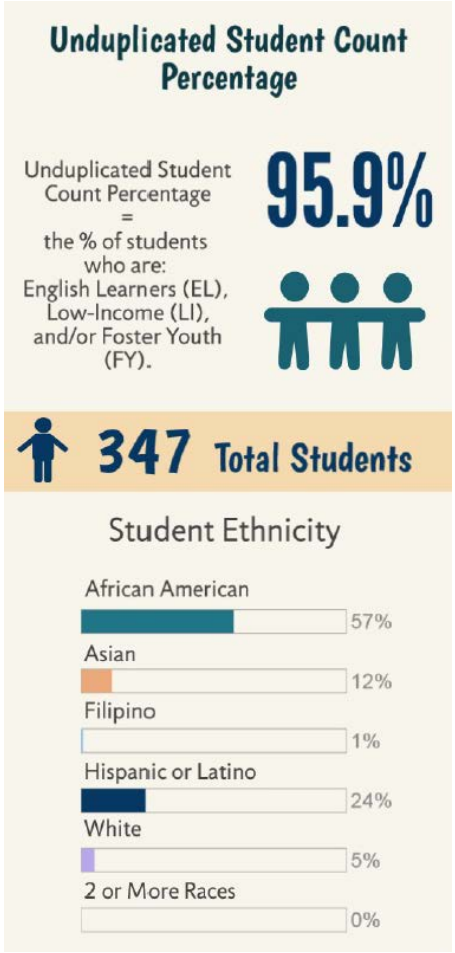
LCAP Actions and Services Report #5

Stege Demographics



- 96% Free/Reduced Lunch
- 27% English Learners
- 14% Special Education

- 17 Teachers
  - 7 First Year Teachers
  - 12 Teachers New to Stege/WCCUSD

Demographics – Support Staff

Support Staff	2013-14 FTE	2014-15 FTE	Change
Resource Specialist	1	2	+1
Para-Professionals	1	2	+1
Psychologist	0.1	0.7	+0.6
Library Media Staff	0.2	0.2	0
Speech/Language Pathologist	0.6	0.6	0
School Community Worker	1	1.5	+0.5
Graduate Tutor	1	1	0
Contracted Services			
Counselor (Social/Behavioral)	1	1	0
Playworks Coach	1	1	0
Music Teaching Artist	0	0.4	+0.4
Mindfulness Teaching Artist	0.4	0.4	0

Stege 2014-15

Program Implementation Year 1

Year 1 – Academic Program

* **Extended Day** – 195 instructional minutes added per week (provided 116 hours of additional instruction)

* **Class Size Reduction** – Average class size is 23 students per class TK – 6 (No combination classes)

* **East Bay Center for Performing Arts Music Program** Weekly music lessons, choral and instrumental, every student, 45 minutes per week

Year 1 – Academic Intervention

Regular School Year Program

* Tier 2 Daily Intervention – RLA instructional blocking for all students

ExCEL Model: *The Excellence-Commitment-and-Effective-Learning Program*, 45 minutes of targeted RLA instruction

* Tier 3 Intervention – Pilot Learning Center Model

Dual Learning Center: *2 Resource Specialists, 2 Para-Professionals served 63 students daily for small group intervention in RLA and Math*

