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- Blogger,
- <http://pipedreams-education.ca/>
- @zbpipes <https://twitter.com/zbpipes?lang=en>

Learning Environments

Makerspaces

Impact of Play and Learning

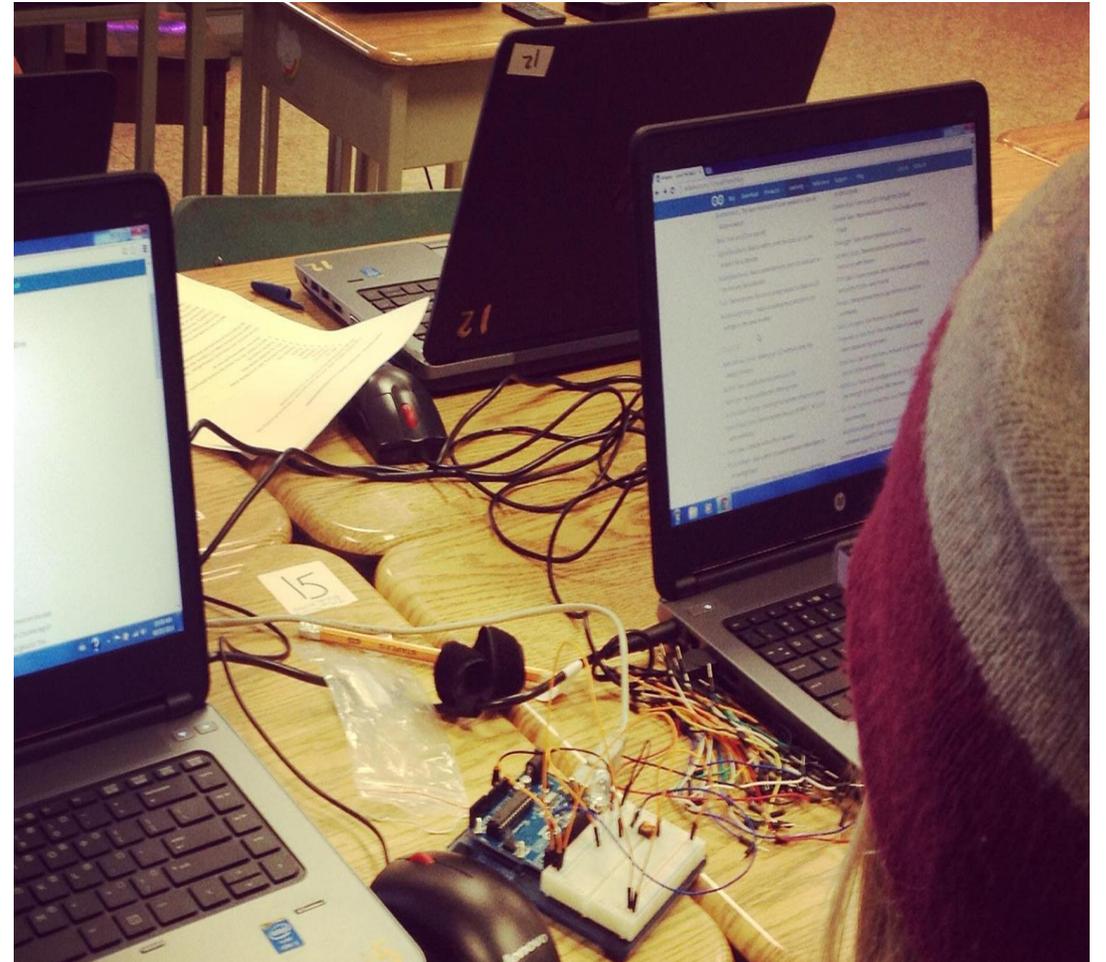
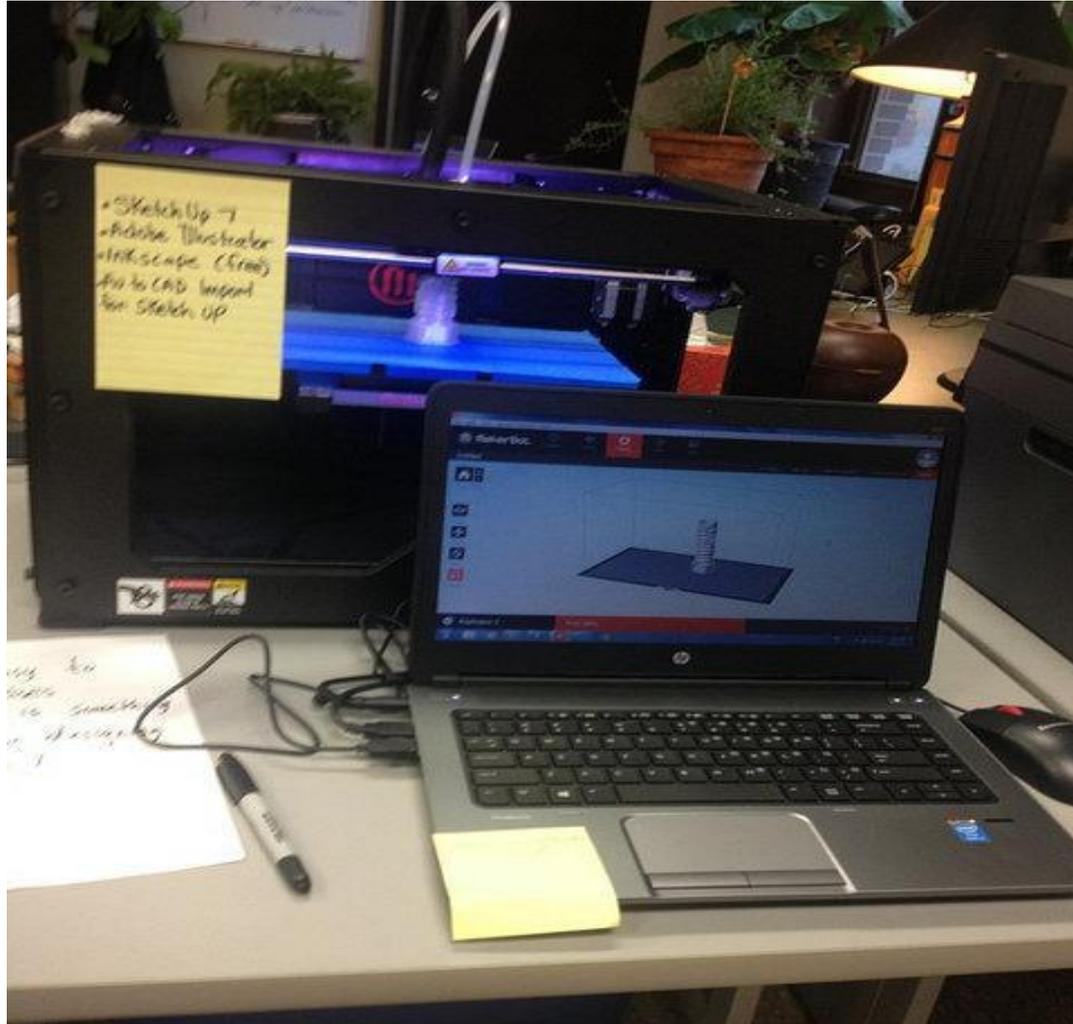
Health and Wellness

