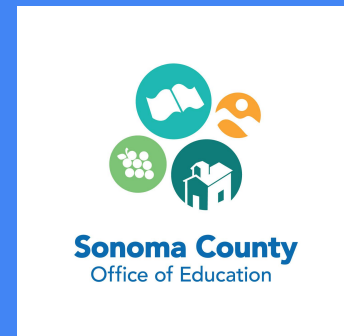


The Growth of Maker Education in Sonoma County Schools



Dan Blake

Director, Innovation & Partnerships
Sonoma County Office of Education

April 7, 2016



@DanBlake51

Director of Innovation & Partnerships

Industrial Arts

Artists

Chemistry “Magic”

Hands-on Science

Engineering

Makers

Musicians

Green Tech

DIY

Tinkerers

Recycling

Alternative Energy



S.T.E.A.M.

Young Makers

Robotics

Digi-tech

Crafts

THE MAKER MOVEMENT

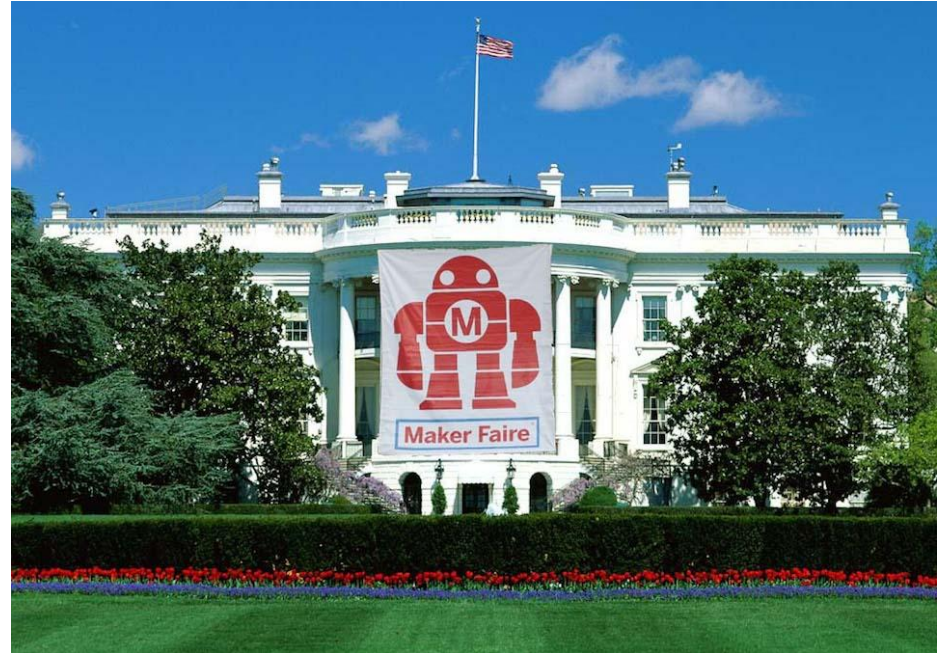
AN EXTENSION OF DIY CULTURE WITH AN EMPHASIS ON **TECHNOLOGY, ENGINEERING AND FABRICATION**. MAKERS USE A COMBINATION OF HOME TOOLS, EQUIPMENT AT LOCAL HACKERSPACES, AND **ONLINE FABRICATION SERVICES** TO **BUILD, PROTOTYPE, MAKE AND MANUFACTURE** ALL KINDS OF THINGS. THE MAKER MOVEMENT VALUES **COMMUNITY & COLLABORATION**, OPEN SOURCE MODELS, AND A SPIRIT OF *experimentation*.



"Across our country, ordinary Americans are inventing incredible things...And you never know where this kind of enthusiasm and creativity and innovation could lead."

-President Obama speaking at the first-ever White House Maker Faire in 2014

MAKERS
THE NEW
INDUSTRIAL
REVOLUTION



MAKER EDUCATION

Maker Education is an instructional philosophy that insights a change in how students interact with technology. Students become creators, rather than consumers. Through the creation of physical artifacts, students engage in authentic learning experiences that accesses their prior STEAM knowledge.

