Willma Cavitt Junior High School is a small, traditional school in the Eureka Union School District (EUSD) with declining enrollment. In 2008, our API was 871, Statewide Rank 10 and a Similar School Rank of 2. In 2013, our API was 932, Statewide Rank 10 and Similar School rank of 9. Currently, our enrollment is 370 students.

**Challenges faced:** Cavitt JHS was experiencing a significant number of intradistrict transfers to our sister school due to parental concerns about test scores and climate issues.

**Pivotal Teamwork:** The dedication of every staff member, certificated or classified, was targeted on more clearly demonstrating our genuine interest in our students, our responsibility for excellent academic instruction and our focus on improved student outcomes. The Cavitt team recognizes the achieved improvements from their efforts through our academic data, perceptual data and decrease in the intradistrict transfer rate.

**The Journey:** Our journey began with examining futures research and taking note of the increased opportunities in the Science, Technology, Engineering and Mathematics fields for employment options with strong entry-level salaries. We also took note of the gender differences in the science fields and felt compelled to address that inequity. Concurrently, within all of our classrooms, we implemented changes based on our District’s Vision and Pathways document and Challenge 21 program. Teachers utilized Promethean Boards, voice enhancement systems, project-based learning, and technology-based research and projects in every discipline. Recently, we have transitioned to Google Docs utilizing our mobile computer labs, traditional computer labs and Chrome Book carts.

**Coursework:** Cavitt Junior High School is proud to present our Science, Technology, Engineering and Mathematics courses (STEM) which we offer to our seventh and eighth grade students of all achievement levels. The STEM classes were developed to provide our students, especially female students, the opportunity to delve deeper into science, readying them for 21st Century careers. The elective courses were created to provide rigorous and challenging curriculum to extend, enrich and inspire our students’ understanding and knowledge of science content and concepts. We believe that students need to connect the curriculum with rich, in-depth, real-world applications, providing students’ opportunities to think critically and create original and innovative products while communicating and collaborating. Our courses are taught by credentialed Science teachers; thus allowing students’ natural curiosity to flourish.
We provide two different types of experiences with our STEM courses - a grade-level specific elective course (lasting at least two trimesters) and non-grade-level enrichment courses lasting for one trimester. We also offer other enrichment courses that have a STEM connection. The elective courses are requested by students and our master schedule is built around providing access to the courses for all interested students. The enrichment courses are assigned by our electronic scheduler and are available to all students who have a period available for enrichment. Trimester enrichment courses include Forensics, Science Explorations (utilizing Lego Mindstorms), Technical Arts, Media (TV productions), Yearbook/Digital Journalism and Computers/Coding.

**Academic Results:** The specific monitoring of the effectiveness of our program is through academic achievement data, transfer data, individual family or student perceptual data and the increase demand of our courses.

One measure of our program’s success is our outstanding eighth grade student achievement on the Science 2014 CST’s. Cavitt had 96% of our students who scored at the proficient or advanced level which was above the district, county and state average of performance. We had twenty-one students with a perfect score and twenty students with a near perfect score of 598. Longitudinally, (13/14) 96% of our students were proficient or advanced, the prior year (12/13) 93% of our students were proficient or advanced and previously (11/12) 85% of our students were proficient or advanced. [2015 Science CST achievement was 95%.

Another strong indicator is our data by gender as female students both in percentage of students choosing the Science Strand electives and performance on the CST has increased. Participation rates for female students has risen at a strong pace: 29% of 7th graders and 17% of 8th graders participated in our elective program in 2013, those percentages were 37% and 21% in 2014 and are currently 40% and 40% respectively. CST scores for our female students in 2011 was 81%, 2012 was 92% and 2013 was 96%. (CST scores for our male students in 2011 was 87%, 2012 was 92% and in 2013 was 95%.)

Lastly, our STEM strand has also impacted our non-sibling intradistrict transfer requests as we have seen a reduction of new family requests to leave Cavitt. Additionally, in 2014, 13/28 intradistrict requests to attend Cavitt are for our STEM courses. As a geographically locked school, we were fortunate to have nine interdistrict students choose our school based on our STEM classes in 2014.
7th Grade Science
STEM Elective
Overview

◆ delve deeper into the subject of science
◆ opportunity to collaborate
◆ communicate
◆ think critically
◆ create original and innovative products
◆ apply content to the real world
◆ opportunity to connect our current curriculum with rich, in-depth, real-world applications
## Seventh Grade

<table>
<thead>
<tr>
<th>Course Work</th>
<th>Elective Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells and Genetics</td>
<td>Forensics</td>
</tr>
<tr>
<td></td>
<td>PLTW-Medical Detectives</td>
</tr>
<tr>
<td>Kingdoms</td>
<td>Field Guide</td>
</tr>
<tr>
<td></td>
<td>Animal Presentations</td>
</tr>
<tr>
<td>Body Systems</td>
<td>Prosthetic Arm</td>
</tr>
<tr>
<td></td>
<td>Multi-Media Challenge 21</td>
</tr>
<tr>
<td></td>
<td>Project</td>
</tr>
<tr>
<td>Chemistry of Life</td>
<td>Food Chemistry</td>
</tr>
</tbody>
</table>
FORENSICS

Sand Analysis

Blood Typing

Crime Scene Drawing

Blood Spatter
Finger Printing
Unknown Fibers
Anthropology Forensics
Bite Marks
Guest Speaker: CSI-
Tire Prints  Shoe Prints

Other Evidence: Tool Marks, White powders, Glass, Entomology, DNA, Autopsy
Food Science

Benefits:
- Reduces fine lines & wrinkles
- Improves skin texture & firmness
- Reduces hyperpigmentation, scab tissue, fine lines & stretch marks
- Significantly increases collagen production
- Provides UVSS skin protection

vitamin c

[Image of vitamin c and orange]
Advanced STEM
Arduino Programming- "Little Bits"- arm
Forensics- Autopsy, time of Death, DNA electrophoresis
Human Body- Nervous System, senses, heart rate, pasco probe ware, brain dissection, orthopedic in action- Sawbones
STEM elective for 8th Grade
Design and Modeling
Design and Modeling
AutoDesk Inventor CAD Software
Design and Modeling
MouseTrap Cars
Automated and Robotics
3D Printing