School of Innovation

RUSSELLVILLE JUNIOR HIGH SCHOOL

Background

▶ Received a Project Lead the Way grant in 2012-13 school year to implement courses at the Jr. High

▶ Implementing these courses at the Jr. High allowed our students to get completers on their transcript.

▶ This would show colleges that the students with completers 1) went through a rigorous course of study and 2) stayed committed to finishing a pathways.

▶ The district hired a teacher to start the program and the grant helped us with the resources and supplies.

PROJECT LEAD THE WAY
PLTW

Engineering Program

- Foundation Courses:
  - Introduction to Engineering Design
  - Principles of Engineering

- Specialization Course:
  - Digital Electronics

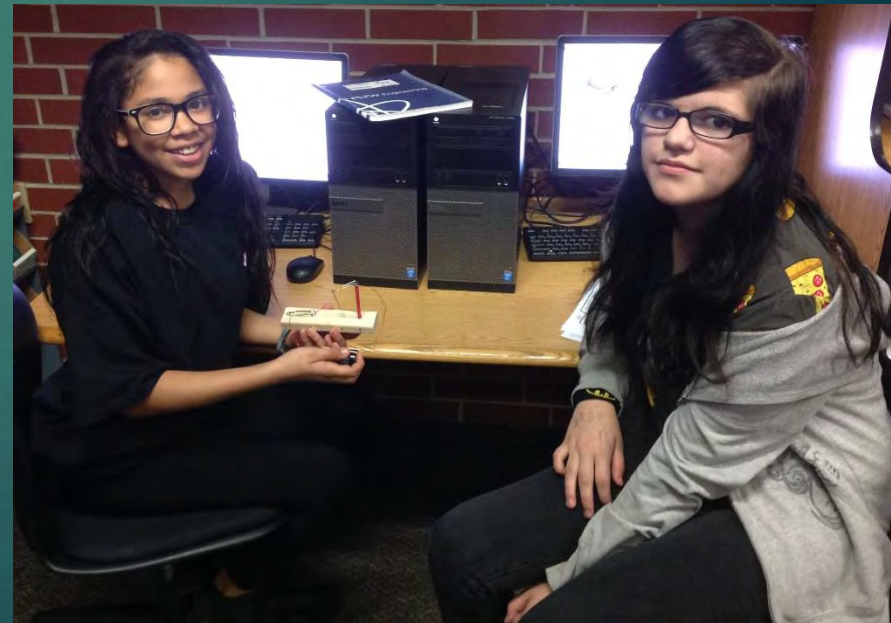- Capstone Course:
  - Engineering Design
    & Development

Biomedical Program

- Foundation Courses:
    - Principles of Biomedical Science
    - Human Body Systems
    - Medical Interventions

- Capstone Course:
    - Biomedical Innovation

Gateway Program

- Offered to 8th grade students
- First offered as semester courses
- Now on a full-year rotation
- Course Offerings:
  - Design & Modeling
  - Automation & Robotics
  - Magic of Electrons
  - Science of Technology
  - Medical Detectives (new)

First Year of PLTW Implementation

- 58 students in 8th grade Gateway
- 45 students in 9th grade Engineering
- 58 student in 9th grade Biomedical
- As we were scheduling students, we found 2 problems:
  - Students **really weren't familiar with Project** Lead the Way course offerings in 9th grade
  - The only students that we could get into the 8th grade classes were students that **weren't in band or athletics.**
- Had 2 teachers **–** one taught Engineering & Gateway, the other taught Biomedical

Our Problem

▶ Not enough 8th grade students were able to take the Project Lead the Way (PLTW) courses because of their other state required electives.

▶ As a result, our high school programs were not growing.

▶ As a PLTW school, we wanted more 8th grade students exposed to the high level, rigorous curriculum.

▶ We also needed a way to feed the high school programs starting in 9th grade.

RJHS School of Innovation Waiver

▶ Russellville School District requests a School of Innovation waiver from the standards of accreditation 9.03.3.5 Physical Education, 9.03.3.6 Fine Arts, and 9.03.3.9 Career and Technical Education (Career Development), requirements in 8th grade, for those 8th grade students who wish to enroll in the STEM electives offered instead (Design and Modeling, Automation and Robotics, Magic of Electrons, & Science of Technology).

Our Goals for the Waiver

▶ Goal # 1

   ▶ Increase the number of students enrolled in the 8th grade STEM courses because of its high rigor, practicality, and interest level.

▶ Goal # 2

   ▶ Improve student performance as evidenced by a higher percentage of students reaching growth because of their enrollment in STEM classes beginning in 8th grade.

Results of the Waiver Year 1 (2014-15)

▶ 165 students enrolled in Gateway classes

▶ 60 in 9th grade Engineering

▶ 58 in 9th grade Biomedical

▶ Gateway program almost tripled enrollment in one year!

▶ Had to hire a new teacher to teach Gateway classes because of student interest

Results of the Waiver Year 2 (2015-16)

- 210 students enrolled in Gateway classes

- 98 in 9th grade Engineering

- 87 in 9th grade Biomedical

- Hire another full time teacher to accommodate student interest

- 9th grade retained almost all 8th grade PLTW students for a total of over 40% student population participation, an increase of more than 430%.

- Students' grades in core classes have improved

- Added Launch program at an elementary school

Results of the Waiver Year 3 (2016-17)

- 220+ students signed up for Gateway classes with more on a waiting list

- 88 students signed up for 9th grade Engineering

- 91 students signed up for 9th grade Biomedical

- Implementing a new PLTW Computer Science pathway to meet students' requests for those courses.

Our Recommendations

▶ Come up with something that will benefit your students and ask for a waiver if needed.

▶ Gather your research first that creates a need for the innovative change.

▶ Convince people there is a need to change before you ever tell them about your idea.

▶ Try it!

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