



Growing interest and sharpening skills for STEM.

# Improving the STEM Workforce for Arkansas

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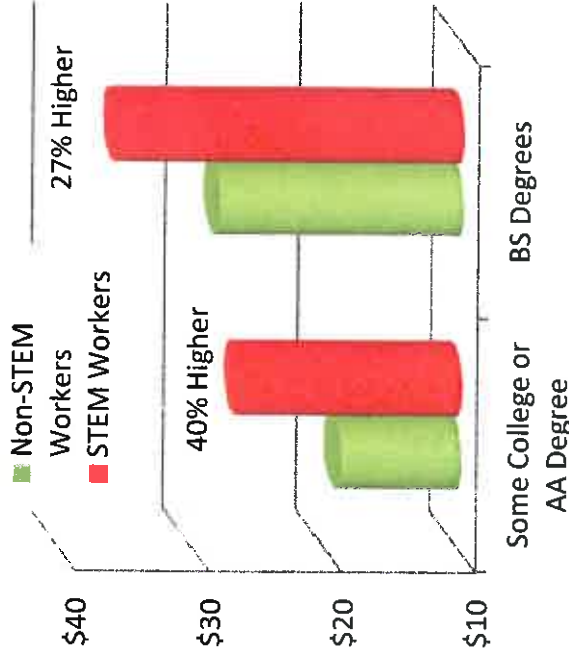
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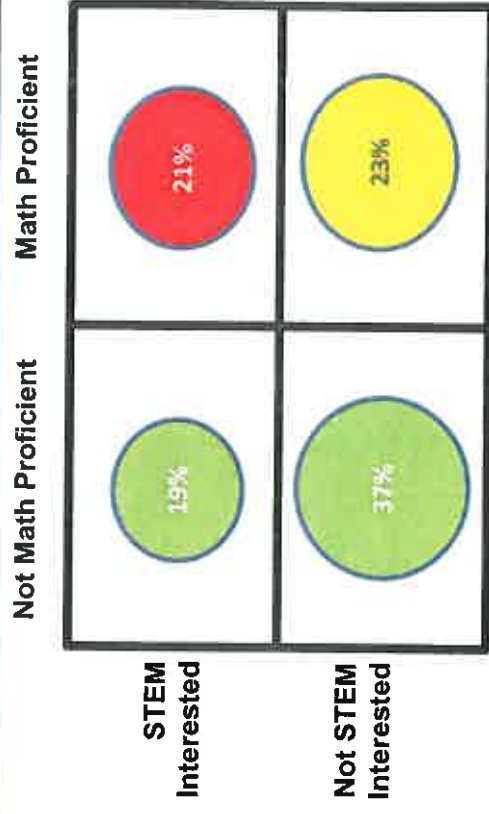
# STEM Jobs are Great Opportunities for Students

STEM jobs:

- **pay higher** for both college and non-college graduates
- **more job openings** available to STEM workers<sup>1</sup>
- **projected to grow** by 17% compared to 10% for non-STEM<sup>2</sup>



STEM Students Must be *Prepared* for and *Interested* in STEM, Yet Only 21% are Both. 23% Have Math Skills but are **Not Interested**



1. STEM Vital Signs, Change the Equation, <http://changetheequation.org/stemdemand>

2. Gordon, E. (2009). The Global Talent Crisis. The Futurist, 43(4) Sept/Oct: 34-39, as quoted by [www.att.com/Common/about\\_us/files/pdf/aspire/att\\_aspire\\_stem.pdf](http://www.att.com/Common/about_us/files/pdf/aspire/att_aspire_stem.pdf)



# Students Need Exposure to STEM Careers in Middle School

**No. 1** Reason Students do not  
Major in STEM is  
**Lack of Awareness of Careers**

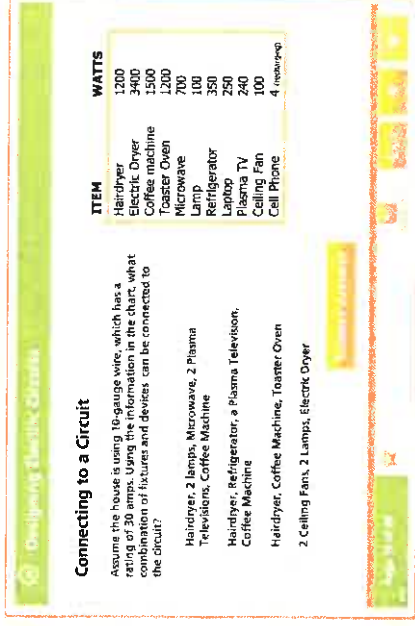
**94%** Middle School Students Making  
**Career-Related Decisions**