Real-world connections and critical literacy

Role of community

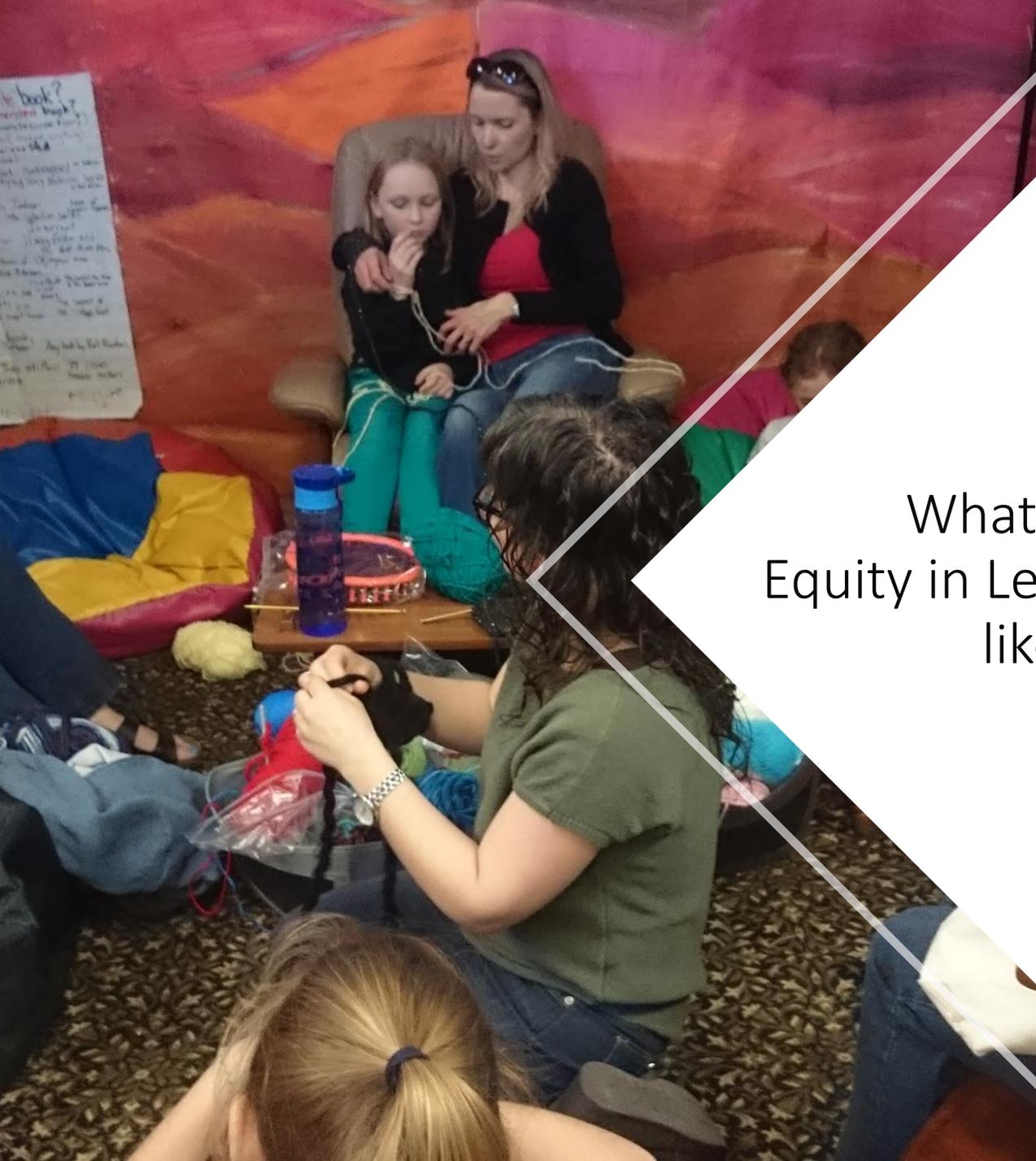


Infused with Technology

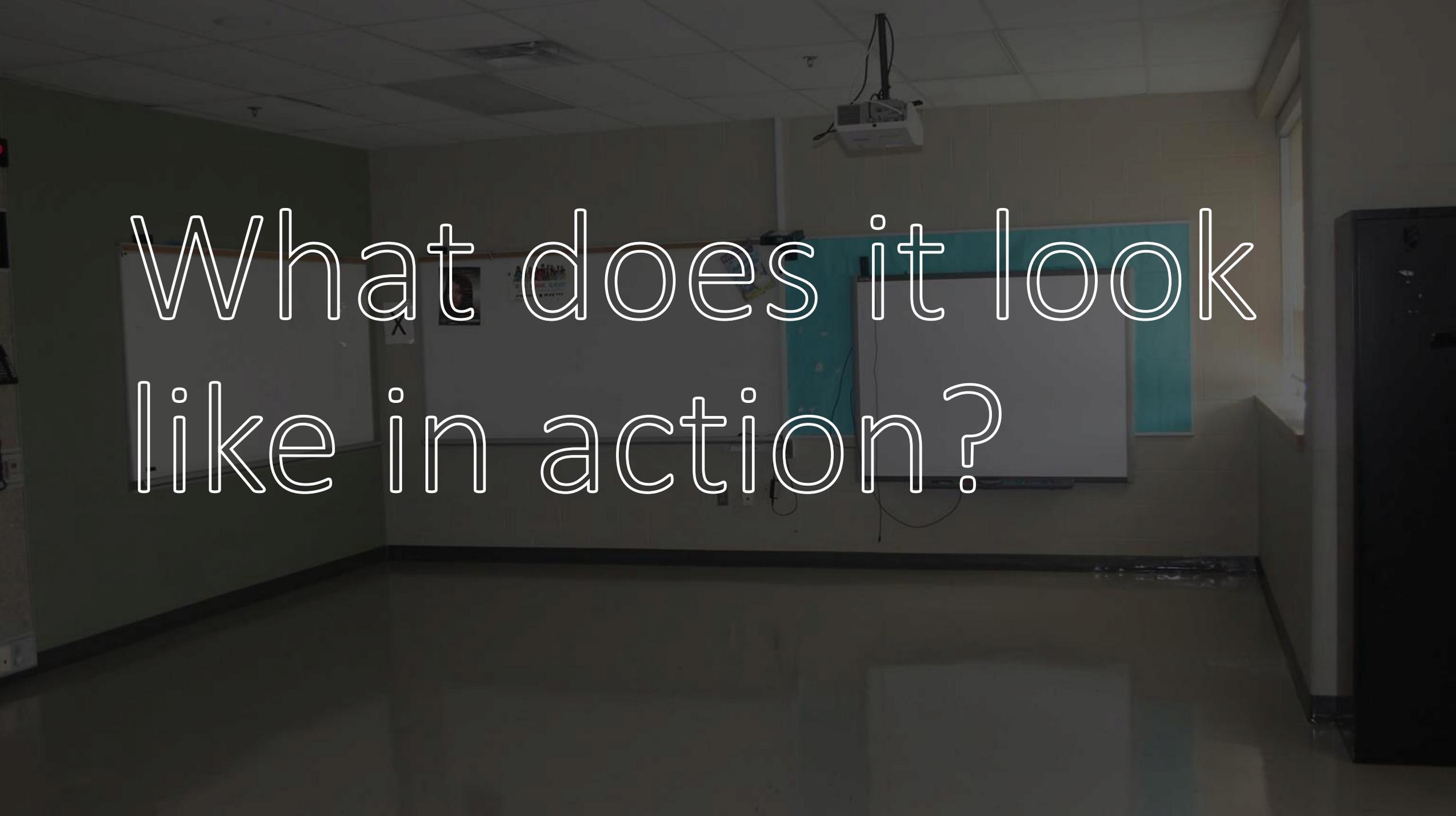


What is needed in a space that gives you a sense of well-being?

What do you consider an equitable learning space?



What does
Equity in Learning look
like?

A dimly lit classroom with a projector hanging from the ceiling, a whiteboard, and a chalkboard. The text "What does it look like in action?" is overlaid in white outline font.

What does it look
like in action?

What does Equity
Feel like?





The Feel of an Educational Makerspace

- Invite Curiosity?
- Inspire Wonder?
- Encourage Playfulness?
- Celebrate Unique Solutions?

For inquiry-based learning to occur, students must be attracted to the space and be inspired to use it. Attracting students to the space is the first big challenge. A makerspace without makers is just a workshop full of lonely tools. How does one attract students hungry to learn?

<http://www.teacherlibrarian.com/2014/06/18/educational-makerspaces/>

Community – a place for all people who welcome to learn, lead, teach, share, contribute

- The idea of inclusion is not only important for community organizations or schools serving underserved populations.
- Making involves an element of risk-taking - how do we create an environment where students are comfortable with taking risks?
- Willing to tackle the unknown? Be willing to fail? And is this part of WHY we make?

Source: <https://www.edsurge.com/news/2015-05-10-making-for-all-how-to-build-an-inclusive-makerspace>



Relationships





What is the role of Health and Wellness in our learning environments?

Belonging

This classroom would like to recognize the enduring presence of Aboriginal Peoples on this land

The City of Hamilton is located on traditional Haudenosaunee (Iroquois) Territory. Our City is also just 10 km from Six Nations of the Grand River which is Canada's largest Reserve.



