

HEALTH SCIENCE Educator



February 2021

Tips, ideas and opinions for Health Science Education

LET THE GAMES BEGIN EDITION



A free publication for professionals who choose to make a difference in the classroom – or working from a home office.

*You inspire the heroes
of healthcare!*

*Play
is the highest form
of research.*

– Albert Einstein

★ EDUCATION NEWS: **GAMES HELP STUDENTS LEARN**

Some teachers roll their eyes at the suggestion of playing games in the classroom. “Health care is a science and I’m not going to waste valuable classroom time playing games.”

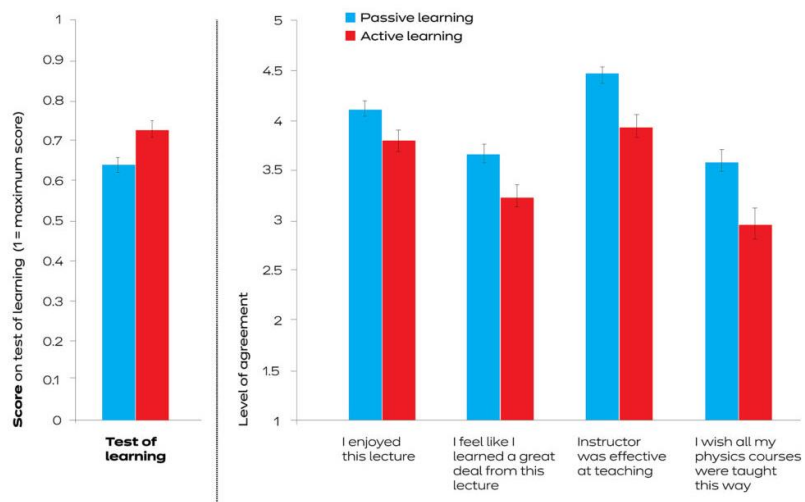
And so they lecture, day in and day out. The health science teacher is a master storyteller and students love their health science class. And it works, right?

Or does it? Take a look at this article: [Study shows that students learn more when taking part in classrooms that employ active-learning strategies – Harvard Gazette](#)

The simple truth is that active learning is more effective than passive learning, and game-based learning is active-learning that’s competitive, interactive, and allows the learner to have fun while gaining knowledge.

Performance or perception

When students sit in a lecture presented by a knowledgeable instructor, it feels to them like they’re learning. It’s certainly much easier to sit and listen to the teacher than it is to figure things out for yourself. However, the research is clear. Students learn and retain more in an active learning environment. Sure, it’s easier to sit and listen to the expert...but that isn’t a good strategy for learning.



Source: “Measuring actual learning versus feeling of learning in response to being actively engaged in the classroom,” Louis Deslauriers, Logan S. McCarty, Kelly Miller, Kristina Callaghan, and Greg Kestin

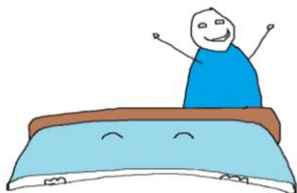
★ NEWS: *Game-Based Learning*

Game-based learning uses a competitive environment, either among other students or within themselves, in order to encourage engagement in and enjoyment of the learning process.

Competition

Game-based learning usually involves some facet of competition. Sometimes students compete against each other, and sometimes it's against a standard. Sometimes a competition can even be against the teacher. Competition helps motivate students and creates an element of enjoyment.

"Once I let my students time me when making a bed in the lab. Then I challenged them to try and beat my time and still make a perfect bed. I've never seen students practice so much, and they sure loved it when they beat my time."



Engagement

Engagement is critical for success in the classroom. The degree of attention, curiosity, interest, optimism, and passion that students show when they are learning extends to the practice of their healthcare profession.

"It finally made sense. The reason my "B and C" students in Health Science 1 were "A" students in Health Science 2 was because when they were learning clinical skills, they were awake, active, and interested in what they were doing. That made me realize I needed to find ways to make my Health Science 1 class more engaging and interesting."

Immediate Feedback

In most games, feedback is immediate. A review of the literature on the role of feedback in learning shows that student feedback is critical to the learning process.



"I like that when my students play games, they have a chance to learn from their mistakes instead of repeating them the next time."

Well-designed games provide a dynamic format that allows students to interact with multiple learning scenarios that simulate the content they need to master. Simulation-based learning exercises exist in many traditional health science education programs, moving towards a blend of strategies and steadily seeing a removal of the traditional lecture based - force fed type of learning.

Literature Review Game-Based Learning

There are plenty of research articles and case studies available that relate to the use of learning games.



Changing the Game with Game-Based Learning

By Colleen Popson and Maegan Mahaffy.
February 17, 2021

Learn how educators at the Smithsonian are going all in with game-based learning and embracing the playful, experimental side of education by using games.