"Increasing Student Interest in Science, Technology, Engineering, and Math (STEM)" UMass Donahue Institute Research and Evaluation Group, 2011, as retrieved from  
<http://www.mass.edu/forinstitutions/prek16/documents/Student%20Interest%20Summary%20Report.pdf>

## Learning Blade Fills the Need for an Accessible Supplemental STEM System that Supports Academics

- Introduces students to a wide range of STEM technologies and careers and **engages students** through a game-based platform
- Requires **minimal preparation** - Little teacher training and no specialized equipment necessary
- Motivates **minorities and girls** to explore STEM fields
- Useful in many academic classrooms, not just science
- Analyzes student skills according to the **Core Standards** nomenclature
- Based on **Middle School Standards** – around 100 hours of curriculum that can be used in Middle and High schools
- Can bring STEM to **Rural Communities**

# Learning Blade Increases STEM Career Interest AND Reviews Academic Standards



- Self-paced, online system allows use in any location, including rural
- Tied to academic skills and useful in any classroom, not just science
- Reaches Rural Communities

## Results:

**71%** Increased Awareness of STEM Careers and Technology

**37%** More Likely to Follow STEM

Source: Learning Blade pilot studies in 5 states validated by Battelle Education

# Missions Focus on Variety of Career Clusters

## 10 Contexts for STEM

<b>Dolphin Rescue</b>	Help rescue rehabilitate an injured dolphin, including creating an artificial prosthetic tail	Biomedicine, Marine Science
<b>Haiti Orphanage</b>	Design and build an environmentally-sound orphanage for children left homeless by an earthquake in Haiti	Construction, Sustainability
<b>Heart Surgery</b>	Conduct heart surgery and therapy for a child with a heart defect; evaluate the use of artificial hearts or heart components	Medicine
<b>Energy Production</b>	Evaluate alternative or upgraded energy sources for a city that currently has an old coal-fired power plant	Energy Production, Environment
<b>Local Food</b>	Consider methods to increase production of local foods in a community	Agriculture
<b>Robotics Design</b>	Explore technology used for robotics design, such as sensors, electrical circuits, industrial design and computers	Electronics, Computer Science
<b>Flu Outbreak</b>	How health and IT professionals can use data warehousing and analysis to predict flu outbreaks using GIS and social media data	Information Technology
<b>Transportation Jam</b>	Evaluate new transportation methods for a city that has a traffic congestion problem	Transportation
<b>Manufacturing Concept</b>	Use modern manufacturing techniques to design and build a new concept car	Advanced Manufacturing
<b>Entrepreneurship</b>	Set up a new business with a focus on entrepreneurship	Finance, Business