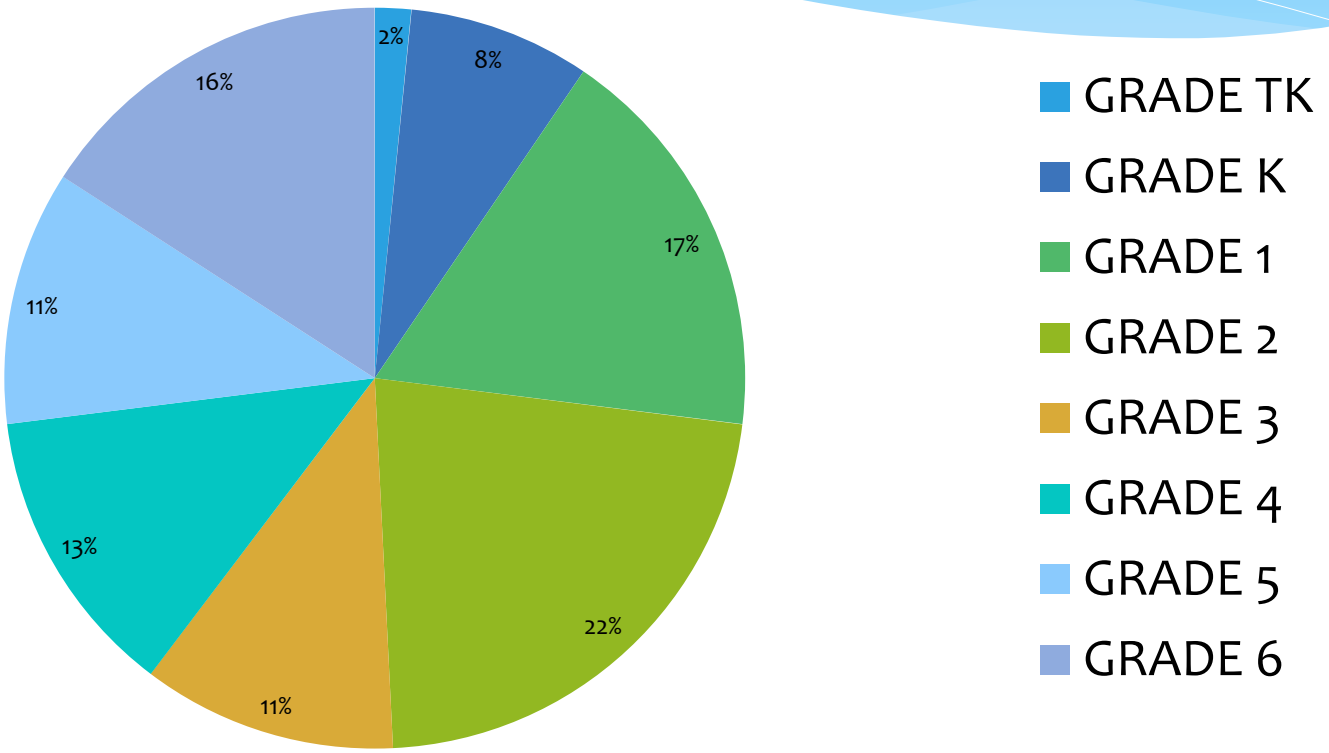
Summer Intervention Program

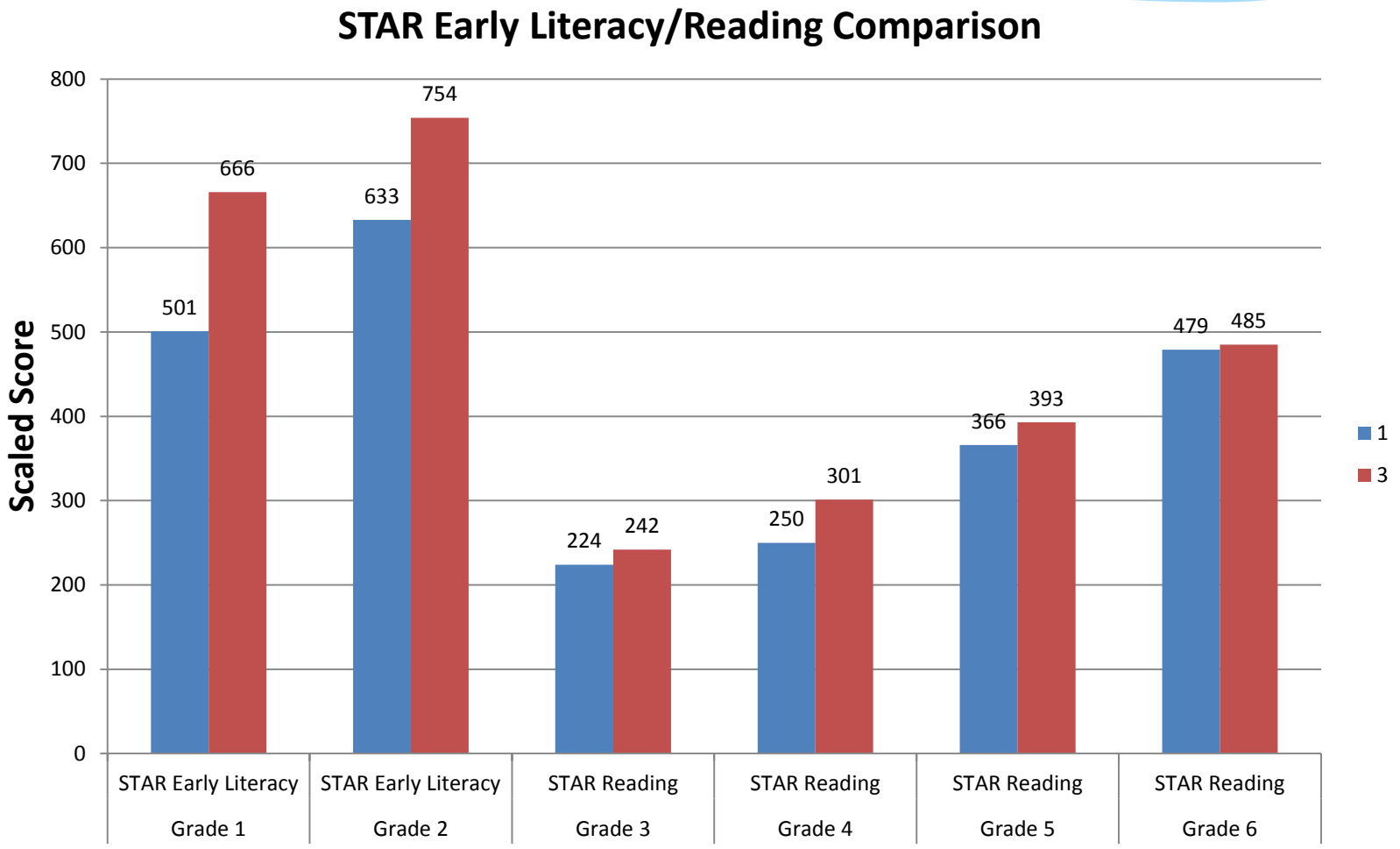
RLA Leveled Instruction, across grade levels, 4 teachers, 4 levels, 60 students, Technology Focus

