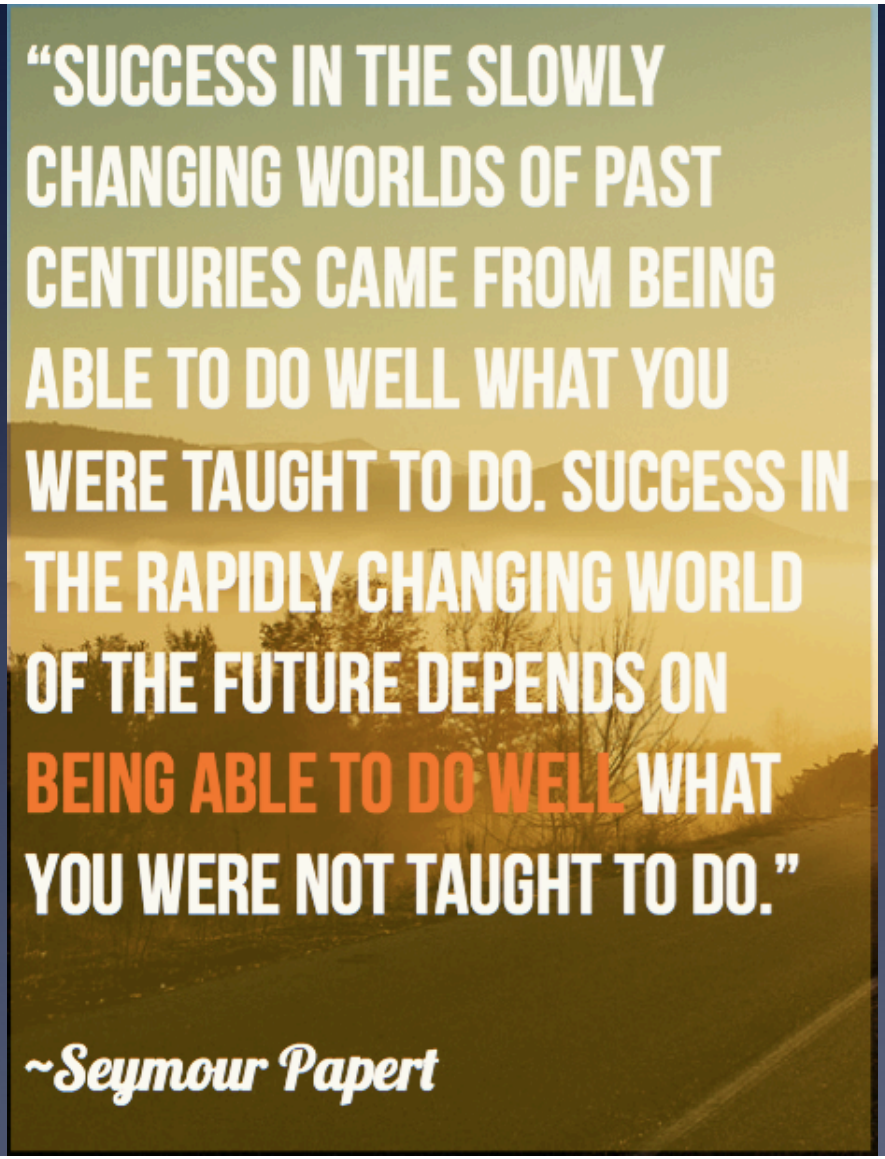
Innovation in Learning Study Group
Report to the School Committee
October 19, 2016


"SUCCESS IN THE SLOWLY CHANGING WORLDS OF PAST CENTURIES CAME FROM BEING ABLE TO DO WELL WHAT YOU WERE TAUGHT TO DO. SUCCESS IN THE RAPIDLY CHANGING WORLD OF THE FUTURE DEPENDS ON BEING ABLE TO DO WELL WHAT YOU WERE NOT TAUGHT TO DO."
~Seymour Papert

How do we respond?

INNOVATION IN LEARNING STUDY GROUP
SHREWSBURY PUBLIC SCHOOLS

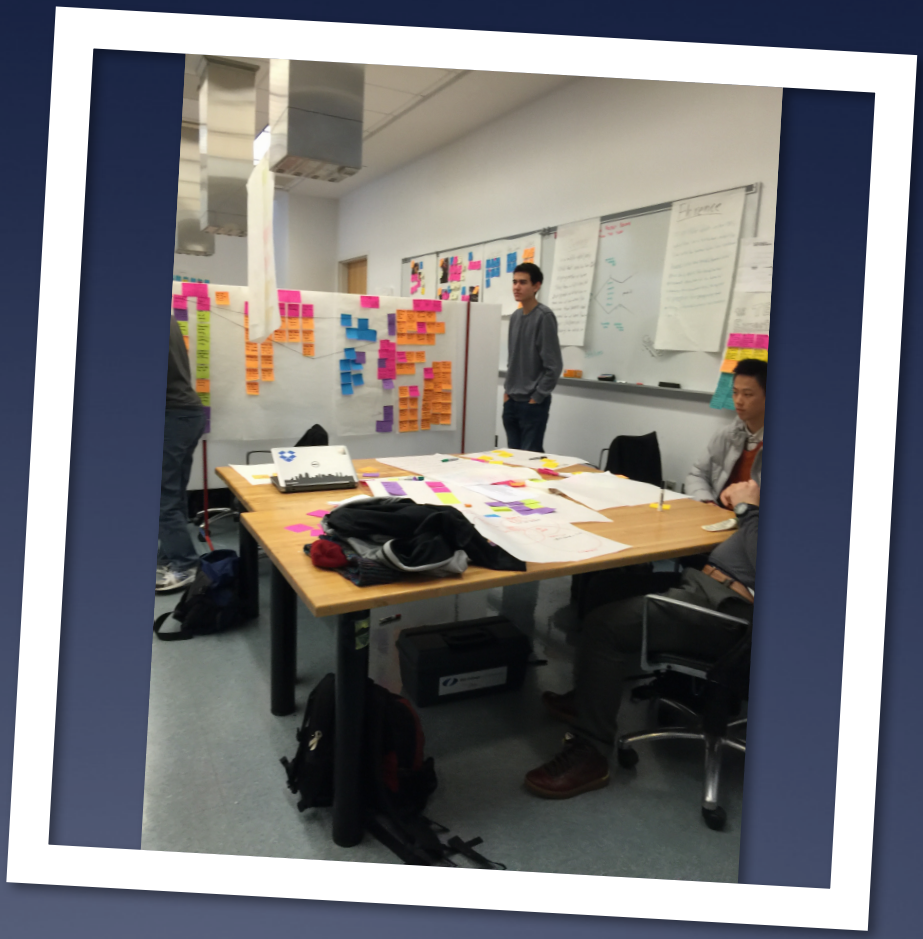
Tiffany Ostrander (Elementary Administration)
Erin Kendrick (Elementary)
Heather Gablaski (Middle Administration)
Moira Cristy (Middle ELA 6)
Megan Graham (Middle Math/Science 5)
Melissa McCann (Middle Curriculum Coordinator/Math)
Ann Jones (Middle Administration)
Jeremy Mularella (Middle Science 8)
Maura Egan (Middle ELA 8)
Jose Schroen (SHS Science/Math)
Jill Carter (SHS Science)
Sarah Powers (Special Education)
Shawna Powers (K-12 Department - Instructional Tech and Media)
Mary Beth Banios (District - Curriculum and Instruction)
Erin Canzano (School Committee)
B. Dale Magee (School Committee)

