2016 LEGISLATIVE BREAKFAST

Ephrata Area School District
“Achieving Success One Student at a Time.”
Agenda

• Welcome to the Ephrata Area School District
• Purpose of our Legislative Breakfast
• Update on Programs Spotlighted in Past Events
• Feature Programs Presentation
• Perspective from the Board of School Directors
• Comments from Legislators
Welcome to the Ephrata Area School District

- 7 Physical Schools and a Virtual Academy
- Approximately 4,200 students
- Annual Budget of about $63 Million
- Academic Performance is generally in the top quartile
- Students from Grades 5-12 are issued computers (iPads for 5 & 6)
Economically Disadvantaged Students
Special Education

- State Reimbursement
- Net District Expense
Purpose of the Morning

• Celebrate a few of the great things happening in the District
• Share a discrepancy between the culture we need and the one reinforced across the state
• Identify significant challenges to further success
• Provide a perspective on possible solutions
To support students in the development of the content skills and dispositions necessary to be successful in life, we need a culture that measures success *one student at a time.*

Students need to be recognized as more than a standardized test score and honored as partners in their own education.

Districts need the autonomy to aim at a broader set of content and skills, as well as the freedom to personalize learning paths towards strengths, interests and goals of individual students.
To transition our system from a “one-size-fits-all” industrial model to one designed to support individual learner success is a foundational shift.

Aiming at more relevant and authentic targets for students requires educator risk-taking and innovation, which is something that is difficult to foster due to the significant costs of a misstep.

Current reality includes a high-stakes accountability system at the district, school and individual teacher level, based primarily upon narrowly focused multiple choice testing.
Ag Science Education and FFA

Overview:
- 80 students
- 30 FFA members
- Eight courses
- Facilities: agri-science classroom, small animal barn, greenhouse, shop with welding area, agricultural library, 80 acre farm
Faster Growth for STEM from 2008–2018¹

17% STEM Occupations
9.8% Non-STEM Occupations

Source: http://meteorology.rutgers.edu/STEM.pdf

STEM Job Growth as projected by U.S. Dept. of Labor 2012–22

18% Computer & Mathematical
7.3% Architectural & Engineering
26% Mathematical & Science
10% Life, Physical, Social Science
Why Computer Science?

There are over 500,000 vacant computer jobs nationwide.

71 percent of newly created positions are in computer science.

Only 8 percent of college graduates have the necessary computer science skills to fill these positions.

Projected Changes, Major STEM Occupations 2008-2018

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Total Number of Jobs</th>
<th>Percent of Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average, All Occupations</td>
<td>53% 208,300</td>
<td></td>
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<tr>
<td>Network Systems Analysts</td>
<td>34% 213,400</td>
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<tr>
<td>Computer Software Engineers, Applications</td>
<td>30% 153,400</td>
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<tr>
<td>Computer Systems Analysts, Systems</td>
<td>21% 48,500</td>
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<tr>
<td>Biological Scientists</td>
<td>16% 6,900</td>
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<tr>
<td>Mechanical Engineers</td>
<td>6% 75,700</td>
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</tr>
<tr>
<td>Physicists</td>
<td>3% 30,000</td>
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</tr>
<tr>
<td>Chemists</td>
<td>2% 38,900</td>
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</tbody>
</table>

EASD Computer Science
The District recognizes the need to equip students with computer science skills relative to nationwide job trends.

CODING CONTEST

ROBOTICS

PLUS!