Stege Elementary RLA 2014-15

STEGE LEARNING CENTER

63 STUDENTS DAILY

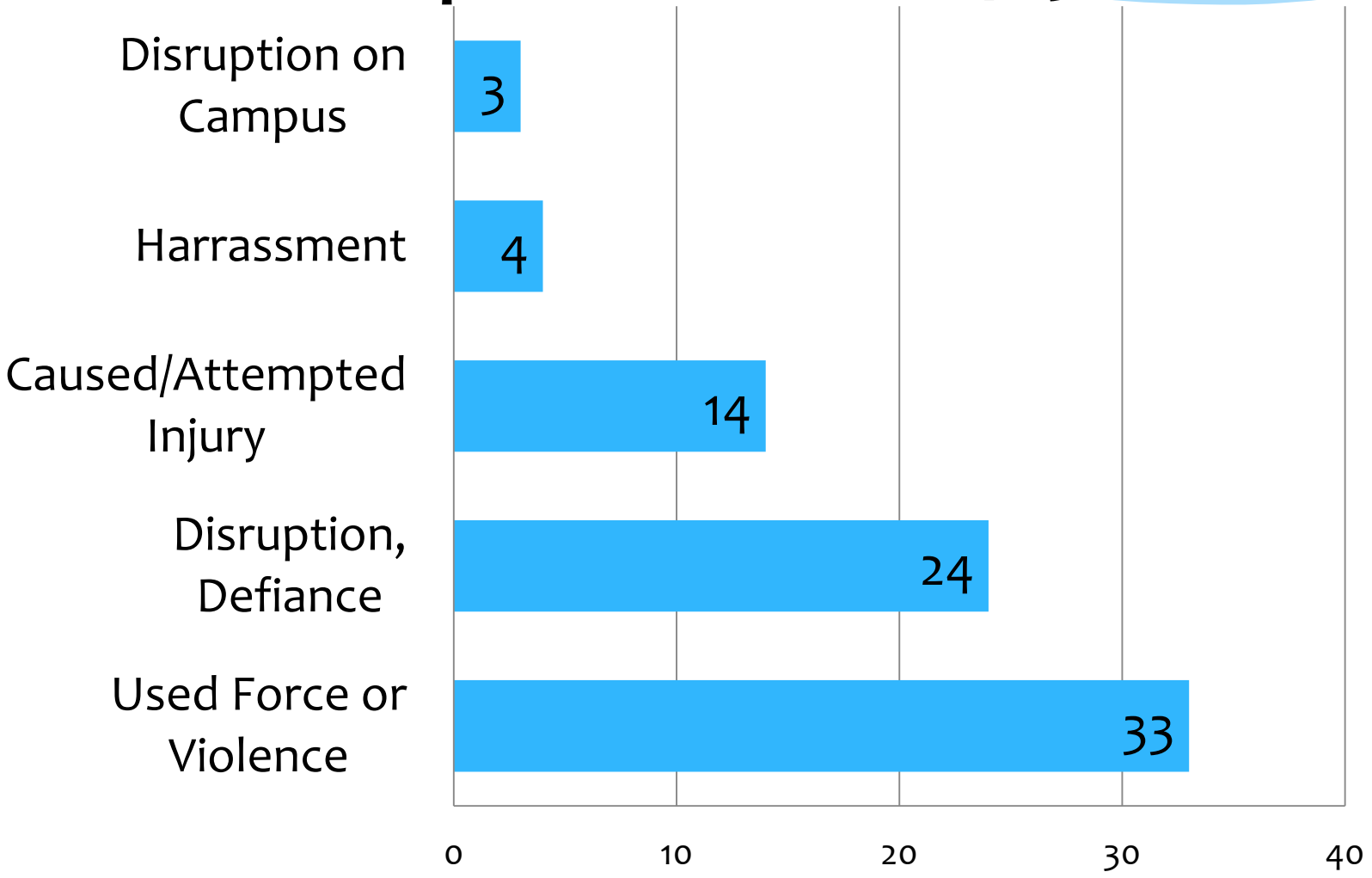



STAR Early Literacy/Reading Comparison
Scaled Score
800
700
600
500
400
300
200
100
0
501
666
633
754
224
242
250
301
366
393
479
485
STAR Early Literacy Grade 1
STAR Early Literacy Grade 2
STAR Reading Grade 3
STAR Reading Grade 4
STAR Reading Grade 5
STAR Reading Grade 6
1
3