Oral Traditions

Significance of Balance

Interaction with Community

Significance of Elders

Importance of Silence & Listening

Respect for the Group Process

Role of Family & Community

Experiential Learning

Respect for Traditional Knowledge

Importance of Values

Connection to the Land

Mentorship



This classroom will endeavour to incorporate Indigenous Worldviews & Principles into our lessons & practices.

This classroom will aim to highlight Aboriginal contributions to our way of living, learning and being.

We will never forget those that suffered at Residential Schools & those that continue to suffer as a result of past practices.



What are the specific health attributes of food we put in our body?

Experiential Learning

The Role of FOOD



Create a recipe for a smoothie and explain how the ingredients in th each will help your body.

Connect it to First Nations Metis and Inuit Connection to the land.

Discuss the impact of farming on cities the Sustainable Development Goals.

Research bees and their decline and the role they play in pollination. GMO debate

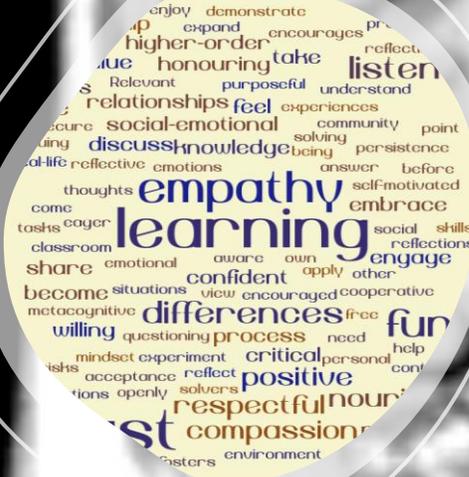
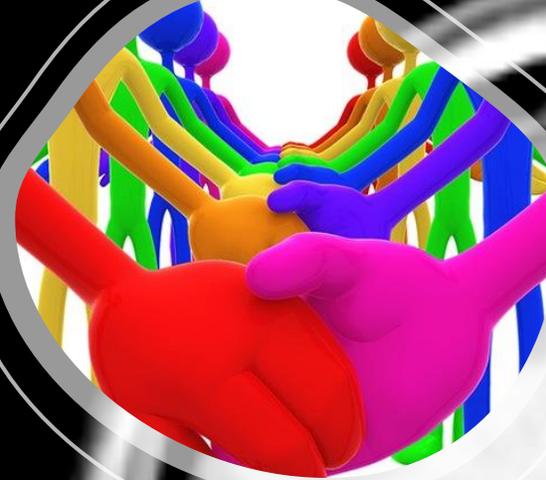
Look at ratios by doubling/tripling a recipe.

What is food insecurity?

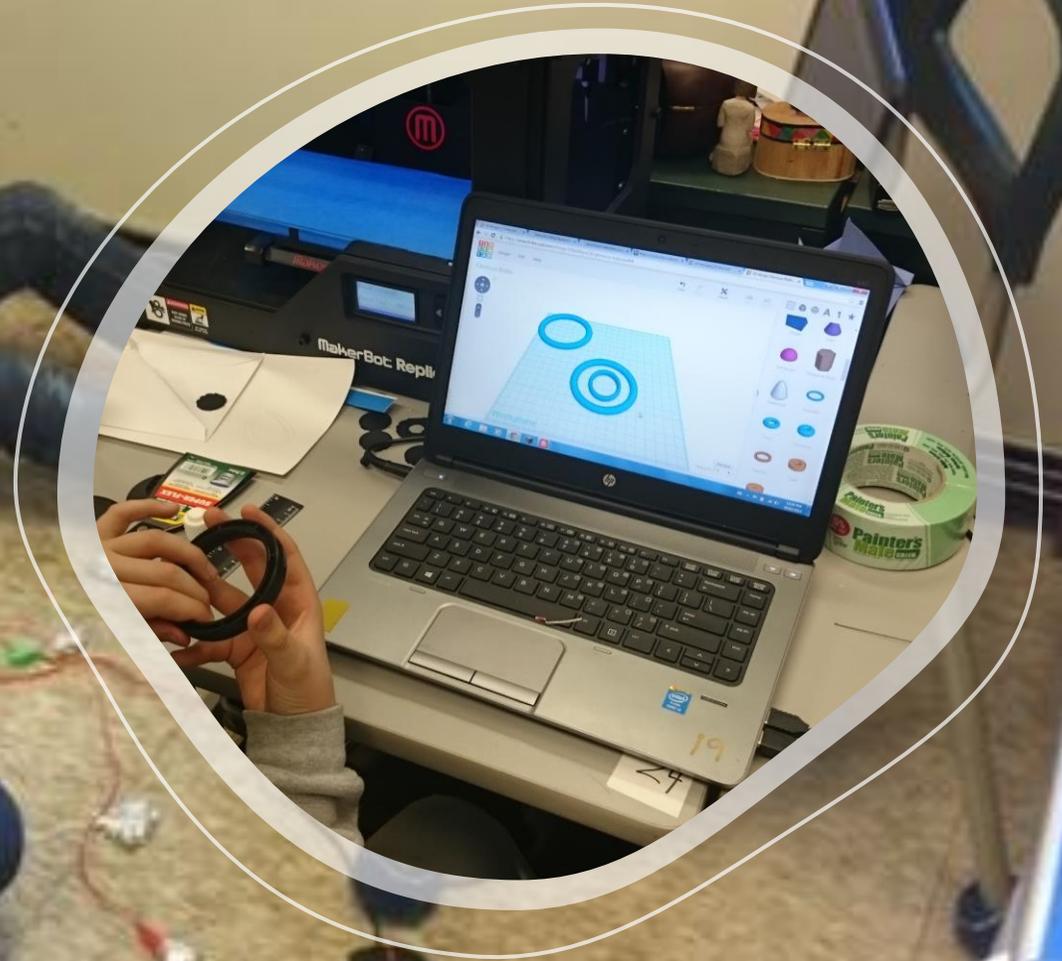
Does food mean something different to different people?

