

EVERY CLASSROOM MATTERS

Episode 295

Leanna Prater talks with Vicki Davis

TOPICS

- Constructivism
- Project-Based Learning
- Robotics
- Hands-On Manipulatives
- STEM Teaching

SUBJECT AREAS

- Science
- Teacher Professional Development
- Writing
- Math

LISTEN TO THE SHOW

iTunes: <http://bit.ly/ecm-296> Web: <http://bit.ly/ecm-web296>

GUEST: LEANNA PRATER

Leanna Prater, M.A. Ed., is a District Technology Resource Teacher for Fayette County Public Schools in Lexington, KY where she conducts professional development and provides support to educators in instructional technology. She is also a doctoral candidate in Instructional Systems Design in the Department of Curriculum and Instruction at the University of Kentucky, College of Education.

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4 POWERFUL WAYS TO TEACH YOUR STUDENTS THROUGH PLAY

Use the following to guide your notetaking.

- Leanna loves to let students explore topics using _____ and things that are _____ to students.

Scratch is a simple, free web-based programming tool from MIT. Tutorials: <http://bit.ly/ecm296-scratch>.

1- Teaching Science with SCRATCH

They've created challenges in Scratch for students to go in and play. For example, an elementary science teacher asked students to create a game or interactive story that showed different elements of a cave.

2- Teaching Creative Thinking and Writing with Manipulatives.

Teacher Professional Development. Using Build to Express from Legos, Leanna had the teachers build a model of what they thought STEM meant using LEGO pieces. They built a physical representation of their idea and then they explained what they thought STEM meant to them. After this, the teachers turned around and used that same method with their students. For example, model with the Lego's "What does it mean to be free?"

- Give kids the opportunity to explore their _____.

Writing. Building with manipulatives gives learners the idea to _____ about what they are writing. The writing becomes richer because it has details.

*"We need to give kids more creative play opportunities in the classroom."
Leanna Prater*

- You can use _____ for prewriting instead of just graphic organizers.
- Leanne quotes _____, who advocates the principle of constructionism. (Read more here: <http://stanford.io/2hT5dLF>.)

History. For example, if you're teaching a content unit on Colonial America, ask students to explore those ideas in a Scratch project. What was the economy and culture of the region? What were the roles? Government?

3- Teaching Math Concepts with Manipulatives.

Math. Legos have the bumps on them, so they are great for models with counting and adding blocks together and having a constraint. Give them something to build and limit the number of blocks they use.

"The first time I heard the word circumference outside of math class was when students were building robots." Leanna Prater

4- Teaching with Robotics

Leanna recommends using robots for math. Leanna uses the EB3 robots.

See the article I wrote for FIRST Robotics, "The Definitive Guide to Computer Science in K-12 here: <http://info.firstinspires.org/stem-classroom-offer>.

- Giving kids an experience with robots in a setting that is very _____ with a bridge to real world _____.

INNOVATE LIKE A TURTLE

SEARCH

Search one thing from the show that has you curious. Take notes.

THINK

Reflect on my teaching.

1. **When is the last time I used play in the classroom to teach? How did it work?**
2. **If I could use any strategy in this episode, what would it be? How would I use it?**

EDUCATE

How will I use play in a lesson this week?

POWER

I think the most powerful use of play in the classroom happens when...

SHARE

Based on what I've learned, what will I share or discuss with other teachers now?