Worcester Technical High School

Worcester, MA

Olin College of Engineering

Needham, MA

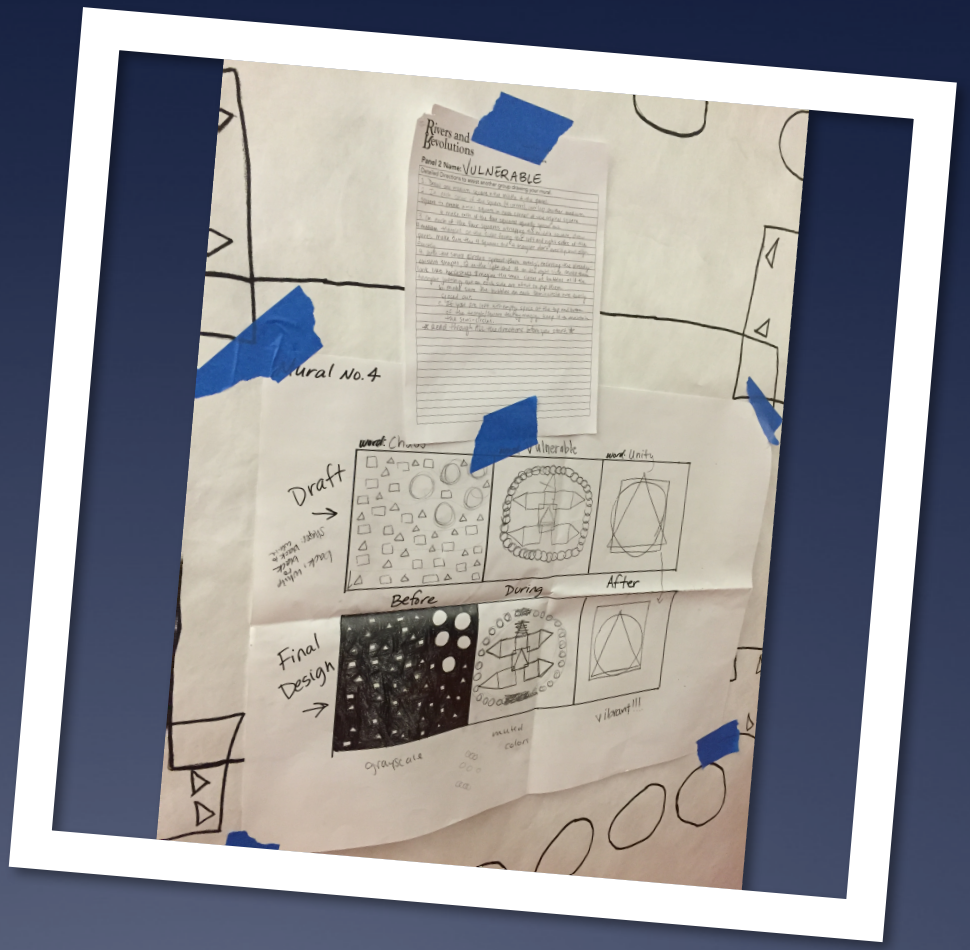


High Tech High

Campuses in San Diego, CA
and Chula Vista, CA

Rivers and Revolution Program

Concord-Carlisle High School
Concord, MA



Beaver Country Day School

Chestnut Hill, MA

King Middle School

Portland, ME

Common Themes

Across These Innovative Environments

Common Vision

- Schools started with a clear vision; instruction and culture matched vision
- Empowered faculty
- On-going communication with all stakeholders regarding mission and vision


The Olin Effect
/T͟Hə ō'lin ə'fekt/
noun
The heightened state of engagement, creativity and productivity that comes from taking control of your own education.
THE WIRE
Olin's online news channel
TEAM BUILDING WITH NEW STUDENTS
ORIENTATION 2015
> VIEW PHOTOS
olin.edu/the-wire

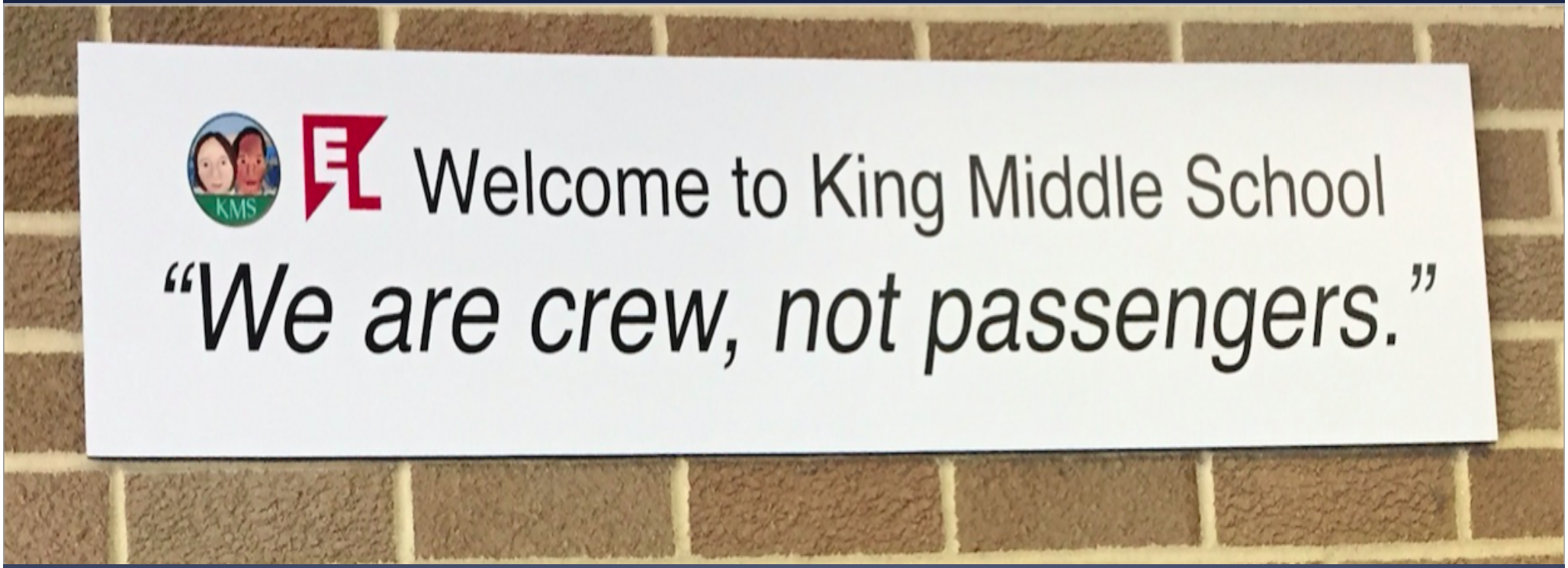
NEW BASICS

- Creative Problem-Solving
- Collaboration
- Tech & Media Literacy
- Iteration
- Visual Communication
- Empathy
- Presentation Skills

The 21st Century
MOUNT VERNON MIND

Sense of Community

Relationships Matter
Families Connect to Classroom
Community Partnerships
Both individuality and community are valued