## 90 Careers and Technologies

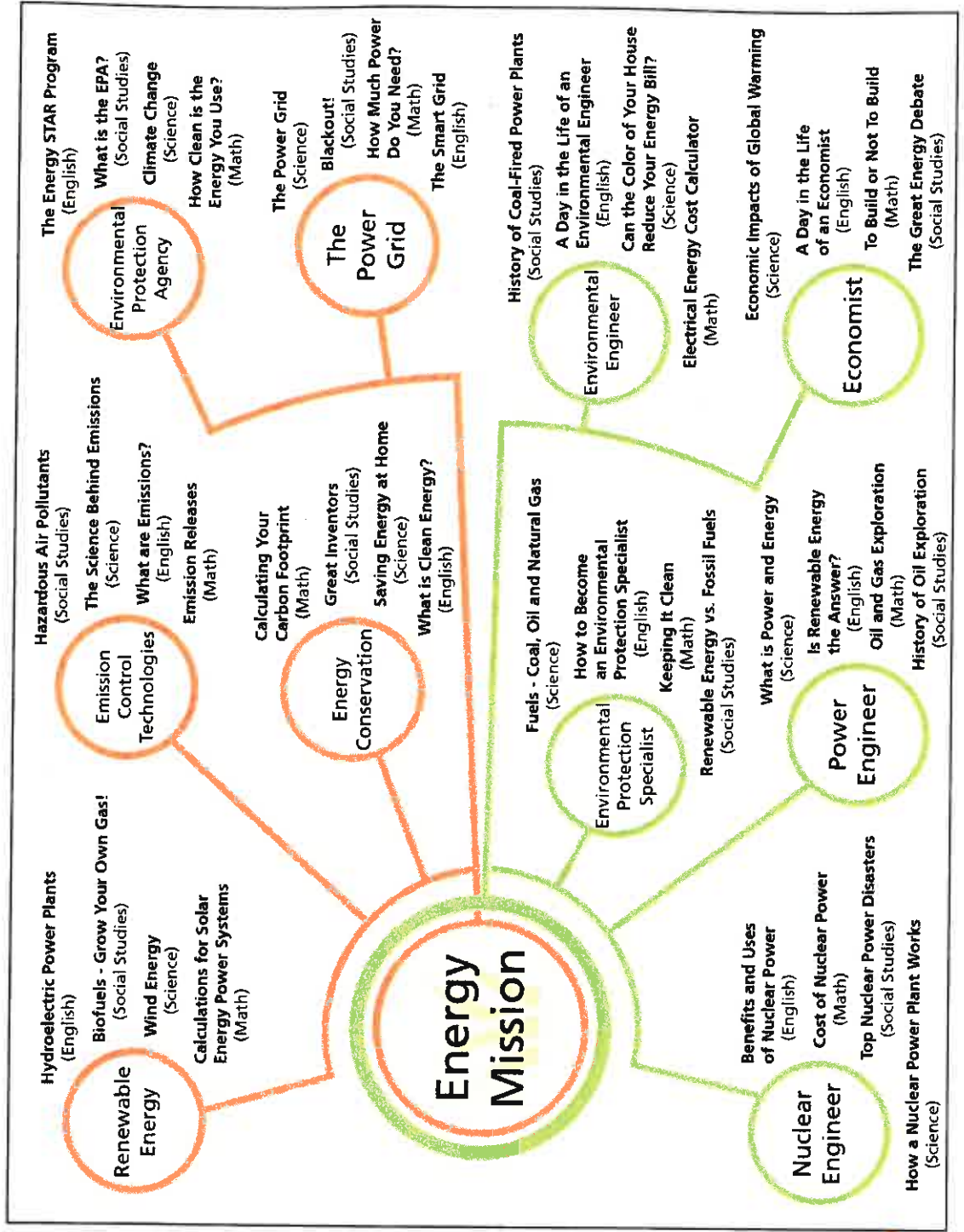
# 10 Different Missions

## 360 Interactive Academic Lessons

Sample Mission Outline:

Tools

Teammates





# Learning Blade Projects for Fall 2015

- Statewide Tennessee project 
- All of Washington DC public school 
- 30+ schools in Kentucky 
- Regional projects including Yuma, AZ and Colorado Springs, CO  
- Regional efforts in 20 States  

## Battelle

*The Business of Innovation*

*Learning Blade has been validated as a supplemental tool for increasing STEM career awareness and interest by BattelleEd.*



*Suggested resource by STEM experts in ACT's "The Condition of STEM 2014"*





## Thinking Media Brings Strong Experience in Similar Education Solutions

- Tennessee-based WBE, MBE and Small Business of the Year for Chattanooga
- Held **Statewide Arkansas Contract** for 7 years for Workforce with DWS and used in CTE statewide.
- Creators of KeyTrain® for ACT WorkKeys®, acquired by ACT
  - Online basic skills enhancement curriculum
  - Used in approx. 15% of US high schools and in other agencies
  - Managed 28 statewide contracts with over 4 million registered users
  - 7.2 million lessons and 2.4 million hours used per year
  - Statistically proven effective at raising basic skills test scores

# The Proposal

## Statewide STEM Impact Program

- Make Learning Blade system available for all middle schools in Arkansas
- Provide regional training sessions and ongoing webinar trainings for teachers and staff
- Support implementation and publicize nationally
- Evaluate data and results of usage in conjunction with Battelle Education

# THANK YOU FOR YOUR CONSIDERATION!

STUDENTS



Learning  
Blade  
Missions

STAFF



Game-Based, Contextualized Learning  
Tailored to the Interests of each Student

Reinforcement of Basic Academics  
Indexed by Standards



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