

# Spring-Ford Area School District & Project Lead the Way

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STEM Education Program  
2014-2015

October 28, 2013

# What is STEM?

**STEM** stands for a cluster of careers in the fields of:

- \* Science
- \* Technology
- \* Engineering
- \* Math



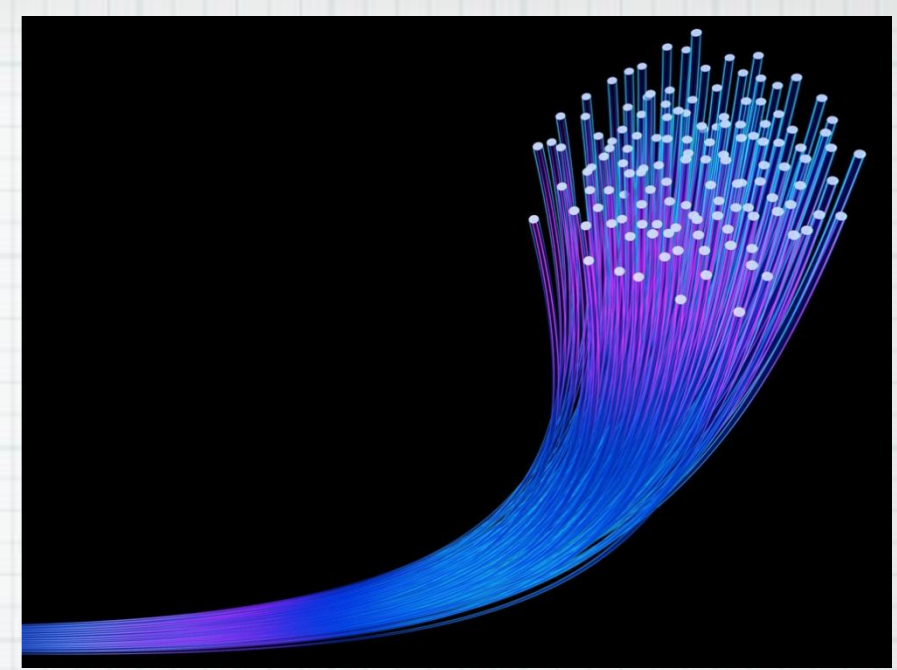
# What Do We REALLY Mean by STEM?

Any field or career that:



- \* Creates, Discovers or Applies **New** Knowledge to Make Life **Better** for All!

# In Other Words...



STEM careers :

- \* Search for **new** information, methods, and ways to do and understand things better
- \* Work to effectively and efficiently **solve** the world's problems
- \* Require you to **innovate**, create, & discover
- \* Require you to ask **why** and **how** about things that need to be built, invented and designed

# Project Lead the Way

Spring-Ford Area School District is pleased to partner with **Project Lead the Way** to bring our students a new STEM education program beginning in the 2014-2015 school year