• 1:1 Technology in Grades 5 - 12

• New computer science courses

• District participation in Hour of Code since 2013
from Engineering... to Robotics... to Computer Science
Project Lead The Way @ EHS
Engineering Overview

- Pierce Martin
  - Introduction to Engineering Design
    - Design principles, Autodesk Inventor
  - Principles of Engineering
    - Overview of many disciplines including mechanics, energy, electronics, statics, and robotics.
  - Aerospace Engineering
    - Flight and space exploration
  - Civil and Architectural Engineering
    - Considerations for structures for society
    - Architectural concepts
    - AutoCAD
Robotics

- Wyatt Blevins, Tim Jefferson, Nick Jenkins
  - Growth out of the Principles of Engineering class
    - Combines Mechanical Engineering with Computer Science
  - Explanation of VEX competition format
    - New challenge each year
Robotics

- Wyatt Blevins, Tim Jefferson, Nick Jenkins
  - Growth out of the Principles of Engineering class
    - Combines Mechanical Engineering with Computer Science
  - Explanation of VEX competition format
    - New challenge each year
    - Worldwide participation
- Club expansion
  - 12 students last year to 20 this year
  - One team last year to 3 teams this year
- Robot Demonstration
Introduction to Computer Science

- Chandler Eby
  - Overview of basic CS concepts
    - CS working on mobile devices
    - Web & Internet Applications
    - Introduction to text-based programming

Getting a Bill through the Legislature APP!
Computer Science Principles (AP)
- Tim Jefferson, Caleb McKinney, Christian Weber
  - Overview course teaching the over-arching principles of computer science – not a specific language
  - Initial concepts involve items such as variable, branching and looping patterns; Trump game example
Project Lead The Way @ EHS
Obstacle spawner:

- When this sprite receives the random obstacle event broadcasted "spawnObstacle.Clinton"
- Move the sprite to the left side of the stage (x=340) and make it invisible
- If the game is not lost (gamelost = false), continue looping
- Change the x position to the left by -1 * gameSpeed every time the sprite moves
- Add 1000 * gameSpeed points to the score if the sprite successfully went across the stage
- Make the sprite invisible at the end of the loop

Sets sprite x to 340 and makes sprite invisible at start of game.
Project Lead The Way @ EHS
Project Lead The Way @ EHS
“Opportunity is missed by most people because it is dressed in overalls and looks like work.”

Thomas Edison
PDE Requirements

- Keystone Exam and PSSA
  - Ephrata students performing well
  - Growth year over year
- But tests and more tests
- How many of you have taken a test for your job?
- We are creating test takers and not problem solvers.
- Test taking is:
  - Memorization and regurgitation
- It’s more than algebra, language arts, and biology.

At Ephrata Area School District

- Ephrata Virtual Academy
- Language programs
- Ag Science
- Full range of subjects and classes offered
  - Above and beyond the Keystone and PSSA requirements
- Extracurriculum, arts, music, and sports
- Advance Placement Courses
- Even with budget limitations, we’ve continued to offer
- PLC – continued education and learning for our staff
Skills Found Lacking – Not on Tests

% Missing Skills

- Critical Thinking/Problem Solving
- Attention to Detail
- Communication
- Writing Proficiency
- Leadership
- Ownership
- Public Speaking
- Interpersonal Skills/Teamwork
- Data Analysis
- Industry Specific Software
- Grit
- Mathematics
- Curiosity
- Design
- Coding/Computer Programming
- Foreign Language Proficiency

Source: Fastcompany.com
It is the mission of the Ephrata Area School District to provide all students a secure learning environment and exemplary academic programs that inspire all students to reach their full potential.

Achieving Success One Student at a Time
Skills Needed to Thrive

*World Economic Forum – January 19, 2016 article*

“Five years from now, over one-third of skills (35%) that are considered important in today’s workforce will have changed.”

“Some jobs will disappear, others will grow and jobs that don’t even exist today will become commonplace. What is certain is that the future workforce will need to align its skillset to keep pace.”
Doing the Best We Can

• What knowledge and skills do our students need to have?
• Meet the standards and go beyond.
• Focus is on our students.
• Technology is a tool to enhance learning.
• Still need to have highly trained teachers in the classroom.
• In spite of funding . . . We’ll do it.
Innovative Learning Projects

Ephrata Area School District

Innovative Learning Projects

The following Innovative Learning Projects directly align with the District mission to provide exemplary academic programs to inspire all students to reach their full potential.

