Designed to Motivate
The Key to Our Future

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Presenters

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The Familiar Stereotype

I DON'T WANT TO GO TO SCHOOL! I HATE SCHOOL! I'D RATHER DO ANYTHING THAN GO TO SCHOOL!

STUDENT EMOTIONAL ENGAGEMENT

ENGAGED 55%

NOT ENGAGED 28%

ACTIVELY DISENGAGED 17%

Source: 2013 Gallup Student Poll, U.S. overall
TEACHER EMOTIONAL ENGAGEMENT

ENGAGED

31%

NOT ENGAGED

56%

ACTIVELY DIENGAGED

13%

Source: 2012 Workforce Poll, U.S. Overall

SCIENCE EVOLUTION IN DISTRICT 109
THE FUTURE HAS BEGUN
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Next Generation Science Standards

• Internationally-benchmarked standards that focus on Core Ideas, Practices, and Cross-Cutting Concepts
• Adopted by Illinois State Board of Education in January 2014
• Go into effect for 2016-2017 School Year
District Goals

- Improved technology – **REAL-LIFE APPLICATIONS**
- Health and safety
- Flexible and integrated learning spaces
- Upgraded student labs stations
- Support NGSS adoption
- Develop prototype of ideal space

Planning for Motivation

- Allows for additional/enhanced opportunities for project/problem/inquiry based learning
- Can use the tools that **real scientists use** in an environment similar to that in which real scientists work in
**Planning Process**

- Superintendent's Task Force for Middle Level Education
  - Science/STEM subcommittee comprised of students, parents, teachers, and administrators
- Coincided with our district adoption (and later state of Illinois adoption) of NGSS
- Board understanding and support
- Significant teacher input
  - Multiple meetings with Fanning over the past two years
  - Several board meetings

**Educational Benefits of Motivation**

“Harvard Test of Inflected Acquisition” designed to predict academic blooming

The experimental group showed a 12.22 point gain versus an 8.42 point gain for the control group

〜Rosental R & Jacobson L.

Can a Building Be as **Motivating** as a Handful of M&Ms?

**Engagement-Item-Level Response From the Gallup Student Poll - U.S. Overall**

**CONNECTIONS**

<table>
<thead>
<tr>
<th>Connection</th>
<th>N Size</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a best friend in school.</td>
<td>609,392</td>
<td>5 3 6 13</td>
<td>73</td>
</tr>
<tr>
<td>I feel safe in this school.</td>
<td>611,773</td>
<td>5 6 14 20</td>
<td>47</td>
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</table>

**STUDENT-CENTERED**

<table>
<thead>
<tr>
<th>Connection</th>
<th>N Size</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My teachers make me feel my school work is important.</td>
<td>612,645</td>
<td>4 4 13 29</td>
<td>50</td>
</tr>
<tr>
<td>At this school, I have the opportunity to do what I do best every day.</td>
<td>610,367</td>
<td>5 6 17 32</td>
<td>40</td>
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</tbody>
</table>

**INSPIRATION**

<table>
<thead>
<tr>
<th>Connection</th>
<th>N Size</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the last seven days, I have received recognition or praise for doing good schoolwork.</td>
<td>602,017</td>
<td>13 11 19 26</td>
<td>31</td>
</tr>
</tbody>
</table>
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Making Connections –
New Modes of Education

20th Century Classroom

21st Century Classroom

Previous Deerfield Labs
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Student-Centered - Flexibility

How desirable is it to add a variety of rooms, enlarge labs, improve casework, technology, utilities, loose furnishings, etc.?

1. Don’t know
2. Very Undesirable
3. Undesirable
4. Neutral
5. Desirable
6. Very Desirable
Student-Centered – Activity Zones

How important are activity zones to the layout of the science area?

1. Don’t know
2. Very Unimportant
3. Unimportant
4. Neutral
5. Important
6. Very Important

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<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>25%</td>
<td>33%</td>
<td>42%</td>
</tr>
</tbody>
</table>
Student-Centered – Technology

How important is it to integrate three projection screens in science labs?

1. Don’t know
2. Very Unimportant
3. Unimportant
4. Neutral
5. Important
6. Very Important

17% 33% 50%
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[Image of a computer monitor displaying a webpage with images of animals and scientific content.]

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[Image of a monitor showing surveillance camera footage, possibly of a ceiling or wiring system.]
The Inspiration X-Factor

“My school is committed to building the strengths of each student”

“I have at least one teacher who makes me excited about the future.”

Students who STRONGLY AGREE with these two statements are

30x more likely to be ENGAGED at school as students who strongly disagree

Source: 2013 Gallup Poll

EASTER EGGS
Can a building enhance learning?

A Framework for K-12 Science Education: Practices, Core Ideas, and Crosscutting Concepts

1. Patterns
2. Cause and effect
3. Scale, proportion, and quantity
4. Systems and system models
5. Energy and matter
6. Structure and function
7. Stability and change
System and System Models

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Energy and Matter
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Structure and Function

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Stability and Change
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The Learning Landscape begins...