**STUDENTS BECOME CREATORS,
NOT CONSUMERS.**

MAKER EDUCATION



1758

Education should
"allow students to
develop freely in
nature."

Rousseau



1840

Kindergarten is a
place where
students are not to
be in classrooms,
but labs of play.

Froebel



1976

Demanded that
school officials
integrate
discovery learning
programs.

Piaget

“Students thrive in an environment where they are allowed to experience and interact with the curriculum, and all students should have the opportunity to take part in their own learning.”

-John Dewey (1859-1952)

IF YOU
LET THEM
BUILD IT,
THEY
WILL
LEARN!

Laura Fleming

WHAT ARE 21ST CENTURY SKILLS? THESE 4 C's:

C

COMMUNICATION

Sharing thoughts,
questions, ideas &
solutions

C

COLLABORATION

Working together to
reach a goal. Putting
talent, expertise,
and smarts to work

C

**CRITICAL
THINKING**

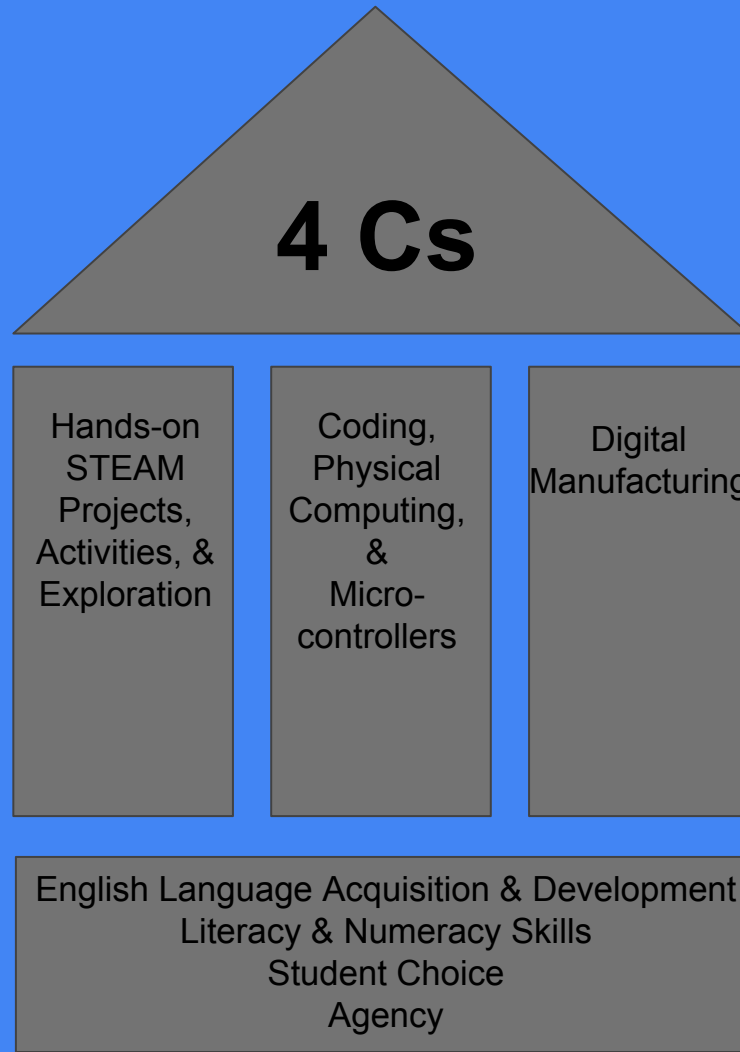
Looking at problems in
a new way and linking
learning across
subjects & disciplines

C

CREATIVITY

Trying new approaches
to get things done equals
innovation & invention

3 Primary Areas of Maker Education



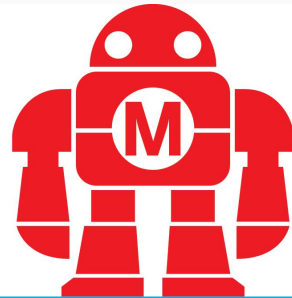
LOCAL ROOTS

...