Connection to the land

How does Equity impact Social emotional Learning

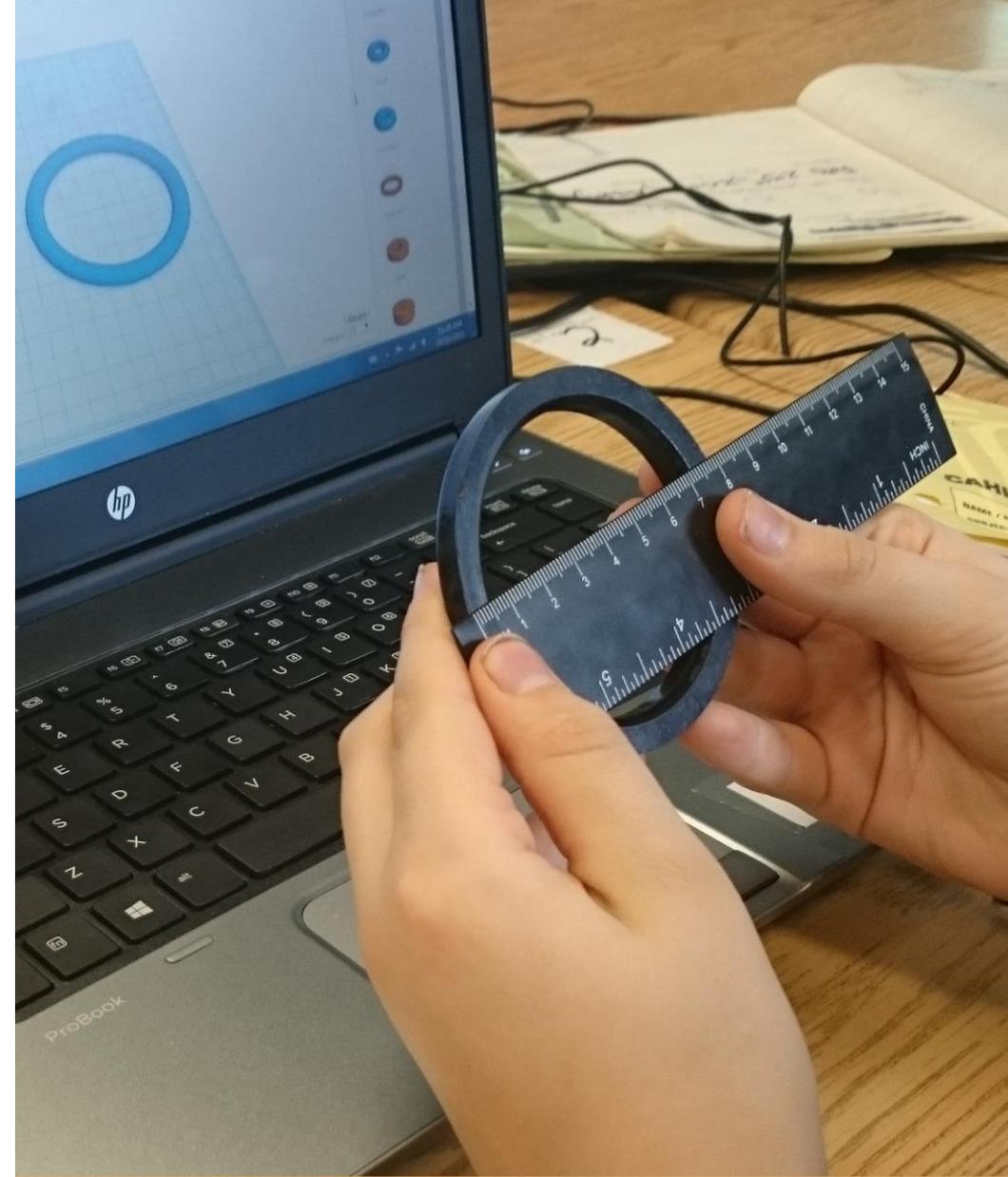


Equity –
Do we have a profound
belief that all children
are capable of
constructing their own
learning?



Constructionism vs. Constructivism

- “**Constructionism**—the N word as opposed to the V word— shares constructivism’s view of learning as “building knowledge structures” through progressive internalization of actions... It then adds the idea that this happens especially felicitously in a context where the learner is consciously engaged in constructing a public entity, whether it’s a sand castle on the beach or a theory of the universe
- Harel, I., & Papert, S. (1991). Situating Constructionism. In *Constructionism: Research reports and essays, 1985-1990* (pp. 1-11). Norwood, NJ: Ablex.



