

creating new
thinking spaces
for students

building

GENIUS





It's all here!
WARRIORS!
Celebrate Your
100th

Let's make our room a
warrior's room. Let's make
it a room that
inspires.

LUPUS


creating new
thinking spaces
for

students

building

GENIUS

creating new
thinking spaces

for

students

& teachers

building

GENIUS

***ENLIGHTEN**

***EMPOWER**

***IMPACT**

building

GENIUS

WHO WE ARE



Dr. Paul Fregeau
Superintendent



Sam Johnson, AIA
LEED AP, REFP
Principal



Rachel Emmons
Data
Analyst

***ENLIGHTEN**

EMPOWER

IMPACT

building

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MASLOW'S HIERARCHY OF NEEDS



PROPOSED SCHOOL FACILITY HIERARCHY OF NEEDS

**SELF
ACTUALIZATION
NEEDS**

AESTHETIC NEEDS

INDIVIDUAL LEARNER NEEDS

ESTEEM NEEDS

SOCIAL AND EMOTIONAL NEEDS

CORE EDUCATIONAL NEEDS

SAFETY AND SECURITY NEEDS

PHYSIOLOGICAL NEEDS

OUR STRATEGIES



ONE:

We will ensure unique, innovative learning experiences for all students.



TWO:

We will ensure a student-focused environment that expands learning beyond the traditional expectations to engage students.



THREE:

We will establish a support network that will identify and address students' physical, social/emotional, and mental health needs to allow each student to reach their full potential.



FOUR:

We will attract and retain talented and invested staff by ensuring they feel valued and supported.



FIVE:

We will create and foster mutually beneficial relationships throughout the community.

LEARNING EXPERIENCES:

- Relevant, innovative personalized academic pathway that promotes passion and pride
- A learning environment that fosters curiosity and the thirst for achievement and discovery
- Commitment to the whole person resulting in student growth and confidence

STRATEGIC OBJECTIVES

- Each student will engage in complete learning experience that **develops the whole person** and fully **prepares them for their future**
- Each student will **explore and develop their emerging talents** and interests to fulfill their **unique potential** and live it with **passion, courage and confidence**

What is a Classroom?

Dovey and Fisher (2014)

Imms, Mahat, Byers & Murphy (2017)



The learning space integrates the three tenets of classroom design:

- The classroom furniture must be **mobile and flexible**
- Each collaboration area must have **access to digital display.**
- Each collaborative area must have a **writable surface.**





Charles City Middle School



BREAKOUT SPACES



CREATE



Charles City Middle School

SOCIAL AND COLLABORATIVE SPACES

Sills, Digby, and Russ (1991)



Waltham Elementary School







PERIPHERAL SPACES



Charles City Middle School



Mahomet-Seymour High School

RESTORATIVE SPACES



Social Science & Medicine

Volume 159, June 2016, Pages 30-37

Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students

Eva Oberle ^{a,*,#}, Kimberly A. Schonert-Reichl ^b



South Shores Elementary School

B208c

1020 44 171





Garden Hills Elementary School

EXPLORATORY SPACES

Kolb (1984)



Sangamon Valley High School



PLACEMAKING AND INCLUSION

STICKY SPACES



Charles City Middle School



Eisenhower High School

START HERE



CHARLES CITY MIDDLE SCHOOL FITNESS TRAIL

Add a mile to your workout by jogging or walking a lap around the path between each station (1 lap = 1.6 miles)

STRETCH BEFORE & AFTER YOUR WORKOUT



HEALTHY HYDRATION



EXERCISE TYPES ON THE TRAIL

- Cardio** - Any exercise that increases heart rate and burns calories.
- Strength** - Any exercise that builds muscle and increases metabolism.
- Flexibility** - Any exercise that improves range of motion and prevents injury.



HEART RATE ZONES



WARNING

WALK OR RUN TO STATION 1

1 LOWER BODY STRENGTH

TYPE OF EXERCISE:
ANAEROBIC / ISOMETRIC / STRENGTH



GLUTEUS
QUADRICEPS
HAMSTRINGS

Standing Squat
This exercise targets the glutes, quads, and hamstrings. It is a compound movement that works multiple muscle groups at once.

Box Squat
This exercise targets the glutes, quads, and hamstrings. It is a compound movement that works multiple muscle groups at once.

Front Squat
This exercise targets the glutes, quads, and hamstrings. It is a compound movement that works multiple muscle groups at once.