Year 1 – Social/Emotional Support Services

* Increased FTE for School Psychologist
* BACR Counseling Services – Increased caseload and student intervention support
* Student support programs include Mindful Life, Tool Box Program, Playworks

Suspension Data 2014-15



Year 1 – Parental Involvement

* Back-to-School BBQ in the Park
* Family Learning Series – Literacy Night, Family Reading Night, Family Science Night
* CARE Team/ Student Success Team Meetings
* Increased participation in SSC
* Increase in number of school volunteers

Next Steps for 2015-16

2015-16 – Academic Program

* **Compartmentalized Teaching** – Collaborative teaching with RLA/Social Studies Block and Math/Science Block
* **Class Size Reduction** - No combination classes
* **Extended Day Intervention Support** for Targeted Students
* **Increased Site-Based Professional Development** for Staff
* **Increased Use of Technology/Digital Learning** – Apple ConnectEd Grant
* **Continued Arts Enrichment** with EBCPA

2015-16 – Social/Emotional Support Services

* **Restorative & Trauma Informed Practices**
* **Continued Counseling Services with BACR**
* **Increase Psychologist Intervention Support**
* **Mindful Life and Tool Box Programs**

2015-16– Parental Involvement

Goal = To increase parent participation and community support by:

* Continuing the Family Learning Night Events
* Hosting bi-monthly Outreach Events
* Increasing home-school partnership for our targeted intervention students

STEGE STARS… RISING UP!

STUDIOUS

THOUGHTFUL

ACCOUNTABLE

RESPECTFUL

SAFE

QUESTIONS?

Science, Technology, Engineering and Mathematics (STEM):

The Emerging WCCUSD Model

Fab Lab @ Kennedy, Mobile Fab Lab, and Hybrid Fab Lab
STEM Community Centers
STEM-West CaMSP grant
Project Lead the Way (PLTW)

WCCUSD FAB LAB

- A Fab Lab is a fabrication laboratory internationally connected and developed in partnership with Chevron and MIT Center for Bits and Atoms
- Kennedy Fab Lab will serve K-12 and the community
- Hybrid Fab Lab at Crespi Middle School
- Mobile Fab Lab

Physically a Fab Lab is an advanced digital fabrication laboratory that consists of a suite of fabrication and rapid prototyping machines.

These machines include:

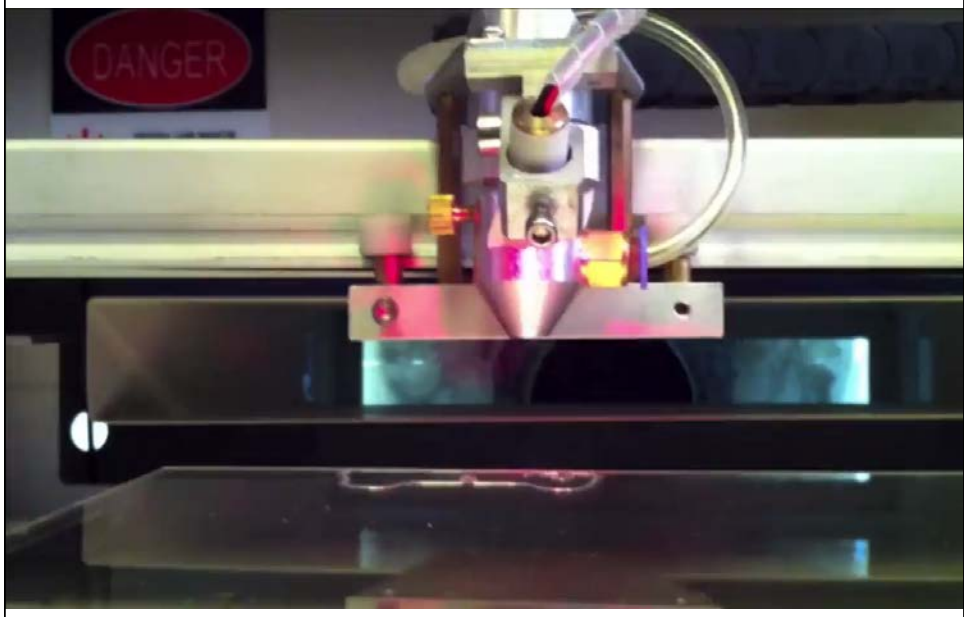
- a laser cutter
- a large CNC Router (Shopbot)
- a 3D printer and the accompanying computers and software
- a 3D desktop mill and scanner
- a vinyl cutter
- an electronics work bench