Inquiry
Project Based
Problem Based



Environmental
learning

Mindfulness

Learning at Home

**MAKER
Culture**

Primary Sources and
Storytelling

Game Based Learning

Design Thinking

Life Balance
Mental Health
Physical Health



What does it
look like in
action?





fatboy.

fatboy

Project Goals

Task 1	Task 2
Task 3	Task 4
Task 5	Task 6
Task 7	Task 8
Task 9	Task 10

Project Overview

Project Description

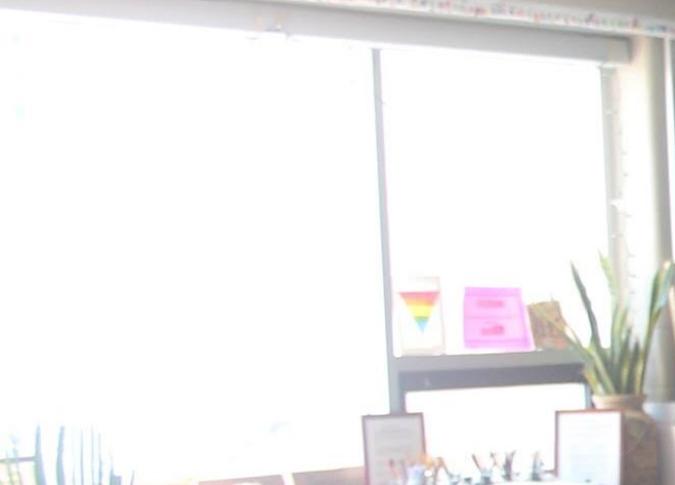
Project Objectives

Project Timeline

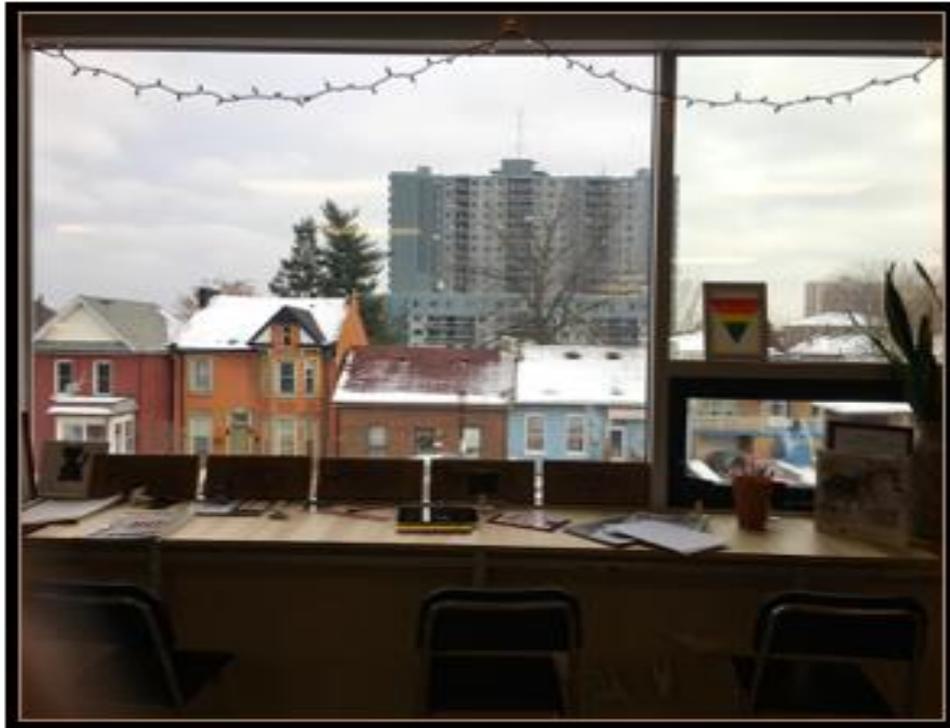
Project Budget

Project Risks

Project Status



Waldorf, Montessori and Reggio Emilia approaches emphasize the use of natural sunlight which inspired the small workspace under the window, surrounded by plants .







What does it look like in
Action?