Back Squat
This exercise targets the glutes, quads, and hamstrings. It is a compound movement that works multiple muscle groups at once.



WALK BACKWARDS TO STATION 2



FUSION SPACES



Chester East Lincoln School



Knoxville High School



Knoxville High School

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**TEACHER
PRACTICE**

**FACILITY
DESIGN**

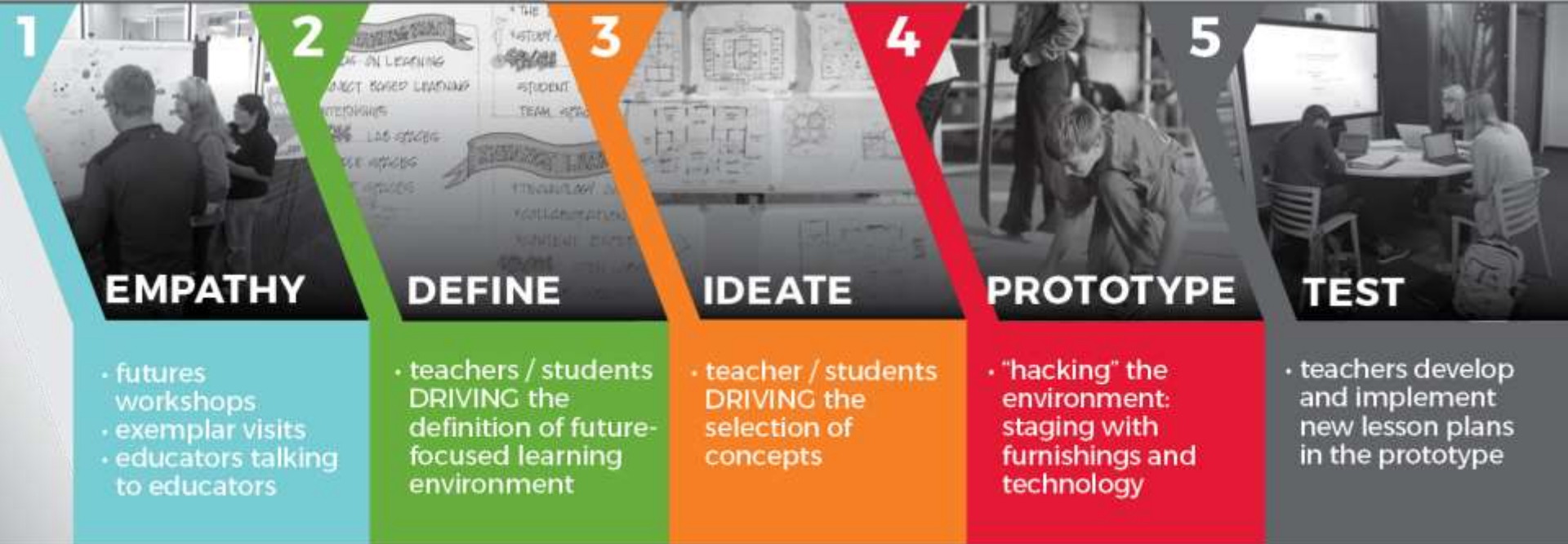
PREP WORK

- establish educational leadership team

think **BIG**

THINKING BIG

Developing our BOLD facility plan.



RESEARCH

- quantify effectiveness of design

BOLD FACILITY PLAN

Building better **O**pportunities for **L**earning in **D**ecatur

GOAL: Create facilities that are future-focused and research-based to enhance student outcomes.

- Academies model Middle School program
- Combined Montessori Program
- Fine Arts Integration School
- Standard prototype for elementary design, to be mapped across the district's elementary facilities