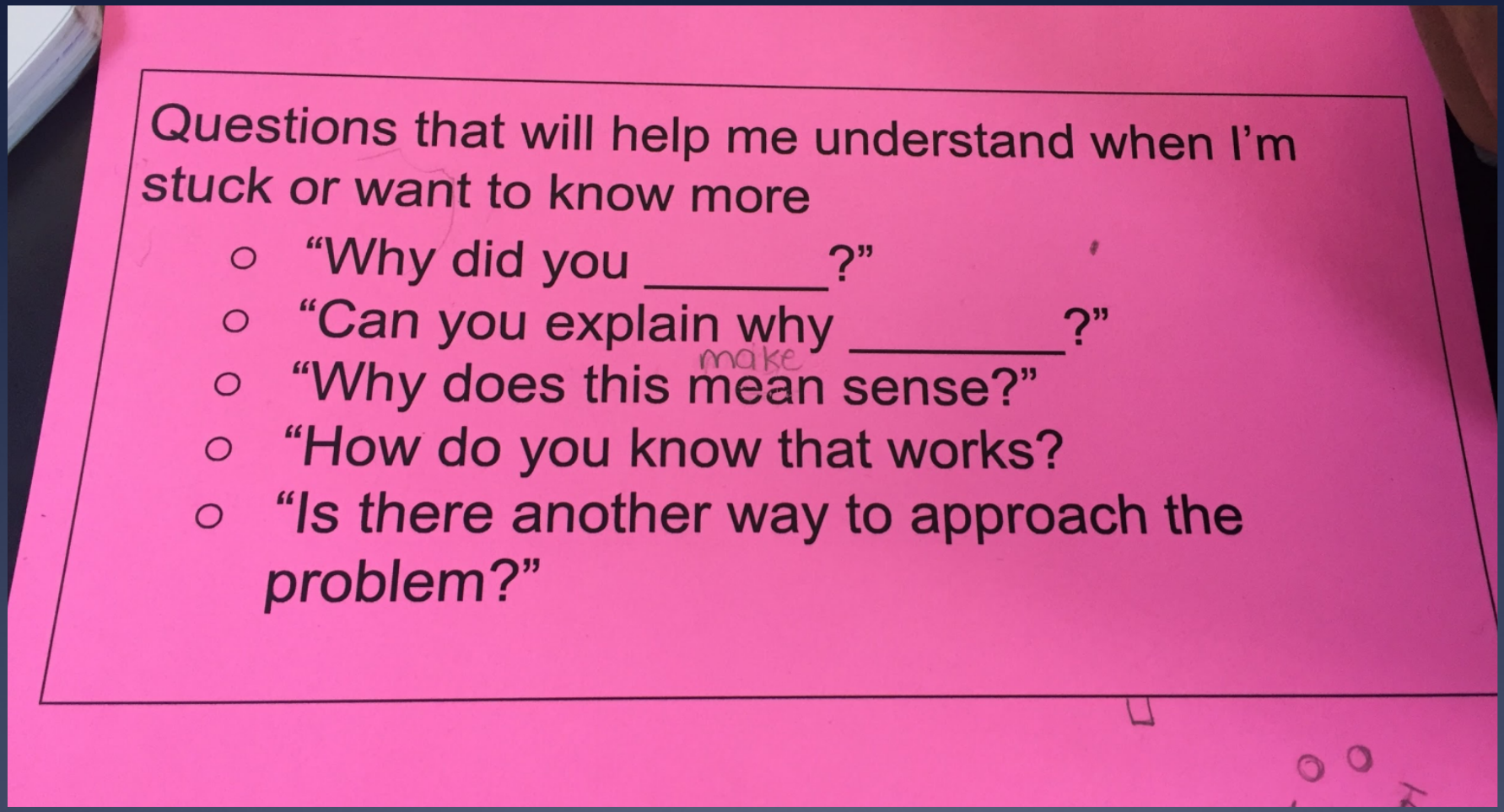

KMS
Welcome to King Middle School
"We are crew, not passengers."


support
college
embedded
buy-in
content
choice
teams
creativity
process
experiences
Scheduling
culture
make
student
level
mindset
program
courses
time
PD
Middle
opportunities
focus
complex
relationships
homework
students
planning
home
audience
work
school
challenges
AP
Focus
Interdisciplinary
Start
School
community
teachers
Planning
district
faculty
instruction
internships
schedule well
vs
teacher
collaboration
kids
skills
learning
vision
take
within
projects
etc
classes
education
Student
SHS
empowered
feel
building
special
model
PBL
schools
Allied

Inclusion & Equity

- No "one size fits all"
- Heterogeneous groupings
- Teaching teams
- Challenge: access points for all students populations


I WONT GO
TO SCHOOL
WITH NEGROES
200 GUNS WILL BE FIRED
I WANT TO
SCHOOL BECAUSE
SEGREGATION
LETTER FROM
BIRMINGHAM JAIL
1963
THE CHILDREN'S
CRUSADE
MARCH ON
WASHINGTON
AUGUST 28, 1963
CIVIL RIGHTS ACT
1964
DELANO
GRAPE STRIKE
1965 - 1970
LOS ANGELES RIOTS
1992
POST-9/11
2001
BARACK OBAMA
ELECTED
2008
EQUITY


Questions that will help me understand when I'm stuck or want to know more
"Why did you _____?"
"Can you explain why _____?"
make
"Why does this mean sense?"
"How do you know that works?
"Is there another way to approach the problem?"

Mindset

Students believe…

- Effort & perseverance → growth
- Kind, helpful, & specific critiques → improvement

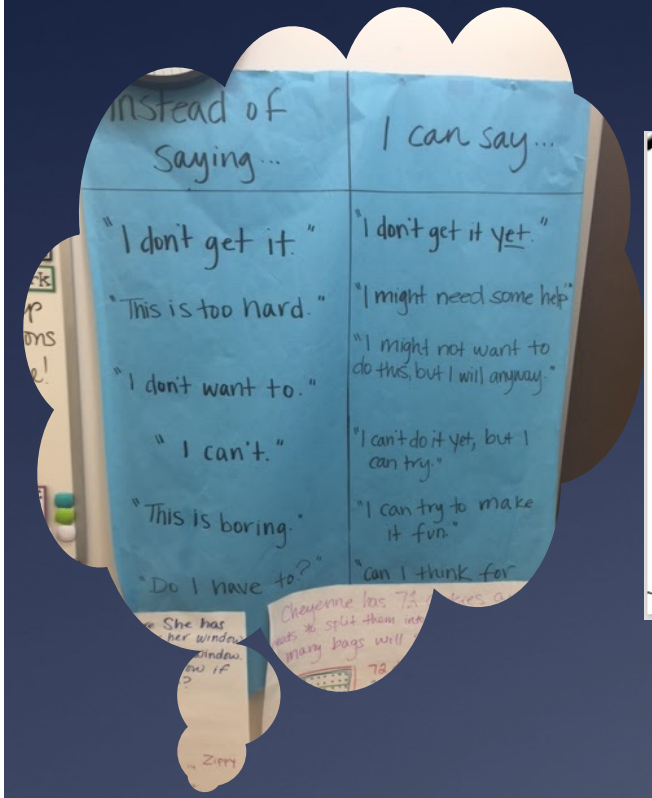
Students know…

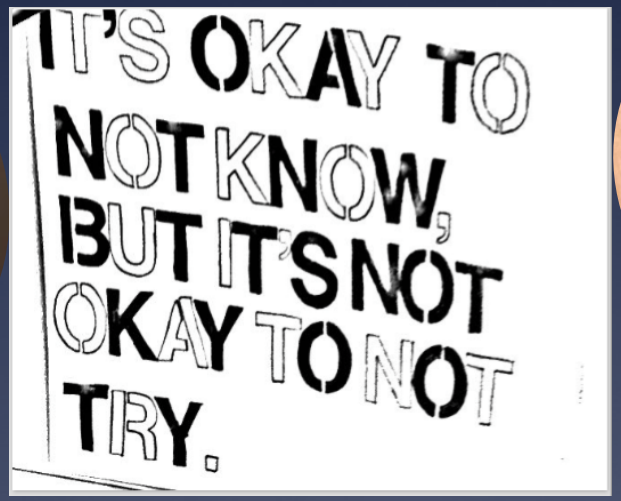
- Empathy is at the heart of design

Students understand…

- Achievement does not come without risk or failure
- Each individual takes responsibility for his or her own success as a learner

Mindset


Instead of Saying...
I can say...
"I don't get it."
"I don't get it yet."
"This is too hard."
"I might need some help"
"I don't want to."
"I might not want to do this, but I will anyway."
"I can't."
"I can't do it yet, but I can try."
"This is boring."
"I can try to make it fun."
"Do I have to?"