Laser Cutter

Wooden Hand Bowl

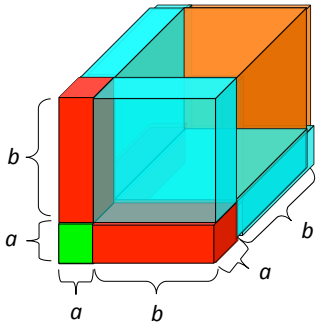
A Dinosaur Model

Graphic Art



Connecting Making to Content

$$(a+b)^3$$
$$=(a+b)(a+b)(a+b)$$
$$=(a+b)(a^2+ab+ab+b^2)$$
$$=(a+b)(a^2+2ab+b^2)$$
$$=a^3+3a^2b+3ab^2+b^3$$



a^3 $+ 3a^2b$ $+ 3ab^2$ $+ b^3$

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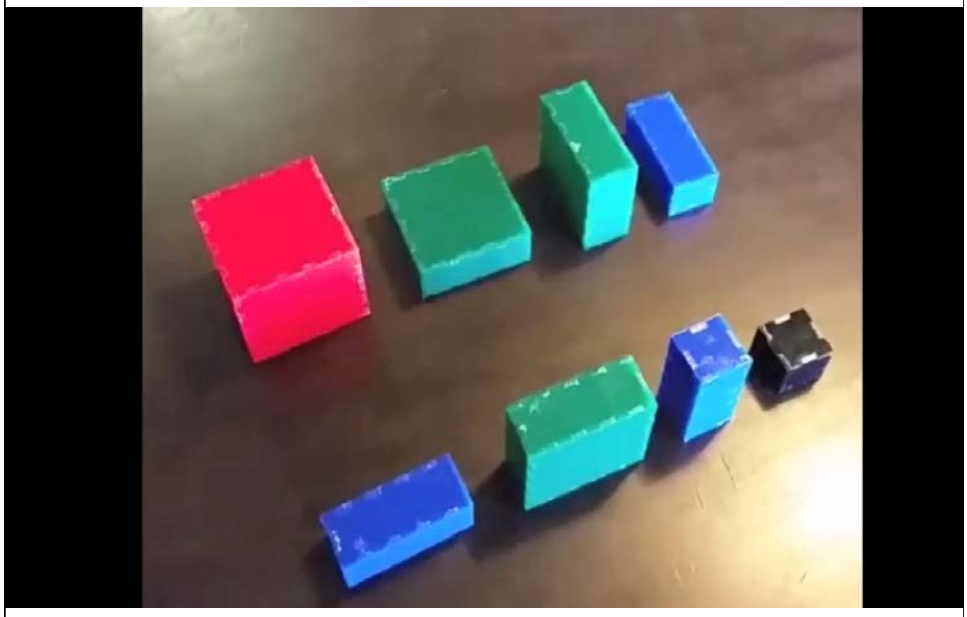
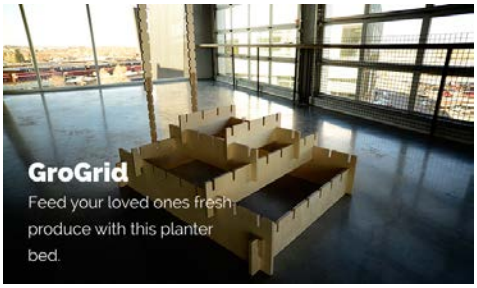
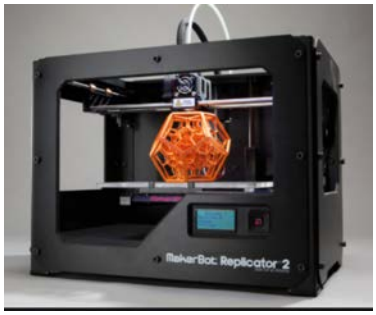


Large CNC Router (the Shopbot)