1: futures workshop



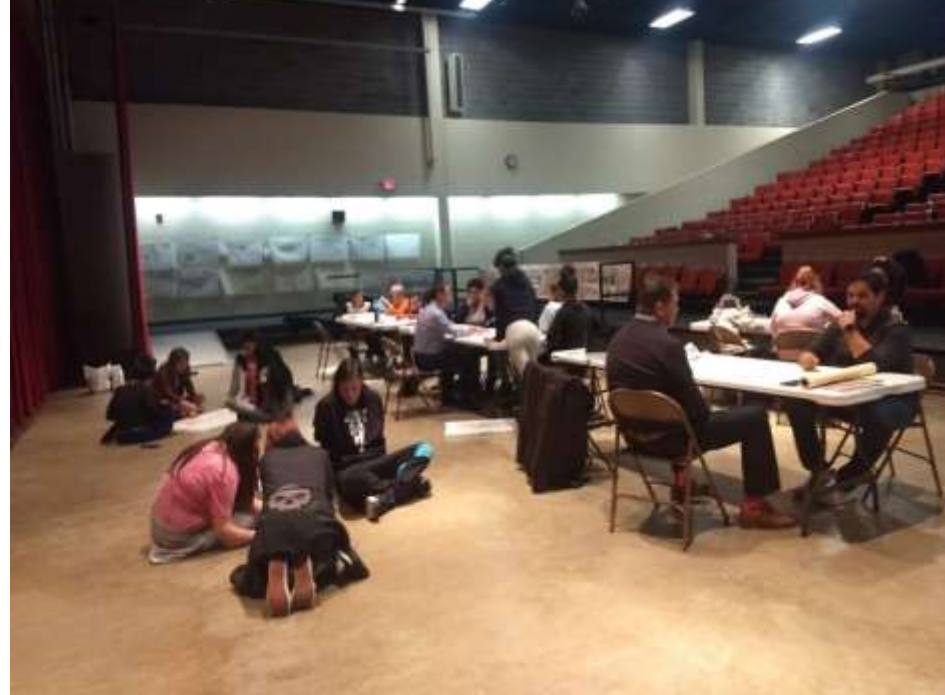
**Stephen Decatur Middle
School**

2: define

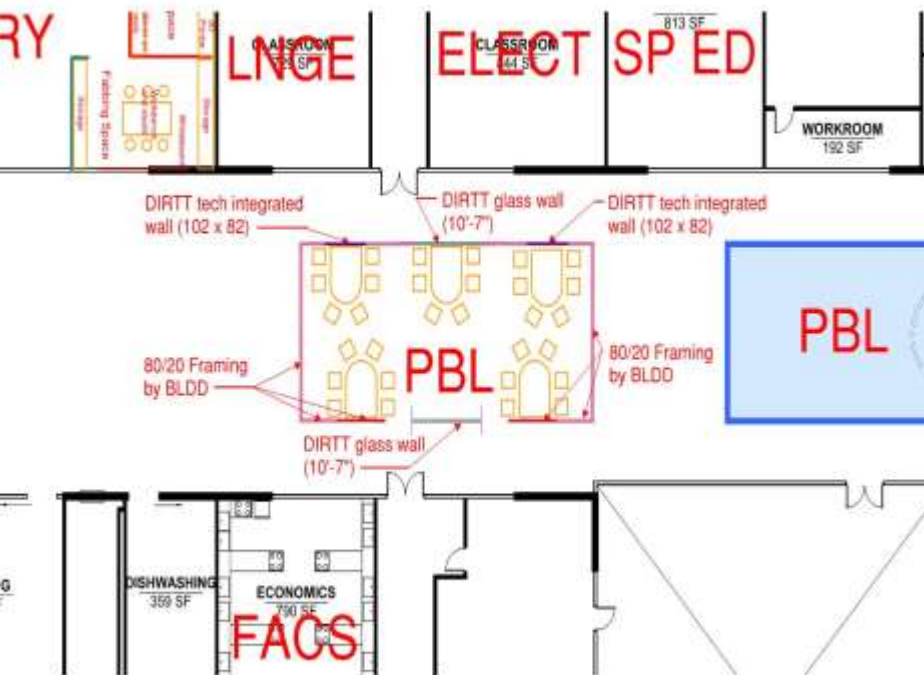


Cognitive Maps and Graffiti Maps with Students

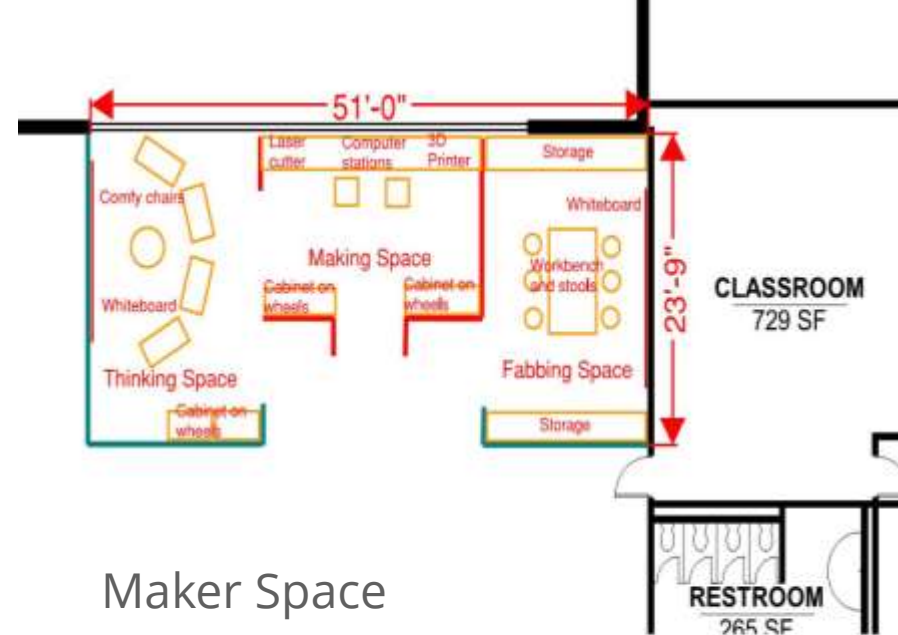
3: ideation



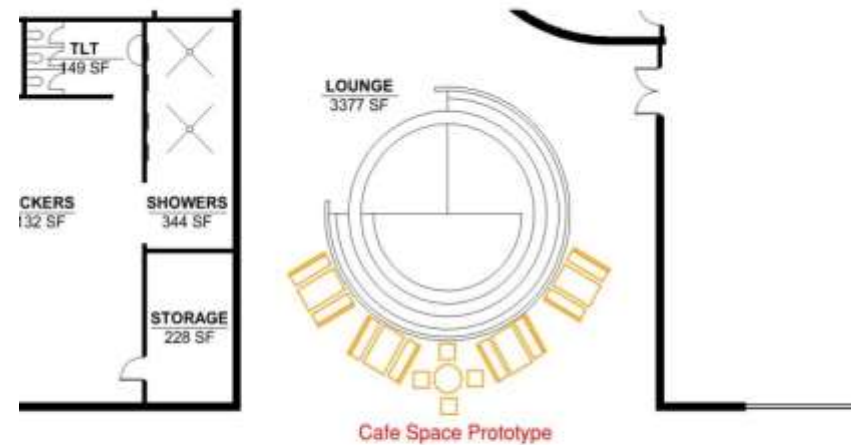
4: prototype



Project Based Learning Classroom

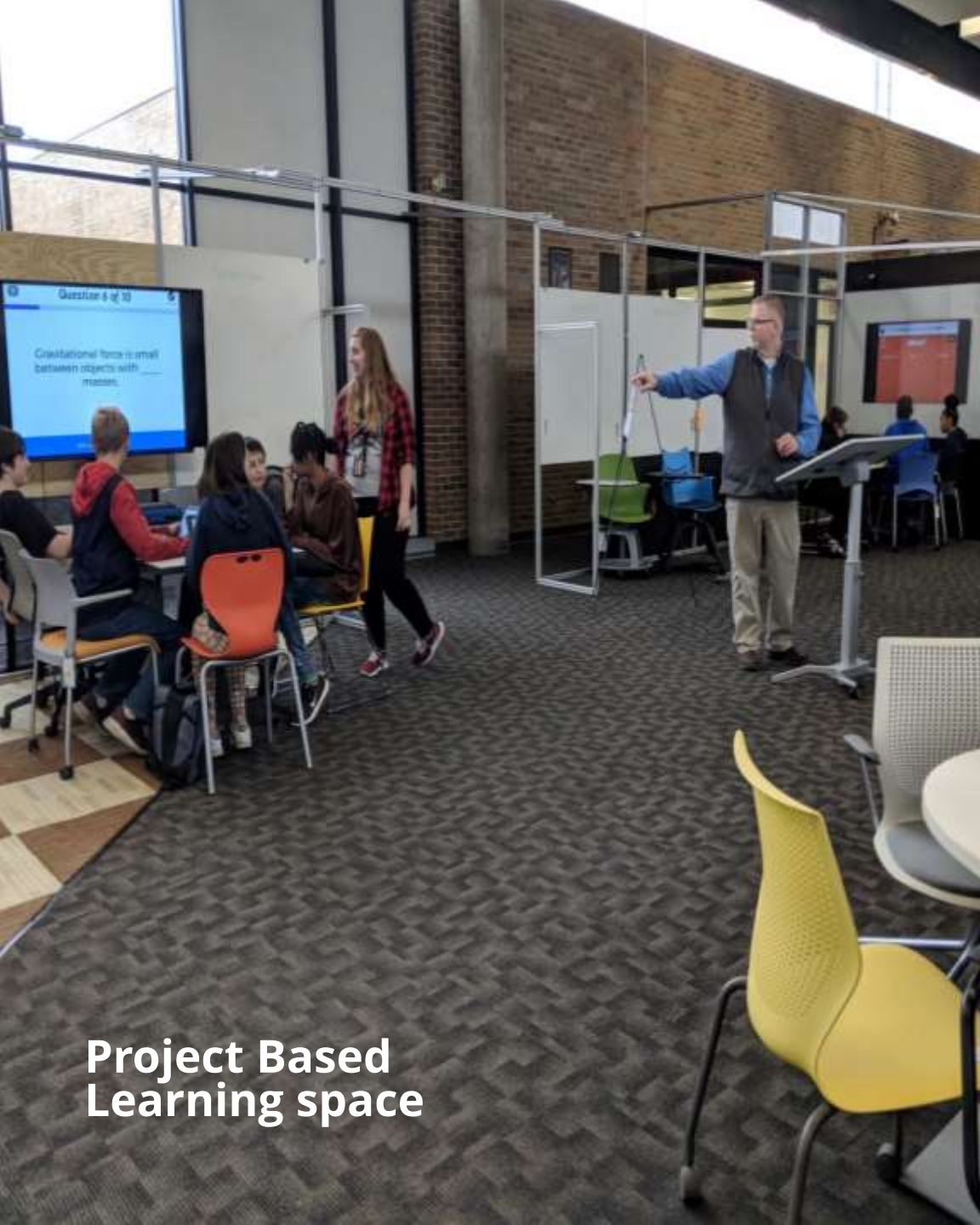


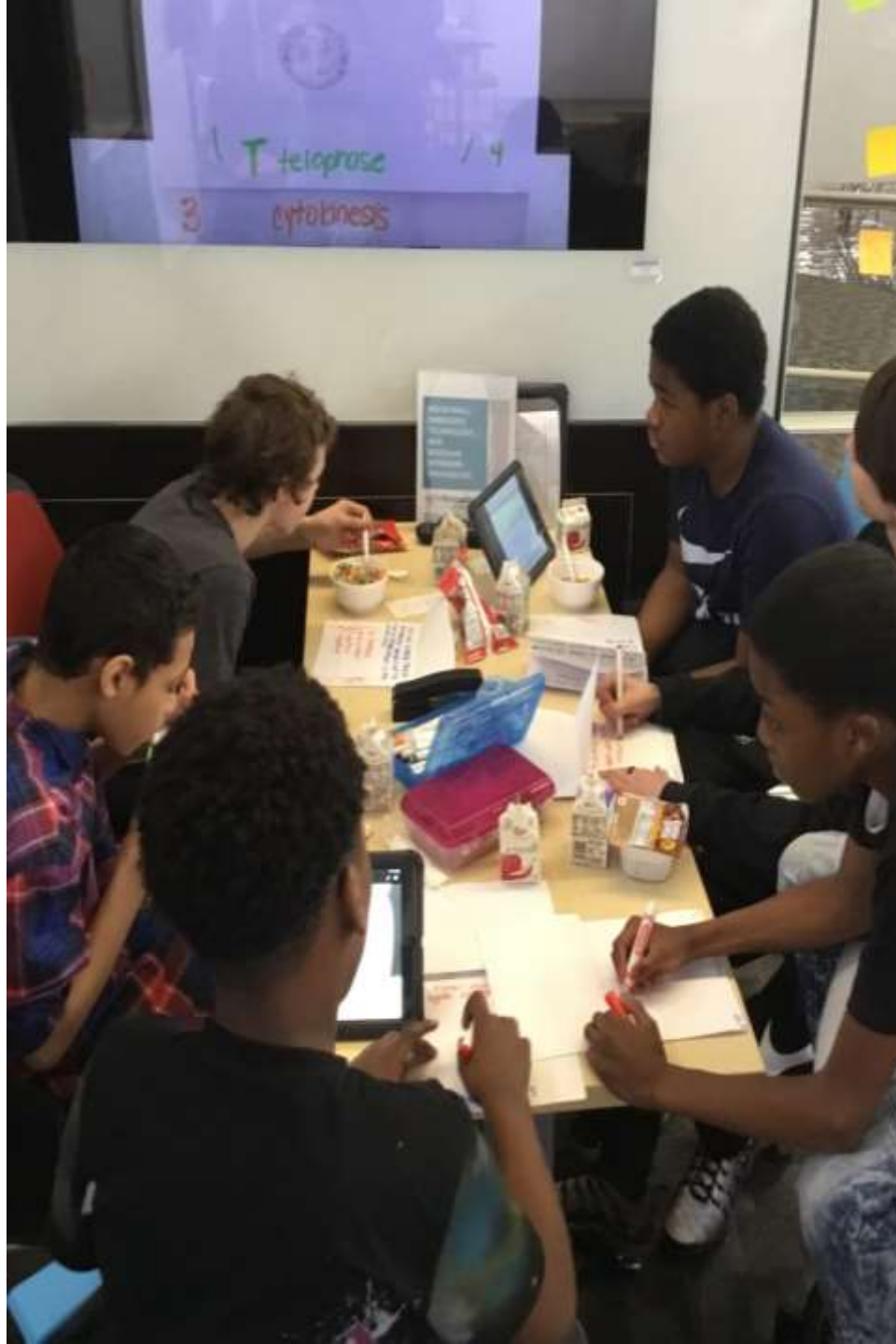
Maker Space



Working Café

Prototype Video









Working Cafe