Oral Traditions

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Experiential Learning

Respect for Traditional Knowledge

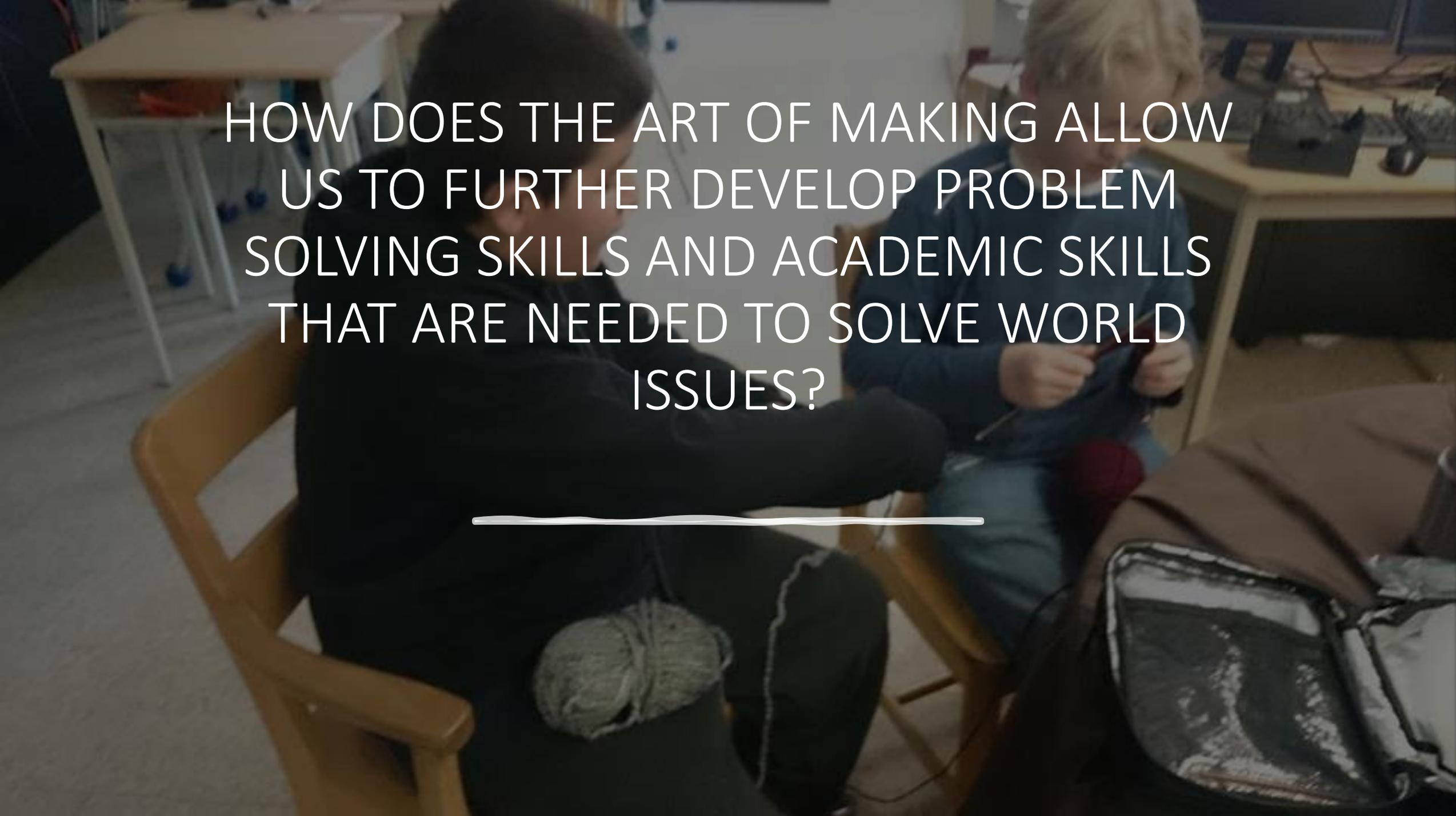
Importance of Values

Connection to the Land

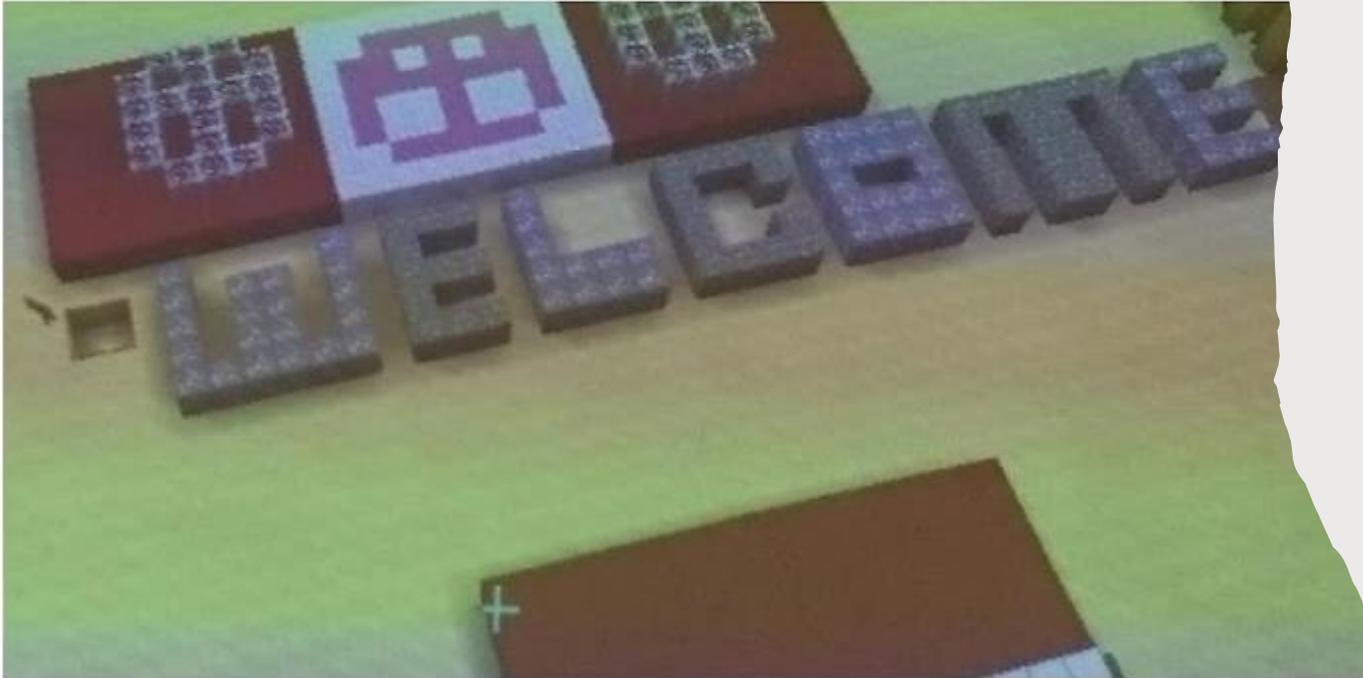
Mentorship

Belonging



A photograph of two children sitting at a wooden table in a room. The child on the left is wearing a dark hoodie and is looking towards the right. The child on the right is wearing a blue jacket and is actively knitting with red and blue yarn. A ball of grey yarn sits on the table in front of the child on the left. The background shows a desk with a computer monitor and other items. The text is overlaid in white, bold, sans-serif font.

HOW DOES THE ART OF MAKING ALLOW
US TO FURTHER DEVELOP PROBLEM
SOLVING SKILLS AND ACADEMIC SKILLS
THAT ARE NEEDED TO SOLVE WORLD
ISSUES?