Make:




MAKER MEDIA

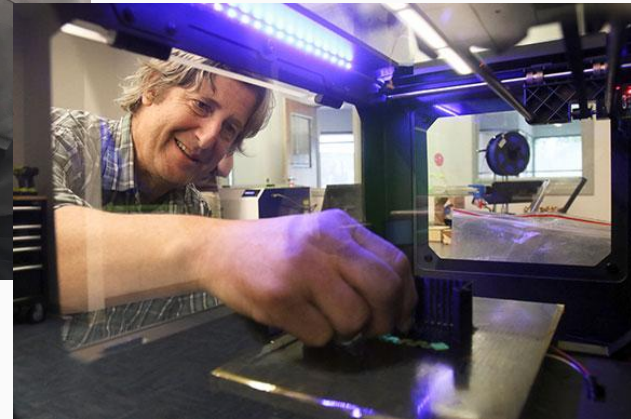


Maker Faire®



Project: Make @ Analy High School

Started in 2010





MAKER
CERTIFICATE



Sonoma County
Office of Education



Make:



Sonoma County
Office of Education

Promoting maker
education across
California



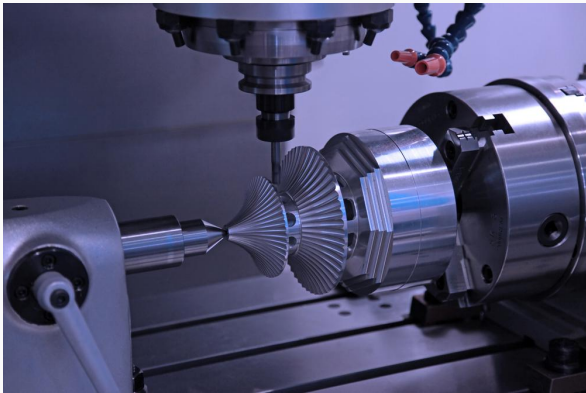


So what's happening in Sonoma County Schools??



15,000 square foot community
makerspace opening later this
year in Santa Rosa

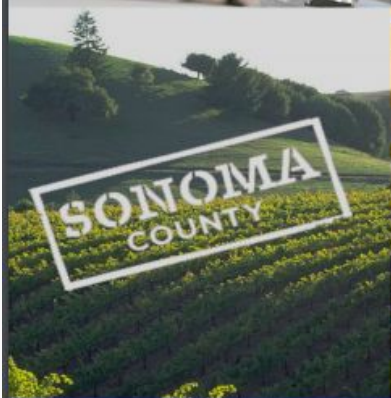
A dynamic space for North Bay Makers





reMAKE
education
a maker summit for educators

August 3-5, 2016



Three days of...

Making, Learning, Networking

remakeeducation.org



SCOE is hosting a
national summit on
Maker Education in
August 2016

www.remakeeducation.org

Where do we go from here?

- NSF Grant opportunity
- Focus on underrepresented populations
- Integration w/core academics

"If we teach today
as we taught yesterday,
then we rob our children
of tomorrow"

-John Dewey

Special Invitation...

Save the date!



The Art & Science of Possibility

Thursday, June 9 | 5:30-8:30pm

FEATURED KEYNOTE

Benjamin Zander: The Art of Possibility

Weill Hall at Sonoma State University's Green Music Center

Friday, June 10 | 8:00am-12:00pm

FEATURED KEYNOTE

Dr. Ainissa Ramirez:

Our Sputnik Moment in STEAM Education

Jackson Theater at Sonoma Country Day School

Friday morning event will also include short talks and a panel discussion featuring local teacher and student innovators.

iesonoma.org

Founding Partners



ieSonoma is a public and private
partnership for education.

BEAT

LAW

Contact information...

Dan Blake

Director, Innovation & Partnerships
Sonoma County Office of Education

Email: dblake@scoe.org

Phone: 707-974-8889

Twitter: [@DanBlake51](https://twitter.com/DanBlake51)