Student feedback



Love

F E E D B A C K

yes, a
Just be
new.

I Like that
they are making
things for children
In need
This is cool
Danaiah

This was
fun -
spinning
chair
girl

This will
be a great
idea to add
more gear

All of this is a great
idea to do for all the
kids next year, its going
to make the year really
fun.

We should
keep it

Love
It

It
was
Full of
Learning class.

The school
is the next
future.

We should
keep
this

want it

Very
creative
concept.

its a
creative
class

I like the
school they
should keep
this in the
classroom

I think we
should have this
next year because
kids will enjoy it
when they come
here

Decore

like the chairs
that are old in
the gallery!!!

cool

This
is
The
Best

It's a great
class
I like
the way
we

I think these
inventions will
soon benefit
humans in
the future

Tell us
what
you
think!
You can't
print
up
more!

Print
up
more!

I really like
the VR
printing
process

School is the
BEST!!!

This will make
the school
interesting!

I like the
mats and 3D
printing

The
Who new
discovery of
technology
- Linda
Sant

It was cool,
I like the

Hi

This

Print till you can't
Print no more!

If I could I'd
come to this
from every class.

want it

I think the
3D printing
thing is cool
and can be very
useful

Very
creative
concept.

it's a
creative
class

3D Printing in Math
class would be
a more fun and
interactive way
to learn

I would really
like to see this
in school!

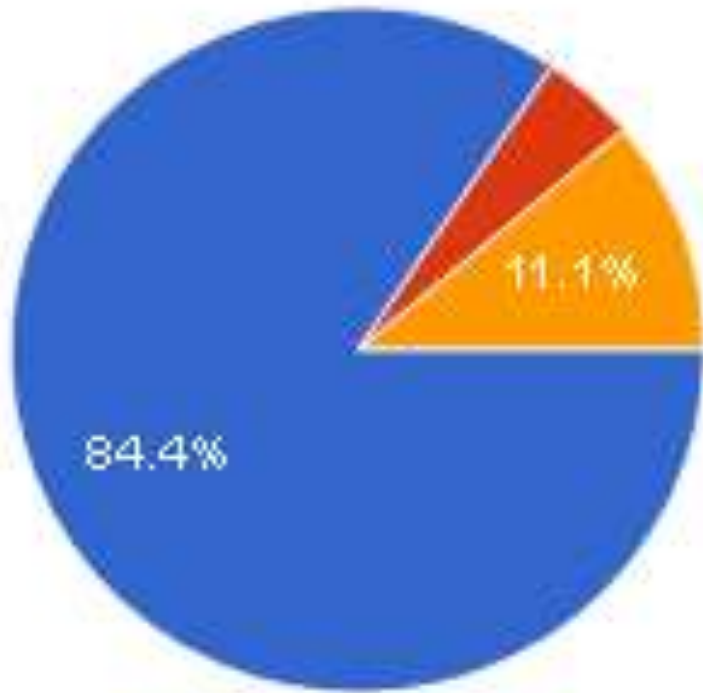
I like the 3D
printer for science
because it will help
us learn more!