October 24, 2015 JFK Park Revitalization – Community Build Park Program



3-D Printers



Platonic Solids

3D desktop mill and scanner

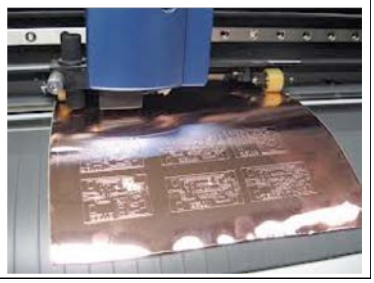
Boxes

Molds

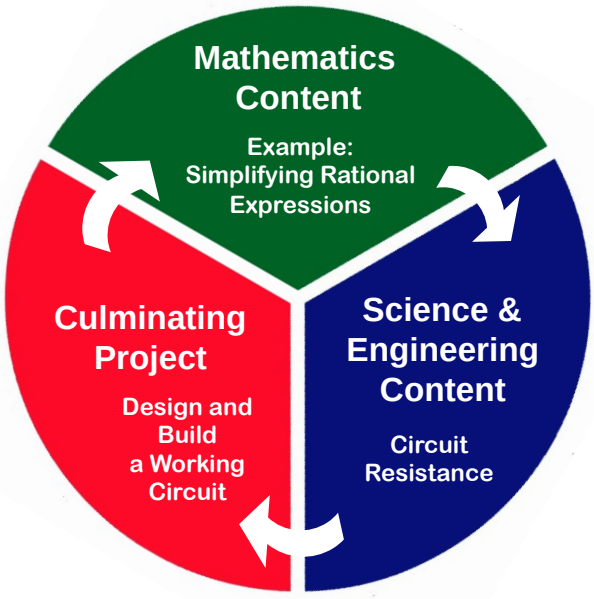
Vinyl Cutter

Posters

Circuits



STEM Curriculum Development Cycle



Connecting Fractions and Rational Expressions: A Look Through the Grades

Mathematics Content

Example: Simplifying Rational Expressions

What "math" word do you see in "rational?" [Ratio]

What does that word mean to you? [Elicit student responses and include a few examples.]

Definition: A ratio is a comparison of numbers by division, typically expressed as $\frac{a}{b}$, where $b \neq 0$.

(There are several ways to express ratios; when working with rational expressions in Algebra and beyond, we typically see them as quotients.)

Definition: A rational number is any number that may be expressed as $\frac{a}{b}$, where a and b are contained in the set of integers and $b \neq 0$.

- When we do work with fractions, we are working with ratios. Thinking about how we work with fractions will assist us in thinking about and working with rational expressions.

Opening for discussion:
What types of operations are we asked to do with fractions? How do you know what to do? When? Why?

- Have students generate different examples of problems and tell you how to do them.
- Allow for students to list/explain multiple methods.
- Note that the list shown below is not an exhaustive list of methods but simply a sample of responses.

Visual (example)	Operation	How to approach:
$\frac{8}{12}$	**Simplify** (Numerator and Denominator must be relatively prime, only common factor is 1)	Prime Factor and find equivalent forms of one. Divide out common factors.
$\frac{7}{8} \cdot \frac{4}{3} = \frac{7}{6}$	**Multiplication**	Multiply across, prime factor and

Science & Engineering Content

Circuit Resistance

Addition of Fr… … Expressions

Engineering Connectio… …dents will be exposed to basic con… …ound using the addition of fractions.

Reinforces Lessons: Connecti…

Figure 1: San Francisco Christmas Tree during the night

…add and subtract *fra…* … electrical engineer and you are … ***…g the lighting for the San Francisco Ch… …t Union Square.*** Your task is to find the ***tota… … required to light the whole tree. In order to find the power, you must calculate the resistance of the wiring and lights to the flow of electricity. As shown in the picture, the lighting system consists of the yellow lights, electric red ornaments, and the star.*** Let's review what some of these words mean first.

Fraction: a fraction is one quantity divided by another quantity. The fraction "four divided by five" or "four over five" or "four fifths" can be written as 4 ÷ 5, 4/5 , or

Circuit: An electric circuit typically consists of various types of electric devices such as lights, or any other electric device connected to an electric source like a battery through electric wires

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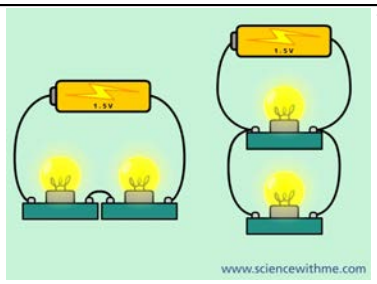


Figure 2: Left-In-Series Circuit. Right-Parallel Circuit

There are two types of electric circuits: parallel and in-series. A parallel circuit is when devices are connected parallel to each other and the in-series circuit is when devices are connected in series. The picture on the left shows two bulbs connected to a battery in series and the second shows the same lights connected in parallel. In-series circuits the resistance to the flow of electricity is equal to the resistance created by wiring and all the lights and other devices connected to it.