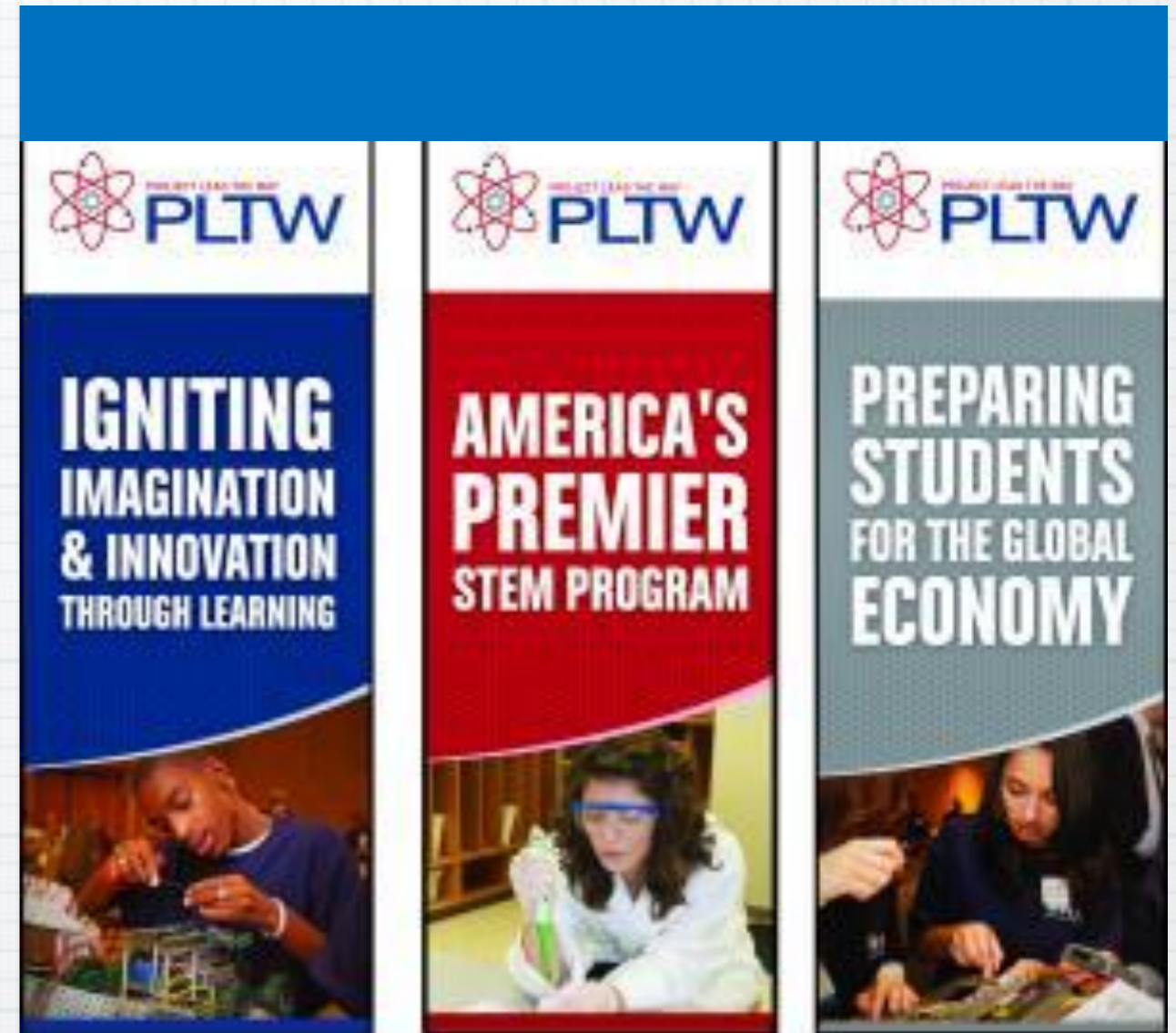
We completed a grant application for \$35,000 over three years and should receive word in January if we have been awarded any funds.



The first **Project Lead the Way** Course,

## **Introduction to Engineering Design**

is on the Board Agenda (10/28/13) for approval.



- It is our hope that students will choose the full PLTW pathway and take all four courses in the program (9<sup>th</sup>-12<sup>th</sup> grade).

# The Project Lead the Way pathway will include:

**Introduction to Engineering Design (9<sup>th</sup>)**

**Principals of Engineering (10<sup>th</sup>)**

***TBD***, choices include: Aerospace Engineering, Biotechnical Engineering, Civil Engineering and Architecture, Computer Integrated Manufacturing, Digital Electronics (11<sup>th</sup>)

**Engineering Design and Development (12<sup>th</sup>)**



# Research shows...

- PLTW students achieve significantly **higher scores in reading, mathematics and science** and in some cases have the **opportunity to receive college credit.**
- They **earn higher GPAs as freshmen in college.** PLTW alumni are studying engineering and technology in greater numbers than the national average, with a **higher retention rate in college engineering, science and related programs** than non-PLTW students.





# Questions?

# Traditional Technology Education Pathway

## 9th Grade Center

**Materials Manufacturing (Minor) I:** This course will be a combination of two current courses- Introduction to Materials and Construction Systems

**Technology Systems I (Minor)**

## 10-12 Grade Center

**Materials Manufacturing (Minor) I:** This course will be a combination of two current courses- Introduction to Materials and Construction Systems.

**Materials Manufacturing (Major) II:** This course will be a more advanced version of Materials I.

**Technology Systems I (Minor)**

**Technology Systems II (Major):** This course will be a more advanced version of Tech Systems I.