do you like to teach this? The kids get excited, fun, easily inquiry based, field trip, concrete, easy to make experiments, personal interest in these topics, good demos, timely, go out side, reveal something unknown

What do students get most excited about to learn: human development, nanotech, ecosystems, chemistry, light, sound, anatomy, physics, animal classification, anything interactive, chemical reactions,

Why do they like this: applies directly to their lives, new/current, get to go outside, cool demos, get to dissect things, get to play on computers, crazy experiment

Unique ways of teaching: long projects = ownership, involve them in solving problems, go outside, relating things to other subjects, hands on, demos, outside speakers,

Other comments: make it easy for teachers too!

Loose interest in middle school.

<http://www.internet4classrooms.com/skills_7th_science_new.htm>

Abstract topics in 7th grade: layers of the earth, rock cycles, cell division, plants, DNA, Systemic Relationship - Interpret a chart to explain the integrated relationships that exist among cells, tissues, organs, and organ systems, diffusion, respiration, forces,