PROJECT BASED LEARNING

• A teaching method in which students gain knowledge and skills by working for an extended period to investigate and respond to a complex question, problem, or challenge. Must include the following components:
  • Based in standards (TEKS) for knowledge and skills
  • 21st Century skills (collaboration, problem solving, critical thinking, etc)
  • Inquiry based
  • Driving question (open ended)
  • Needs to know
  • Relevant projects
  • Revision and reflection
  • Authentic audience
IN OTHER WORDS...
TEACHING THEM HOW TO THINK,
NOT WHAT TO THINK.
TELL ME AND I FORGET.
SHOW ME AND I REMEMBER.
INVOLVE ME AND I UNDERSTAND.
ROBOTICS ALLOWS STUDENTS TO THINK THROUGH AND REASON OUT PROBLEMS
ROBOTICS PREPARES STUDENTS FOR A COMPETITIVE WORKFORCE AND PROVIDES A NATURAL HOOK FOR STUDENTS TO BECOME ENGAGED AND INTERESTED IN THEIR LEARNING

Texas Tech University T-STEM

Here’s how I started....
OUT OF THE FRYING PAN AND INTO THE FIRE

I was promoted to “Program Specialist”

One of our Youth Librarians left

I was handed all of his Robotics classes
WHERE TO START?

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THE STUDENTS KNEW MORE THAN ME....
They were enthusiastic and more than happy to help. My students saved me my first semester 😊

Many of them made it a point to go around the room and help their classmates when they had questions.
TIME TO EDUCATE MYSELF

- Learn from them
- Youtube/Darren Wilson
- Find time to sit down and build/program
- Read all I can about Mindstorms
- Finally locate a class for adults (teachers)
NOW I KNOW! TIME TO DEVELOP MY OWN CURRICULUM.
LEGO MINDSTORMS 8-WEEK COURSE

- Build
- Drive/maze
- Touch sensor/Bumper cars/Battle bots
- Ultra Sonic sensor/Catapults/Angry Birds
- Light Sensor/Twister
1. Identify the Problem
2. Identify Criteria and Constraints
3. Brainstorm Possible Solutions
4. Generate Ideas
5. Explore Possibilities
6. Select an Approach
7. Build a Model or Prototype
8. Refine the Design

NASA
GETTING THE MAT AND GAMEPLAY
...AND THEN WE COMPETE...
FOR AGES 8YRS TO 8TH GRADE
TOURNAMENT
They team up in groups of two and three.
...AND WORK TOGETHER...
SO FUN!

TEAMS DRESS UP FOR EXTRA STYLE AND A POSSIBLE EXTRA TROPHY
THEY ONLY HAVE 2 MINUTES PER RUN
ONLY 12 TROPHIES AVAILABLE, COMPETITION IS FIERCE

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GEAR COMPETITION IN ARLINGTON