Growth Mindset
The 4Cs
Project Based Learning
Blended Learning
Virtual Substitute
Mountaineer Academy
MakerSpace
Shadow A Student
Twitter
We are Committed.

- Teachers & Building Administrators
- District Administrative Team
- District Support & Services Team
- Board of Directors
## State Funding

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<tbody>
<tr>
<td>Basic Subsidy</td>
<td>8,686,957</td>
<td>8,686,783</td>
<td>8,896,680</td>
<td>8,896,636</td>
<td>9,175,456</td>
<td>9,550,240</td>
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<tr>
<td>Edujobs</td>
<td>9,335</td>
<td>461</td>
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<tr>
<td>Accountability Block Grant</td>
<td>192,518</td>
<td>192,517</td>
<td>192,517</td>
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<tr>
<td>Ready to Learn Grant</td>
<td></td>
<td></td>
<td>401,490</td>
<td>515,064</td>
<td>515,064</td>
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<tr>
<td>Total Basic Ed Funding</td>
<td>8,888,810</td>
<td>8,879,761</td>
<td>9,089,197</td>
<td>9,298,126</td>
<td>9,690,520</td>
<td>10,065,304</td>
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<tr>
<td>Special Education</td>
<td>2,063,017</td>
<td>2,035,116</td>
<td>2,080,940</td>
<td>2,088,667</td>
<td>2,292,198</td>
<td>2,214,705</td>
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<tr>
<td>Retirement</td>
<td>1,001,545</td>
<td>1,447,588</td>
<td>2,010,689</td>
<td>2,645,974</td>
<td>3,351,527</td>
<td>3,900,000</td>
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*Increase from 2011-2012 is $2,898,455*
Pension Adjustments

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<tbody>
<tr>
<td>Total State Revenue</td>
<td>14,968,623</td>
<td>15,544,941</td>
<td>16,373,097</td>
<td>17,228,627</td>
<td>18,708,483</td>
<td>19,427,196</td>
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<tr>
<td>Edujobs</td>
<td>9,335</td>
<td>461</td>
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<tr>
<td>Adjusted State Revenue</td>
<td>14,977,958</td>
<td>15,545,402</td>
<td>16,373,097</td>
<td>17,228,627</td>
<td>18,708,483</td>
<td>19,427,196</td>
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<tr>
<td>Less 5 Year Pension Growth Equivalent State Funding</td>
<td>2,898,455</td>
<td>16,528,741</td>
<td>1,550,783</td>
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Act 1 vs. Pension

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<tr>
<td></td>
<td>20.05</td>
<td>0.40</td>
<td>20.45</td>
<td>$1,930,839,500</td>
<td>$772,336</td>
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<tr>
<th></th>
<th>2015-2016 Salary</th>
<th>2015-2016 Pension Rate 25.84%</th>
<th>2016-2017 Pension Rate 30.03%</th>
<th>2016-2017 Pension Rate Increase (Gross &amp; Net)</th>
<th>Act 1 Rate vs Pension Net</th>
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<tr>
<td></td>
<td>$26,800,000</td>
<td>$6,925,120</td>
<td>$8,048,040</td>
<td>$1,122,920</td>
<td>$210,876</td>
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<tr>
<td></td>
<td></td>
<td>District portion $561,460</td>
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</tbody>
</table>
“Opportunity is missed by most people because it is dressed in overalls and looks like work.”

Thomas Edison
Legislators: We Need Your Help

• Fair and equitable funding for all students
  ▪ All funds – not just the “new monies”
• Change in Charter school law
  ▪ Double dipping – Special Education
  ▪ Cost – our own EVA at 50% of most charter schools
• Pension reform
  ▪ High cost of current system
  ▪ Fair to employees and participants & the taxpayers
• All $ saved will help us do more for our students
THANK YOU FOR ATTENDING!

Mr. Tim Stayer • Board President • Timothy_Stayer@easdlpa.org
Dr. Brian Troop • Superintendent • B_Troop@easdlpa.org