[Changing the Game with Game-Based Learning | Smithsonian Voices | Smithsonian Education | Smithsonian Magazine](#)

Why Play is Important

Lents, PhD, Nathan H. Posted May 1, 2017
Playing is a big and important part of who we are. This behavior cannot simply be an evolutionary side effect or a genetic accident. We're not talking about a tiny appendix in our abdomen. Play is a huge part of the human experience, and thus there must be value in it.

[Why Play Is Important | Psychology Today](#)

Why Game-Based Learning?

Cahill, Gavin. It's about changing the approach of students towards learning and the approach of learning towards students. The goal is for students to enjoy the process of learning itself.

[Why Game-Based Learning? | the Learning Counsel](#)

Game-Based Learning

Teed, Rebecca. Carlton College. This online module was written for college faculty who want to start using games to help them teach. While written for the college's geoscience department, the tips and strategies make sense for health science teachers.

[Game-Based Learning \(carleton.edu\)](#)

Name _____

Date _____

TAKE YOUR BEST SHOT

Every year thousands of adults in the U.S. become seriously ill and are hospitalized because of diseases that vaccines can help prevent. Many adults even die from these diseases.

The CDC recommends the ages at which we should begin receiving immunizations. Use the abbreviations and terms listed below to fill in the table. **Each term will be used only once and all terms will be used.**

- | | | | |
|---------------------------|--------------------|---------------------|------------------|
| 2 months | 12 months | Measles | HepA |
| Zoster recombinant | DTaP | IPV | Birth |
| Hib | Chicken Pox | 11 years old | Pertussis |
| 50 years old | Diphtheria | Rotavirus | Rubella |
| MMR | Hepatitis B | HPV | Mumps |

ABBREVIATION	PROTECTS AGAINST	FIRST DOSE
	Hepatitis A	
		12 months
	<i>Haemophilus influenzae</i> type b	2 months
HepB		
RV		2 months
	Tetanus	
RZV		
	Human Papillomavirus	
	Polio	2 months
VAR		12 months

Teacher Discussion: Make it a Game or Puzzle


An easy way to make a puzzle is to create a table of information and then remove some of the data. As an introduction to content you can ask students to “guess” what fits in each box of the table. This encourages students to think about what they already know - and the challenge of guessing correctly makes it a game.



Another option is to use time as a competitive element. Reward or recognize the “first” student (or team) to fill in the chart (or worksheet) correctly.

ABBREVIATION	PROTECTS AGAINST	FIRST DOSE
HepA	Hepatitis A	12 months
MMR	Measles	12 months
	Mumps	
	Rubella	
Hib	<i>Haemophilus influenzae</i> type b	2 months
HepB	Hepatitis B	Birth
RV	Rotavirus	2 months
DTaP	Diphtheria	2 months
	Tetanus	
	Pertussis	
RZV	Zoster recombinant	50 years old
HPV	Human Papillomavirus	11 years old
IPV	Polio	2 months
VAR	Chicken pox	12 months

[IMMUNIZATION SCHEDULES | CDC](#)



Webinar: Games Are Good!
Kim Smith, CreativeEd Services
 Wednesday, February 17, 4:00 PM (ET)

Thanks to everyone who participated in our Wednesday Webinar. You are a wonderful group of professionals and working with you is a delight.

Congratulations to the teachers from Team 7. North Carolina was the winner of our webinar team competition. Well done!

To review past webinars from NCHSE, visit [Webinars | National Consortium for Health Science Education](#) (healthscienceconsortium.org)



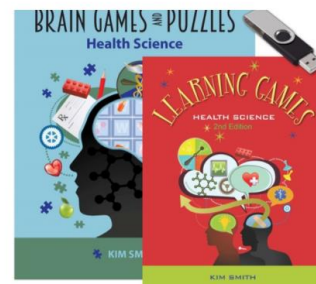
If you like the Health Science content puzzle on page 3 of this newsletter, you'll love:

Brain Games and Puzzles: Health Science

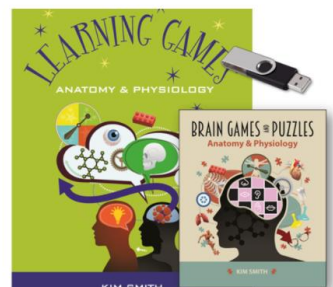
and

Brain Games and Puzzles: Anatomy & Physiology

The best deals in bundle pricing can only be found at www.creativedservices.com



Health Science Resource Bundle
\$29.00



Anatomy and Physiology Bundle
\$29.00

The Health Science Educator, published by CreativeEd Services in collaboration with NCHSE, is a free monthly newsletter for health science professionals at the middle school, high school and collegiate levels.



Kim Smith, the author of *The Health Science Educator*, is an instructional designer and Certified Professional in Talent Development. She is a retired RN and former Health Science Teacher, Health Science State Supervisor, and Assistant Director of National HOSA.