I want
more 3D
printers so
we can examine
cells and stuff

Maker Space

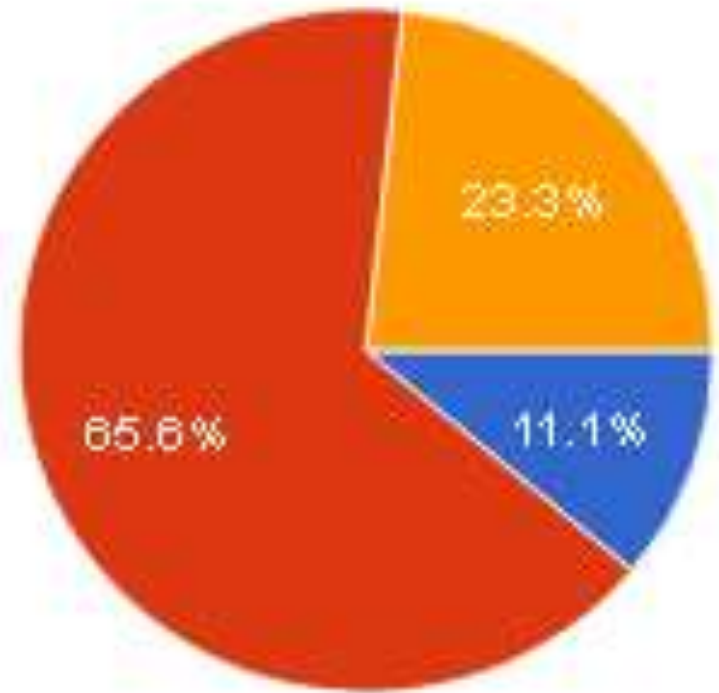
5: test

Do you understand how to use these spaces and how they could be used in the future?



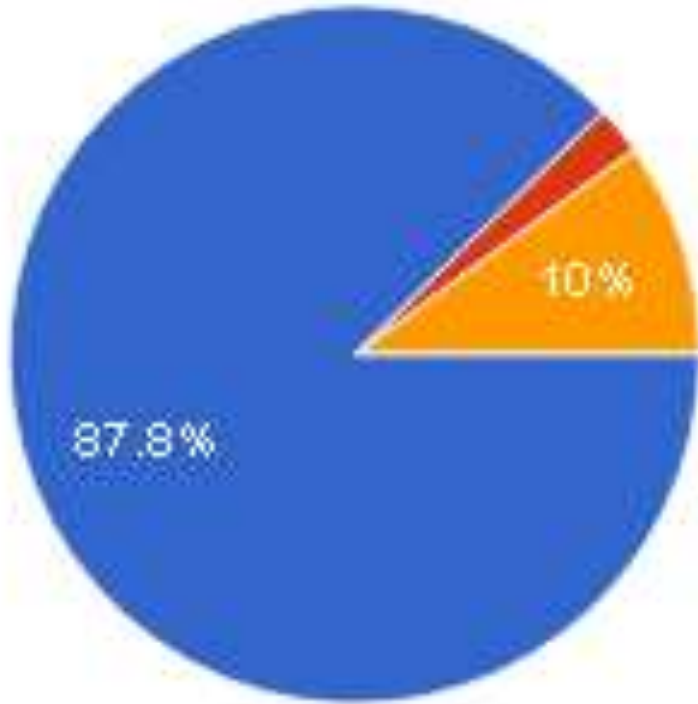
Yes
No
No opinion

Which option best describes how you feel students will respond to these spaces next year?



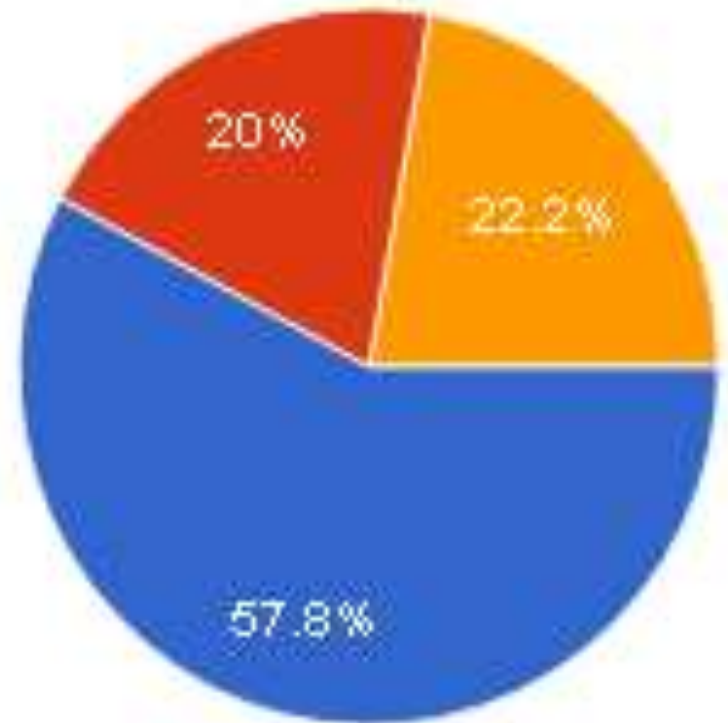
Will not care
More excited to come to school
No opinion