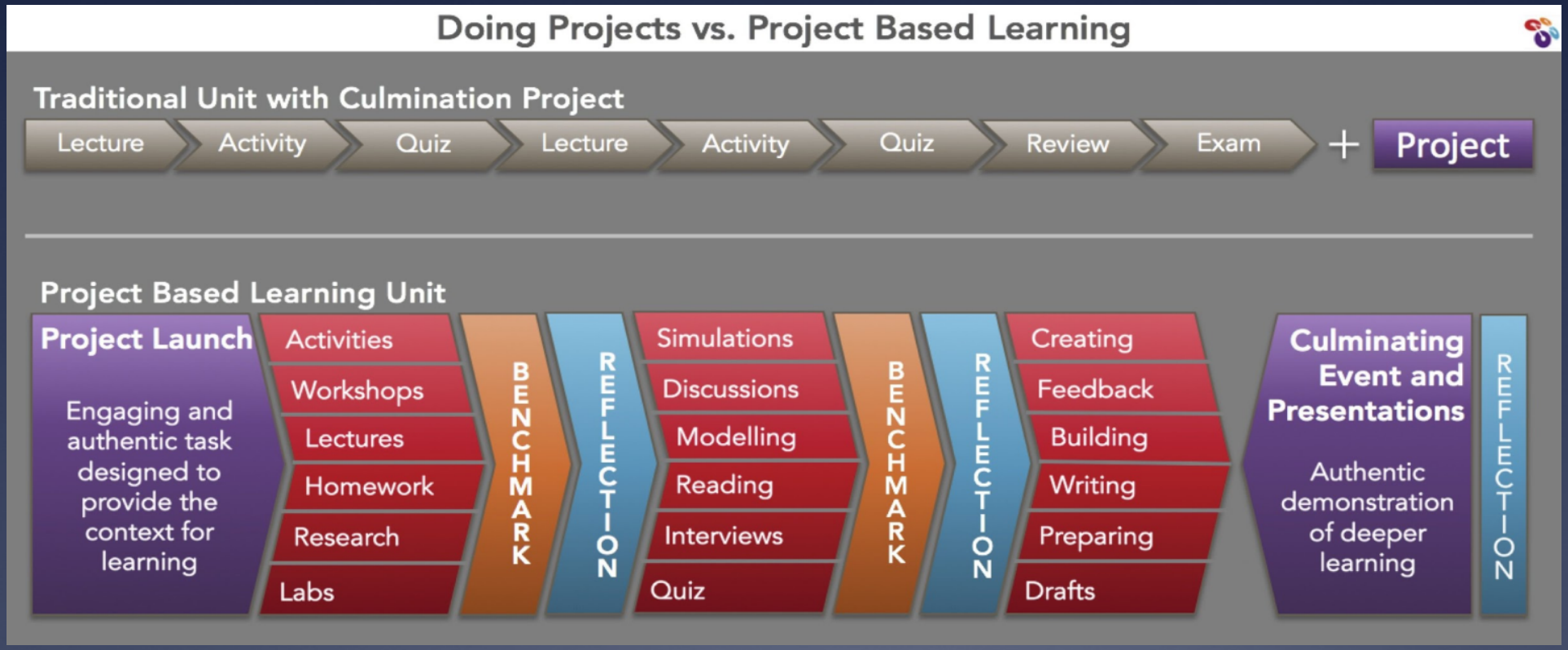

IT'S OKAY TO NOT KNOW, BUT IT'S NOT OKAY TO NOT TRY.


KING MIDDLE SCHOOL
Habits of Work and Learning
RESPECT
I am a respectful member of the King Community
I communicate politely and kindly.
I work cooperatively with others.
I take care of resources and materials and act as a steward of our community.
RESPONSIBILITY
I take responsibility for my success as a learner
I arrive for each class prepared.
I participate fully and mindfully in class.
I carefully and thoughtfully complete all class assignments to the best of my ability and in a timely manner.
PERSEVERANCE
I persevere to produce high quality work
I improve my learning by seeking help when needed and by asking questions.
I assess my work based on established criteria.
I learn from feedback and revise my wo

Project-Based Learning

- Engaging, authentic, and allows for deeper learning
- Builds capacity around 4 C's and self direction
- Focus is on revision and reflection
- Culminates with a public exhibition; student work is assessed by an authentic audience