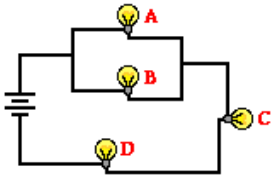
When devices are connected in-series the formula for total resistance is as follows

$$Rtotal = R1 + R2 + R3 + \cdots.$$

When devices are connected in parallel the formula for total resistance is as follows

$$\frac{1}{Rtotal} = \frac{1}{R1} + \frac{1}{R2} + \frac{1}{R3} + \cdots$$

The San Francisco Christmas tree lighting is an example of a complex circuit that combines both parallel and in-series circuits. The light bulbs in each section are connected in series and then the sections are connected in parallel similar to the picture to the right. Therefore for the Christmas tree example, assume the lights in each color are

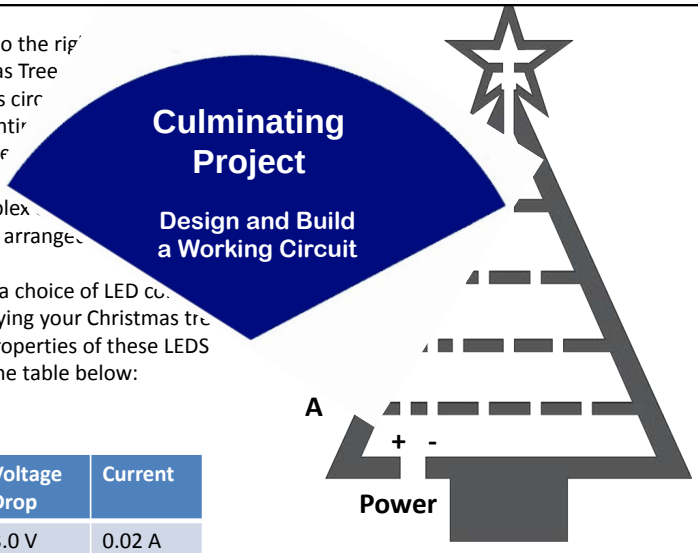


The drawing to the ri
for a Christmas Tree
be cutting this circ
cutter and lighti
Emitting Diod
San Francisc
tree is a complex
series circuits arrange

You will have a choice of LED c
when electrifying your Christmas tr
circuit. The properties of these LEDS
are listed in the table below:

LEDs:

Color	Voltage Drop	Current
Green	3.0 V	0.02 A
Red	2.0 V	0.02 A
White	3.2 V	0.02 A
Orange	1.9 V	0.02A



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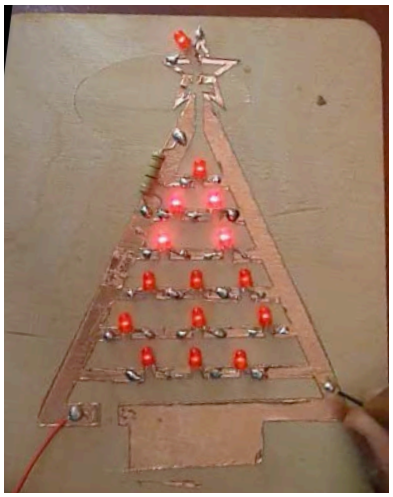

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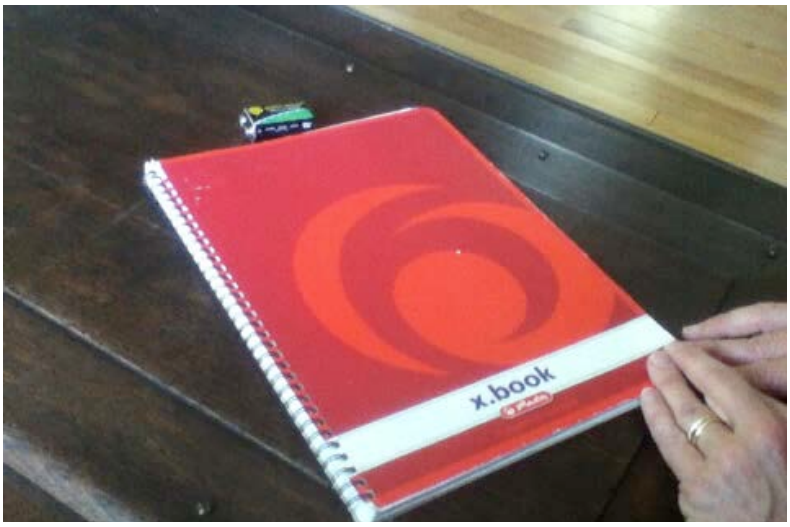

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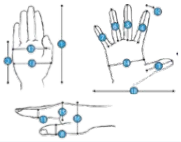
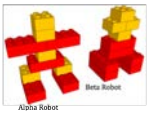
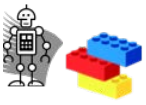
Other Curriculum in Development