Did the furniture help you feel more focused or more distracted?



More focused
More distracted
No opinion

Were the clear walls in classrooms distracting or did you like being able to see what was going on outside these spaces?



I liked them
Distracting
No opinion

5: test ^{SDMS}



WCIA video



PLAM PANEL SYSTEM:
 WILSONART ASHBEE OAK w/
 ALIGNED TEXTURE FINISH



GALVANIZED CORRUGATED METAL

PBL SPACES

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CHARLES CITY MIDDLE SCHOOL

A photograph of a school balcony with several students sitting on the floor, reading books. The balcony has a metal railing and a stone pillar. The building has large windows and a modern design. The text "CHARLES CITY MIDDLE SCHOOL" is overlaid in large, white, outlined letters.

Alyssa Kruger @akruger91 · Sep 8

When it's too nice out to be inside, we read on the balcony. They were begging to do it again next week. #cultureofreaders #8thgradersdoread





Dr. Dan Cox @DanCoxPhD · Aug 14

Ts and admins from @CharlesCityCSD and New Hampton learning #PBL from @hightechhigh staff. #CCedFuture #WeAreCC





TREEHOUSE
TIME



BENNETT DAY SCHOOL TINKER LAB













connecting SCHOOL FACILITY CONDITIONS

AND STUDENT OUTCOMES

evidence based design study

This study is designed to measure before and after renovation/construction effects on student outcomes by analyzing a relationship between the following variables:

MOVEMENT PATTERNS



STIMULATING ENVIRONMENT



LEARNING SETTINGS



Hypothesis #2

Students that learn in an environment that they report to be more stimulating will also report higher levels of engagement.

STIMULATING ENVIRONMENT

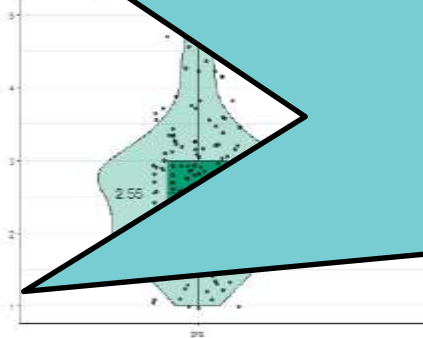
ENVIRONMENT

Students reported on a
tion scores in the pre-

ificantly different
post survey.

No change in
engagement?

Box and Violin



Pre (mean, 95% CI) = 2.55 (2.43 – 2.67)

Post (mean, 95% CI) = 3.74 (3.65 – 3.84) +

Score was created as an average of 9 items.

Post (mean, 95% CI) = 3.32 (3.23 – 3.41)

Post (mean, 95% CI) = 3.30 (3.20 – 3.41) -

Score was created as an average of 9 items.

While there is a slightly positive relationship between stimulation and engagement, a stimulating physical environment alone may not produce a dramatic change in student engagement in grades 5-8.

Hypothesis #3

In schools designed to meet the individual needs of the learner, teachers will report higher student achievement.

LEARNING SETTINGS

STUDENT ACHIEVEMENT

Teachers were asked 2 different aspects of student achievement (flexibility)

perception of student achievement post-test.

Improved teacher perception of student achievement

Reconfigure for activities
Accommodations (social)
Reconfigure for activities
Degree students can
Sound levels (dB)
Accommodations (1 = inadequate, 5 = excellent)
Accommodations (quiet spaces) (1 = inadequate, 5 = excellent)

The four items with the largest positive differences, and the items with negative differences

Our analysts concluded that learning setting design was primarily responsible for the increases in perceived student achievement.

Teachers see students
achieving more in
**learning spaces that can be
reconfigured** and which
**create a social and
collaborative environment**

Collective Teacher Efficacy

With an effect size of 1.57, CTE is ranked as the number one factor influencing student achievement (Hattie, 2016)

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thank you!