Projects vs. Project Based Learning

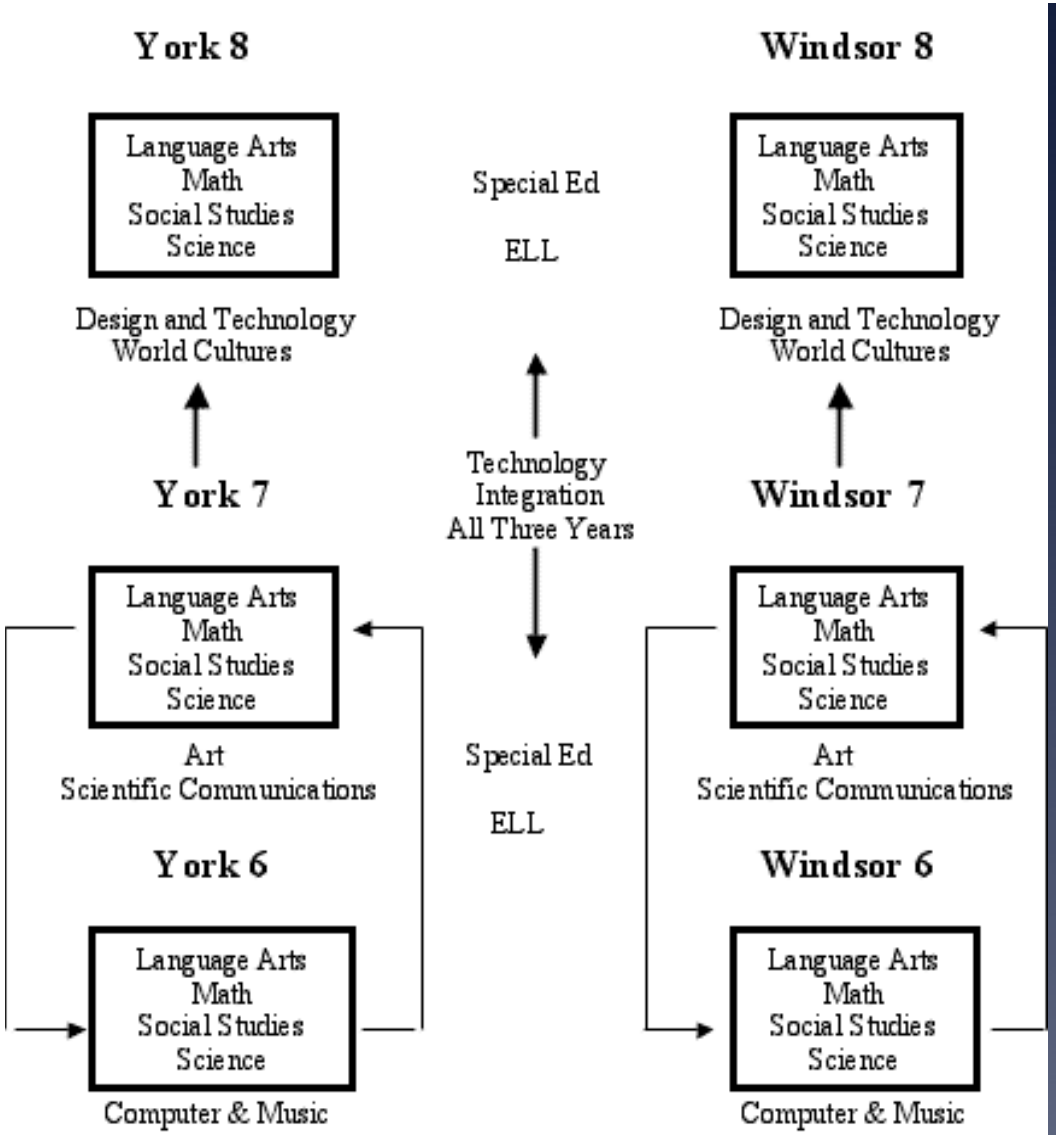



LOBSTERS HATE
CLIMATE
CHANGE
Help Repurpose
and Save the
PLANET
StyroFoam
IS
ETERNAL
Don't EAt
MEAt EAt
And DEFEAt
CO
IF ONE PERSON
POISONED AND
THEY WILL GO TO JAIL
KING MIDDLE SCHOOL
"A SCHOOL FOR ALL"
PORTLAND, MAINE


TINY HOMES PROJECT
What We Want To Do:
Our goal for this project is to be able to keep artists in San Diego. Oftentimes, artists can't afford to live and produce work in bigger cities because the cost of living is too high. We have been working with local San Diego artists to create affordable housing to help keep the art community and culture alive.
Keep Up With Us On:
@HTHCVTinyHomes
Sempiternal Tiny Homes
Sempiternal Tiny Homes
@HTHCVTinyHomes
@Sempiternal_TinyHomes
hthcvtinyhomes@gmail.com
Please support building tiny homes by checking out the rewards and donating as much as you can on our KICKSTARTER
SempiternalTinyHomes

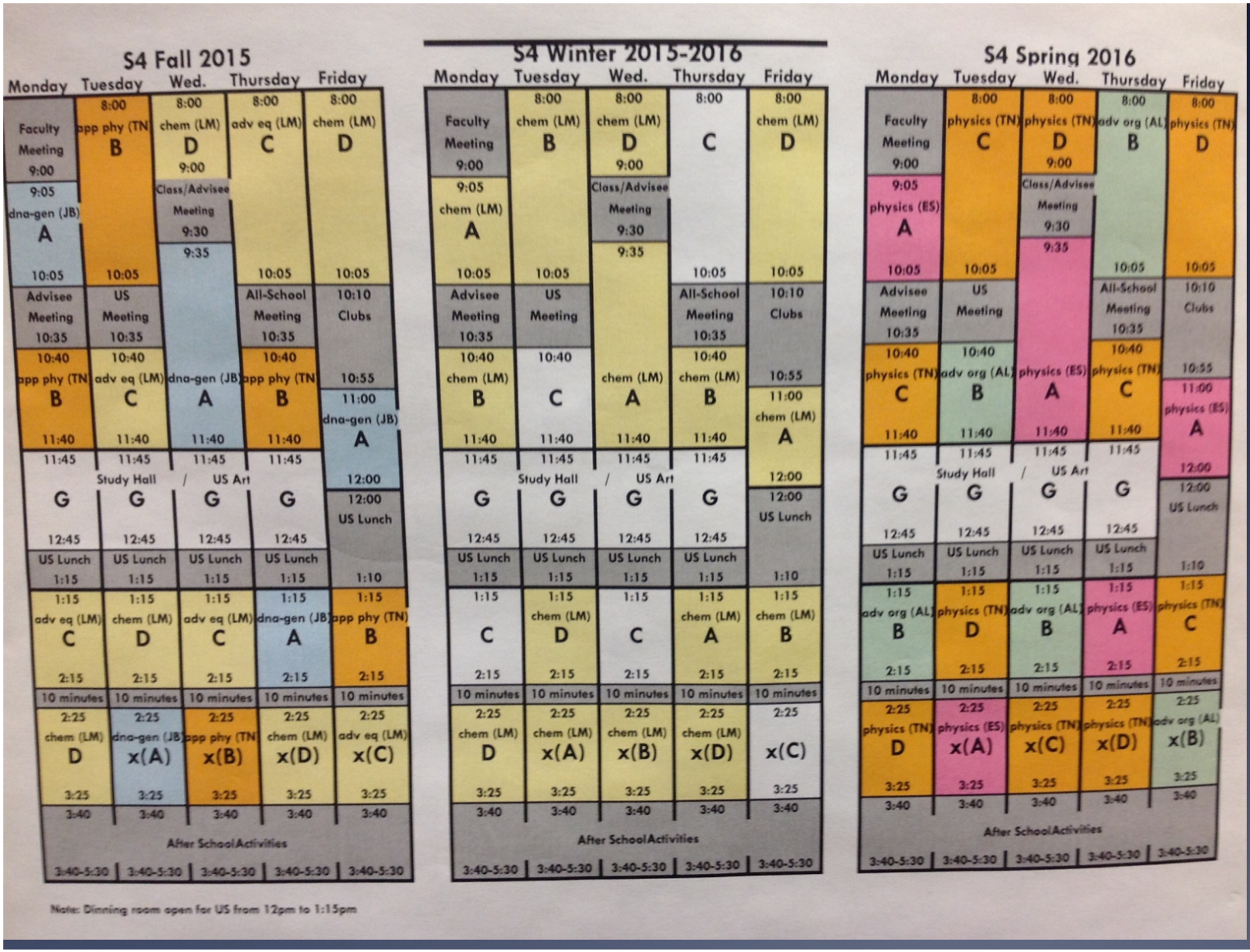
Scheduling/Structures

- Teacher collaboration time
- Interdisciplinary projects and courses
- Multi-age classes
- Fewer but extended, in-depth learning experiences
- School within a school
- High school students schedules designed to accommodate internships and access to community resources



Concentrated Allied Arts

Extended Learning Blocks



S4 Fall 2015

Monday	Tuesday	Wed.	Thursday	Friday
Faculty Meeting 9:00	8:00 app phy (TN) B	8:00 chem (LM) D 9:00	8:00 adv eq (LM) C	8:00 chem (LM) D
9:05 dna-gen (JB) A 10:05	10:05	Class/Advisee Meeting 9:30 9:35	10:05	10:05
Advisee Meeting 10:35	US Meeting 10:35		All-School Meeting 10:35	10:10 Clubs
10:40 app phy (TN) B 11:40	10:40 adv eq (LM) C 11:40	dna-gen (JB) A 11:40	10:40 app phy (TN) B 11:40	10:55 11:00 dna-gen (JB) A 12:00
11:45	11:45 Study Hall	11:45 / US Art	11:45	
G 12:45	G 12:45	G 12:45	G 12:45	12:00 US Lunch
US Lunch 1:15	US Lunch 1:15	US Lunch 1:15	US Lunch 1:15	1:10
1:15 adv eq (LM) C 2:15	1:15 chem (LM) D 2:15	1:15 adv eq (LM) C 2:15	1:15 dna-gen (JB) A 2:15	1:15 app phy (TN) B 2:15
10 minutes	10 minutes	10 minutes	10 minutes	10 minutes
2:25 chem (LM) D 3:25	2:25 dna-gen (JB) x(A) 3:25	2:25 app phy (TN) x(B) 3:25	2:25 chem (LM) x(D) 3:25	2:25 adv eq (LM) x(C) 3:25
3:40	3:40	3:40	3:40	3:40
After School Activities 3:40-5:30	3:40-5:30	3:40-5:30	3:40-5:30	3:40-5:30