Mathematics Content	Science & Engineering Content	Culminating Activity
Rational Expresions	Transamerica Building in S.F. – Wind Force, Dead Load, Safety Factor 	Building a scale model for wind testing 
Arithmetic Sequences	Ergonomics 	Building a prototype 
Graphing Linear & Systems of Inequalities	Operations Research, Linear Programing, and Robotics  Alpha Robot	Building Robots 

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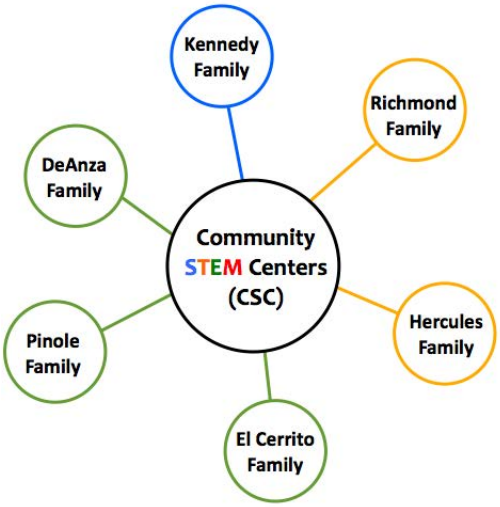
WCCUSD Mobile Fab Lab

WCCUSD Community STEM Centers (CSC)



Proposed CSC activities:

After school academic support:
Provide weekly after school academic support, by Chevron employees, grad tutors, MESA, and peer tutors (e.g., through Pathways and Service Learning).

STEM classes/workshops:
Provide classes/workshops for students and families. These classes/workshops will be provided by coaches, teachers, WCCUSD Adult Ed, MESA, Chabot Science Center, EBAYS, and others.

Additional community outreach:
Family Math Nights, Science Nights, technology trainings, college readiness workshops, career nights, Pathways informational nights, and science fair support. Programs will be developed and implemented by coaches, teachers, Chevron employees, WCCUSD students, and community members.

Teacher & Community Lending & Resource Library:
Develop lending & resource libraries (science kits/experiments, math workshops, college and career resources)

CCSC Webpage
Develop and maintain a resource and information CCSC webpage

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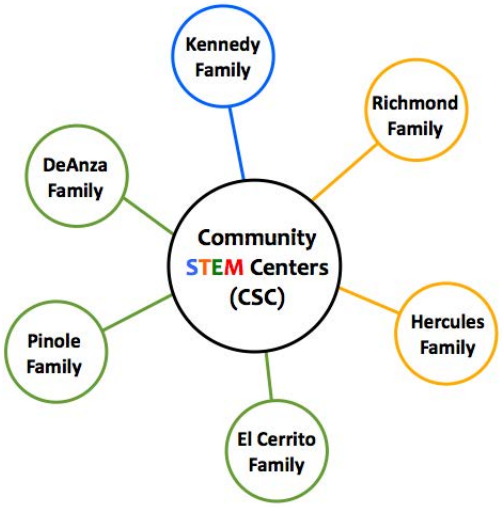
WCCUSD Community STEM Centers (CSC)



Kennedy Family - KHS Fab Lab

DeAnza Family - Crespi Hybrid Fab Lab

Pinole Family - Pinole MS

El Cerrito Family - El Cerrito HS

Hercules Family - Lupine Hills

Richmond Family - Downer ES

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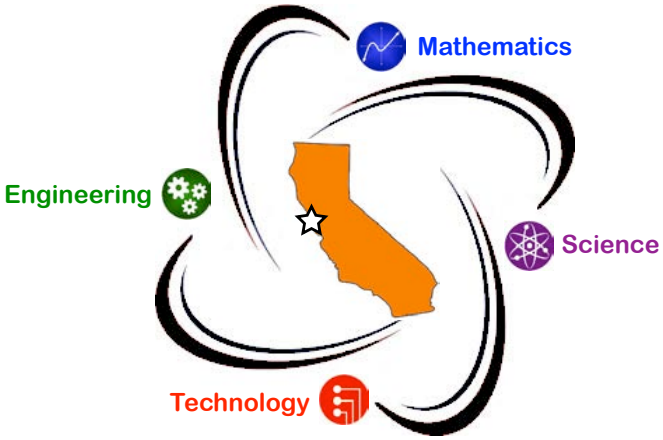
STEM-West



STEM-West is a
California Mathematics and Science Partnership grant
from the California Department of Education

West Contra Costa Unified School District

Project Lead The Way

Project Lead The Way provides a comprehensive approach to STEM Education. Through activity-based, project-based, and problem-based curriculum, PLTW gives students a chance to apply what they know, identify problems, find unique solutions, and lead their own learning.

High School Programs:
Biomedical Science
Engineering

Middle School Program:
Gateway to Technology

WCCUSD is leading the way for STEM in K-12

Participated on the White House Panel Discussion:
Connecting "Making" to Education