Note: Dinning room open for US from 12pm to 1:15pm

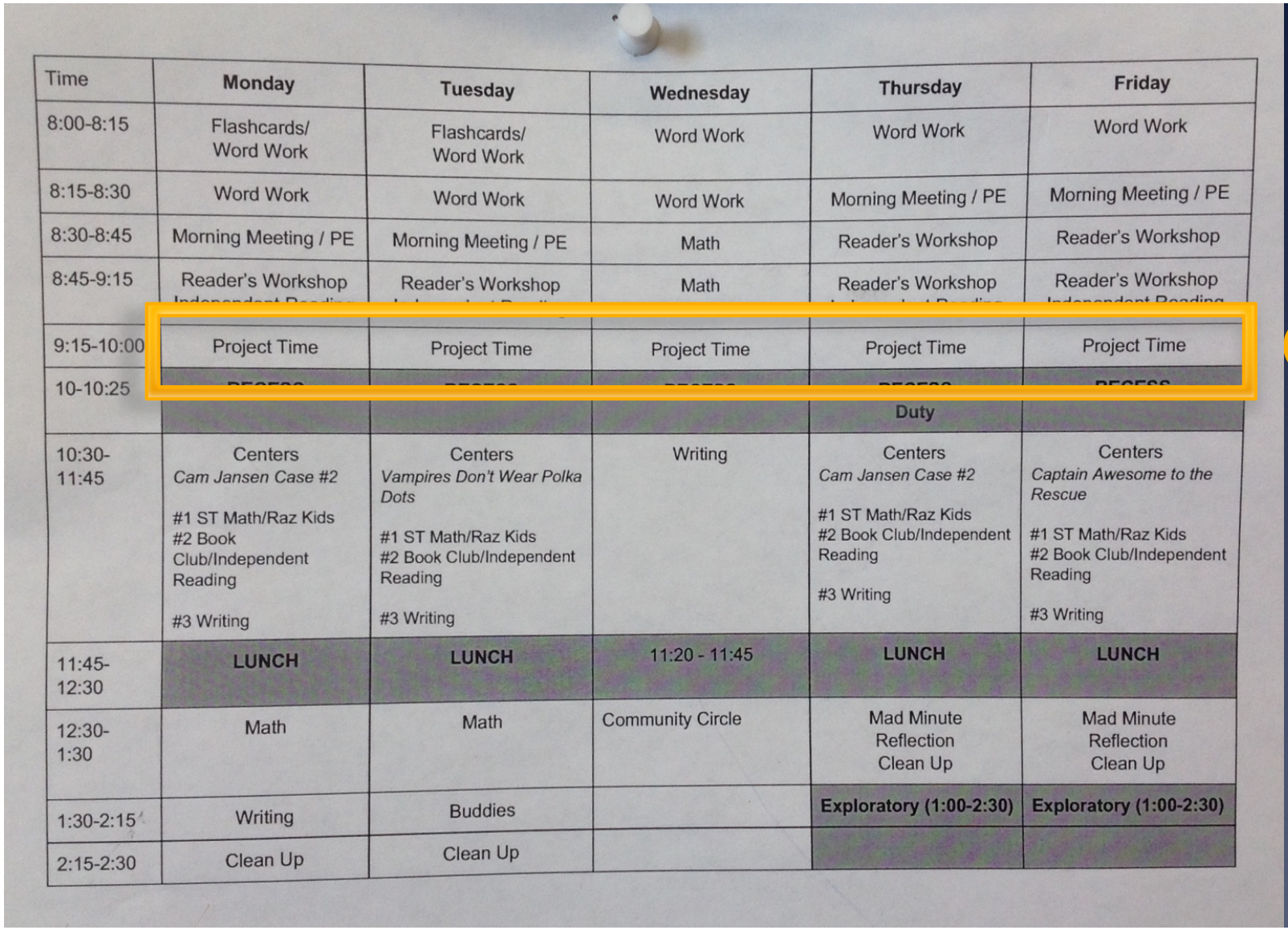
S4 Winter 2015-2016

Monday	Tuesday	Wed.	Thursday	Friday
Faculty Meeting 9:00	8:00 chem (LM) B	8:00 chem (LM) D 9:00	8:00 C	8:00 chem (LM) D
9:05 chem (LM) A 10:05	10:05	Class/Advisee Meeting 9:30 9:35	10:05	10:05
Advisee Meeting 10:35	US Meeting		All-School Meeting 10:35	10:10 Clubs
10:40 chem (LM) B 11:40	10:40 C 11:40	chem (LM) A 11:40	10:40 chem (LM) B 11:40	10:55 11:00 chem (LM) A 12:00
11:45	11:45 Study Hall	11:45 / US Art	11:45	
G 12:45	G 12:45	G 12:45	G 12:45	12:00 US Lunch
US Lunch 1:15	US Lunch 1:15	US Lunch 1:15	US Lunch 1:15	1:10
1:15 C 2:15	1:15 chem (LM) D 2:15	1:15 C 2:15	1:15 chem (LM) A 2:15	1:15 chem (LM) B 2:15
10 minutes	10 minutes	10 minutes	10 minutes	10 minutes
2:25 chem (LM) D 3:25	2:25 chem (LM) x(A) 3:25	2:25 chem (LM) x(B) 3:25	2:25 chem (LM) x(D) 3:25	2:25 x(C) 3:25
3:40	3:40	3:40	3:40	3:40
After School Activities 3:40-5:30	3:40-5:30	3:40-5:30	3:40-5:30	3:40-5:30

S4 Spring 2016

Monday	Tuesday	Wed.	Thursday	Friday
Faculty Meeting 9:00	8:00 physics (TN) C	8:00 physics (TN) D 9:00	8:00 adv org (AL) B	8:00 physics (TN) D
9:05 physics (ES) A 10:05	10:05	Class/Advisee Meeting 9:30 9:35	10:05	10:05
Advisee Meeting 10:35	US Meeting		All-School Meeting 10:35	10:10 Clubs
10:40 physics (TN) C 11:40	10:40 adv org (AL) B 11:40	physics (ES) A 11:40	10:40 physics (TN) C 11:40	10:55 11:00 physics (ES) A 12:00
11:45	11:45 Study Hall	11:45 / US Art	11:45	
G 12:45	G 12:45	G 12:45	G 12:45	12:00 US Lunch
US Lunch 1:15	US Lunch 1:15	US Lunch 1:15	US Lunch 1:15	1:10
1:15 adv org (AL) B 2:15	1:15 physics (TN) D 2:15	1:15 adv org (AL) B 2:15	1:15 physics (ES) A 2:15	1:15 physics (TN) C 2:15
10 minutes	10 minutes	10 minutes	10 minutes	10 minutes
2:25 physics (TN) D 3:25	2:25 physics (ES) x(A) 3:25	2:25 physics (TN) x(C) 3:25	2:25 physics (TN) x(D) 3:25	2:25 adv org (AL) x(B) 3:25
3:40	3:40	3:40	3:40	3:40
After School Activities 3:40-5:30	3:40-5:30	3:40-5:30	3:40-5:30	3:40-5:30

Project/Self-Directed Learning Time



Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:00-8:15	Flashcards/ Word Work	Flashcards/ Word Work	Word Work	Word Work	Word Work
8:15-8:30	Word Work	Word Work	Word Work	Morning Meeting / PE	Morning Meeting / PE
8:30-8:45	Morning Meeting / PE	Morning Meeting / PE	Math	Reader's Workshop	Reader's Workshop
8:45-9:15	Reader's Workshop	Reader's Workshop	Math	Reader's Workshop	Reader's Workshop
9:15-10:00	Project Time	Project Time	Project Time	Project Time	Project Time
10-10:25				Duty	
10:30-11:45	Centers *Cam Jansen Case #2* #1 ST Math/Raz Kids #2 Book Club/Independent Reading #3 Writing	Centers *Vampires Don't Wear Polka Dots* #1 ST Math/Raz Kids #2 Book Club/Independent Reading #3 Writing	Writing	Centers *Cam Jansen Case #2* #1 ST Math/Raz Kids #2 Book Club/Independent Reading #3 Writing	Centers *Captain Awesome to the Rescue* #1 ST Math/Raz Kids #2 Book Club/Independent Reading #3 Writing
11:45-12:30	**LUNCH**	**LUNCH**	11:20 - 11:45	**LUNCH**	**LUNCH**
12:30-1:30	Math	Math	Community Circle	Mad Minute Reflection Clean Up	Mad Minute Reflection Clean Up
1:30-2:15	Writing	Buddies		**Exploratory (1:00-2:30)**	**Exploratory (1:00-2:30)**
2:15-2:30	Clean Up	Clean Up			

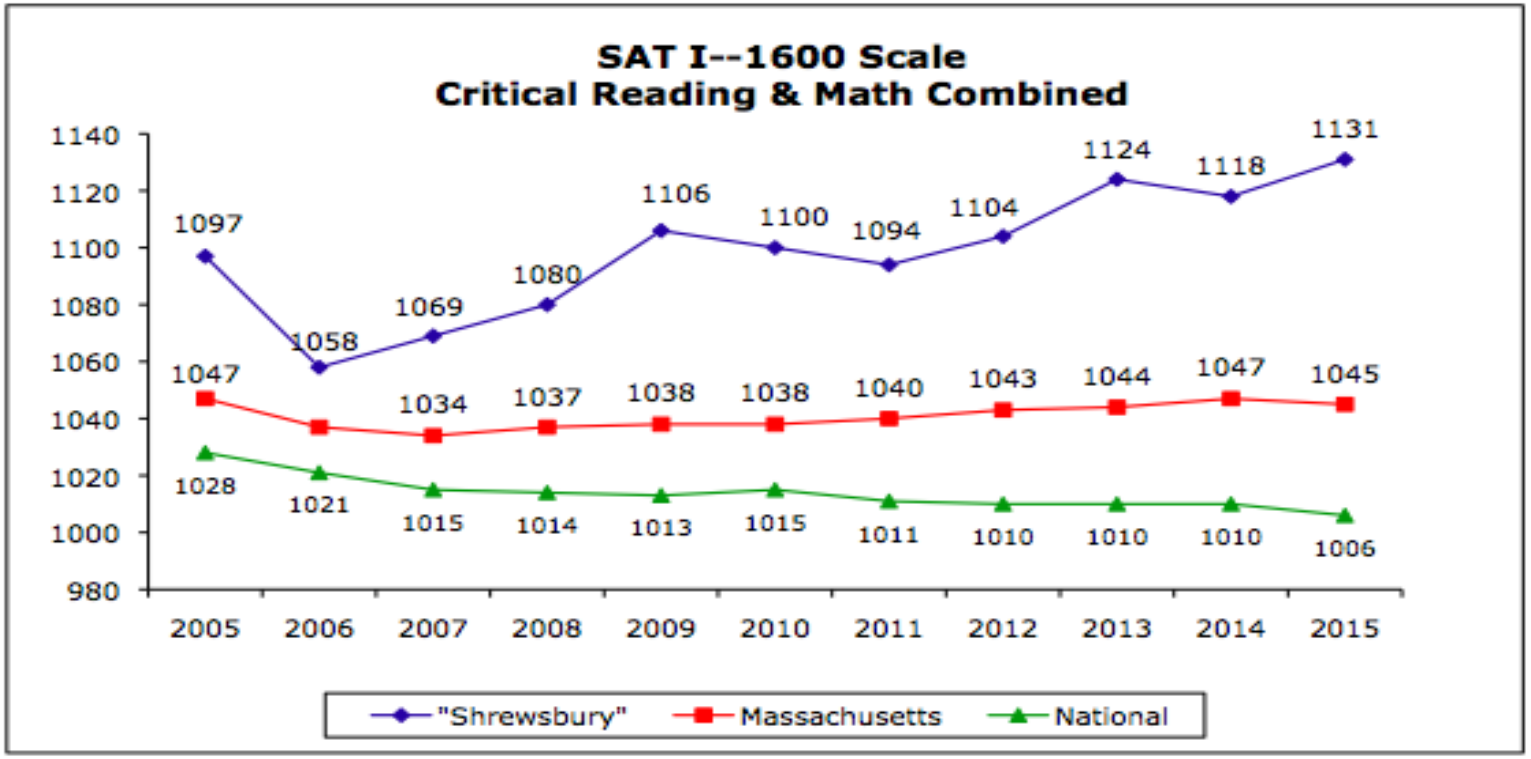
Self-Directed Time

Reflections

How well does our current education system align with future needs?

http://www.viakoo.com/redefining-service/

Shrewsbury has a enviable reputation with excellent results

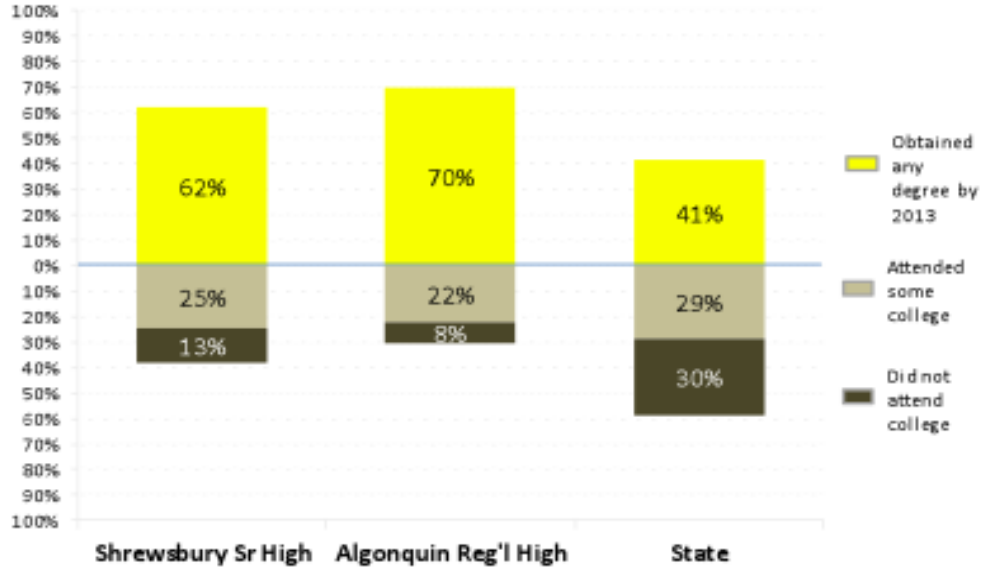


But, we need to look deeper

Postsecondary enrollment and degree completion

First time ninth graders in 2003-04 and/or students in graduation cohort 2007 (click 'more about this data' for more information)

More about this data



		Students in grad cohort 2007	Did not attend college	Attended some college	Obtained any degree by 2014
Shrewsbury Sr High	# of students	344	46	85	213
	% of cohort	100%	13%	25%	62%
Algonquin Reg'l High	# of students	347	27	78	242
	% of cohort	100%	8%	22%	70%
State	# Graduates	75,918	22,921	21,722	31,275
	% of cohort	100%	30%	29%	41%

We need to think more about how we prepare our students and the world that they are entering

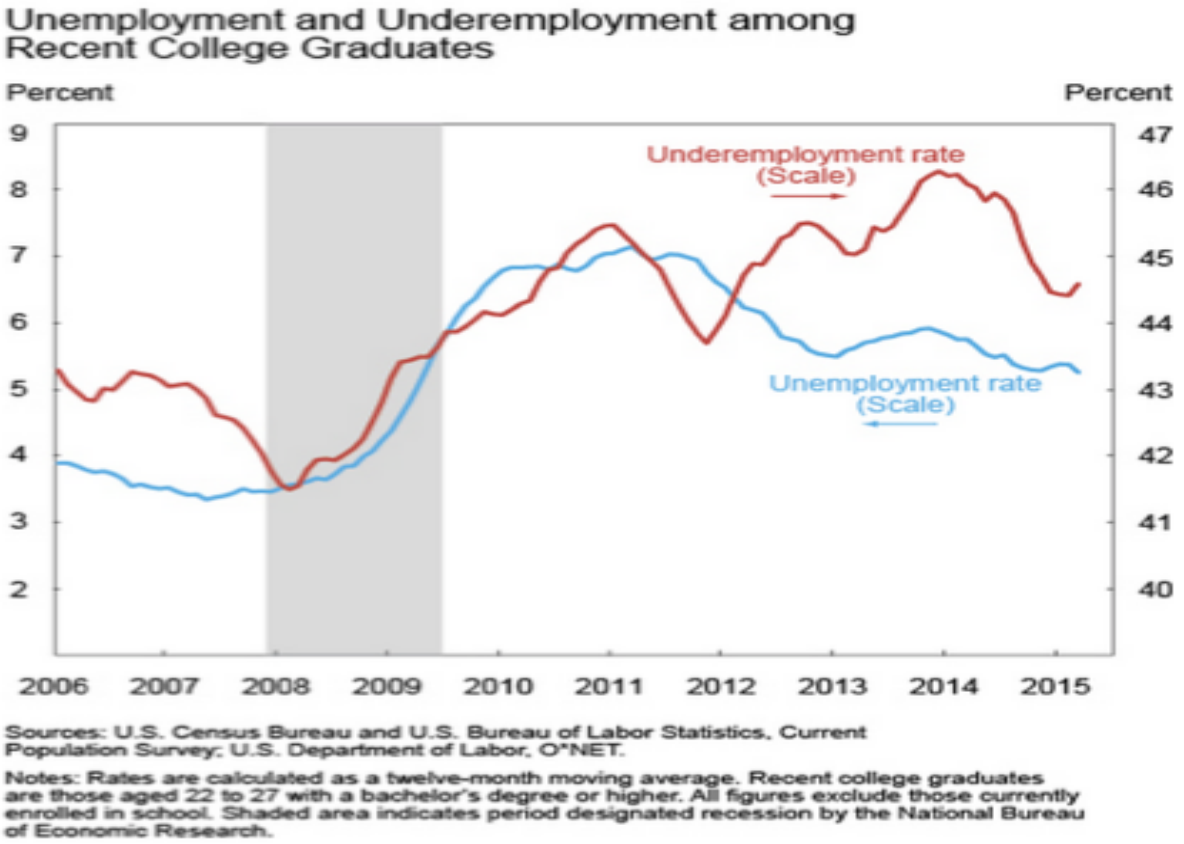
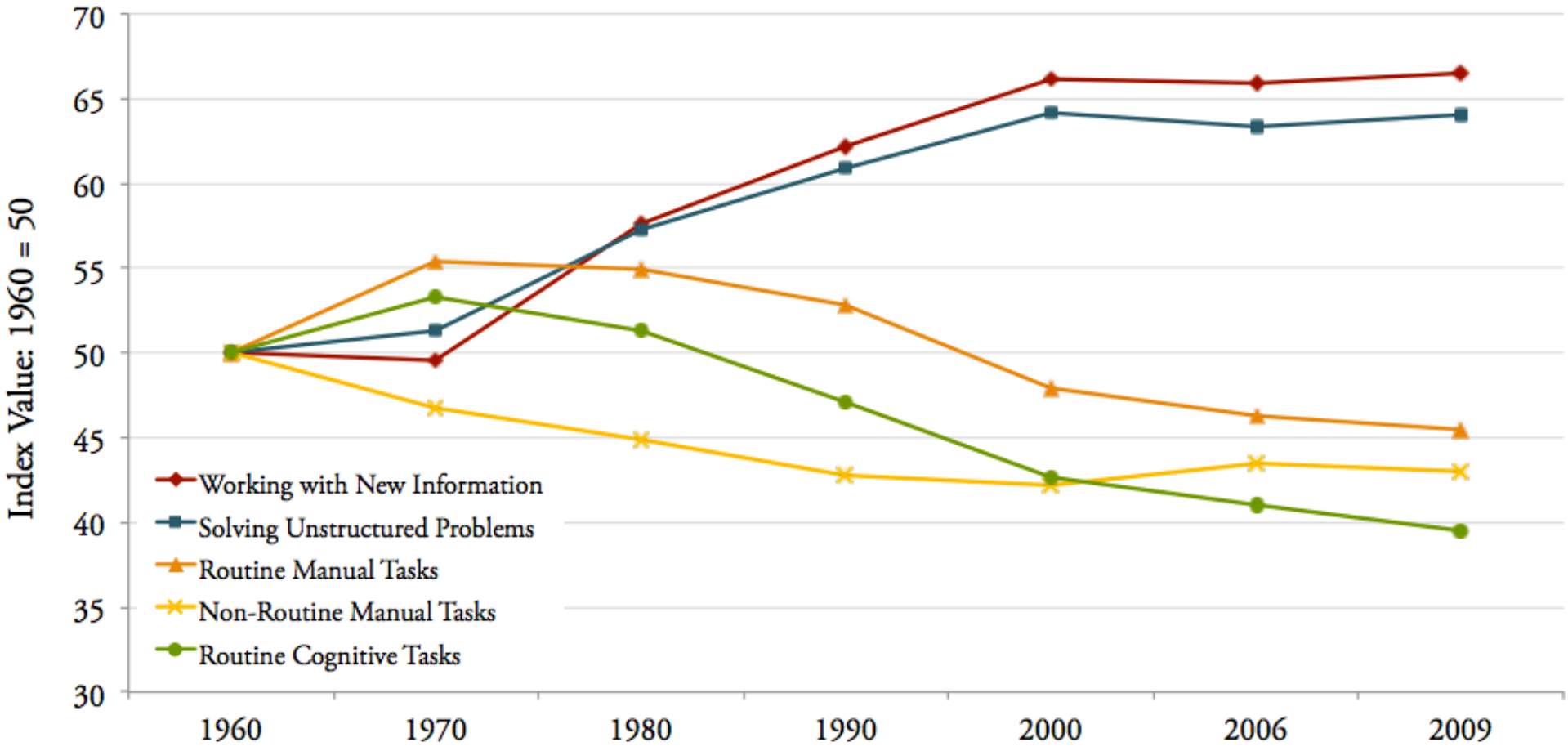


Figure 3: Index of Changing Work Tasks in the U.S. Economy 1960-2009[21]




If we teach
today's students
as we taught
yesterday's,
we rob them of
tomorrow.
John Dewey

Let's start a dialogue…