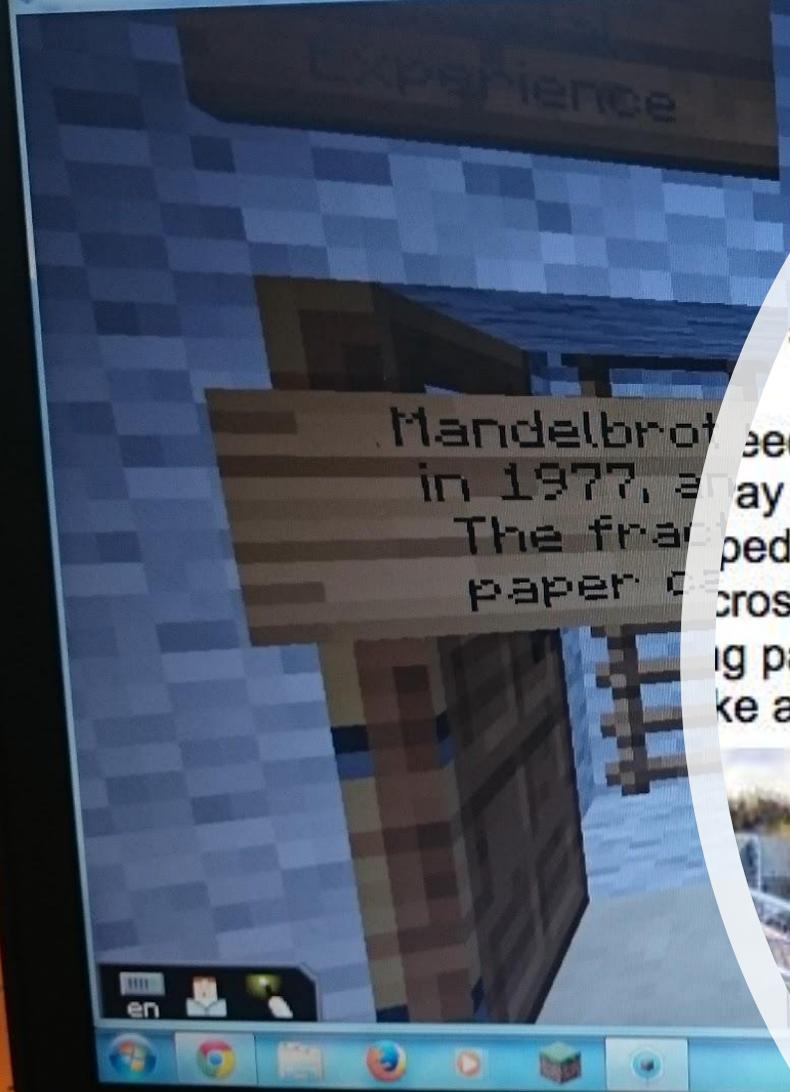
“Critical literacy ... points to providing students ... with the conceptual tools necessary to critique and engage society along with its inequalities and injustices. Furthermore, critical literacy can stress the need for students to develop a collective vision of what it might be like to live in the best of all societies and how such a vision might be made practical.”

- (Kretovics, 1985, in Shor, 1999).



Makers are motivated through problem solving, community action, collaboration and activism, rather than extrinsic rewards (Dougherty, 2017).





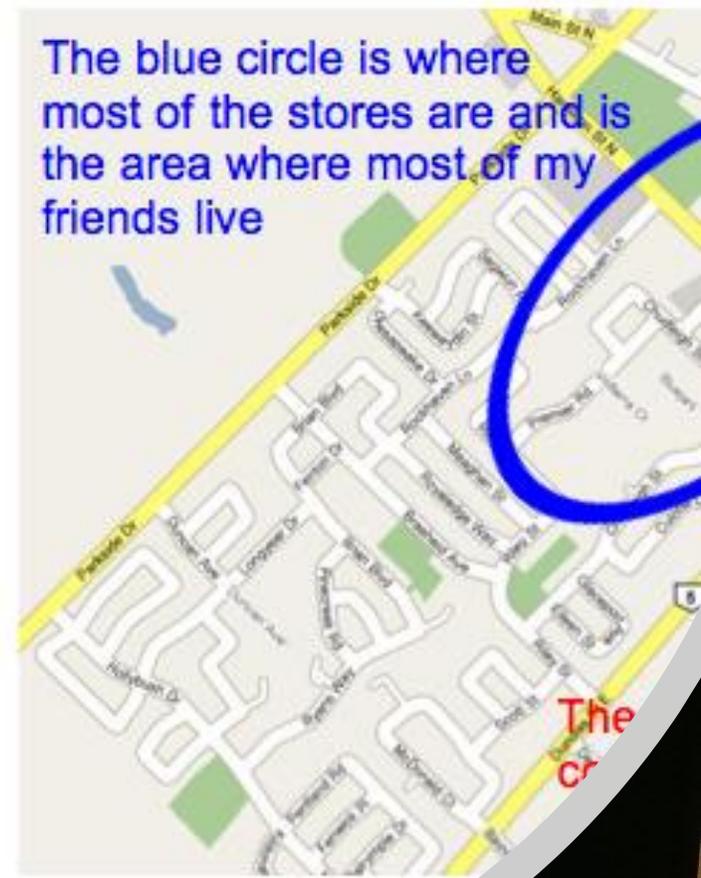
na

. waterdown was built around hwy 5, the problem with this is the
side and I live on other side. the hwy has always made it hard to get
street when I was little and that made it hard to visit friends and be so

Mandelbrot needs to be
in 1977, a way created that
The fra pedestrians
paper cross without
g paths with the
ke an overpass



The blue circle is where
most of the stores are and is
the area where most of my
friends live



with your name onto





How are we **BALANCING** what we take and what we give back?



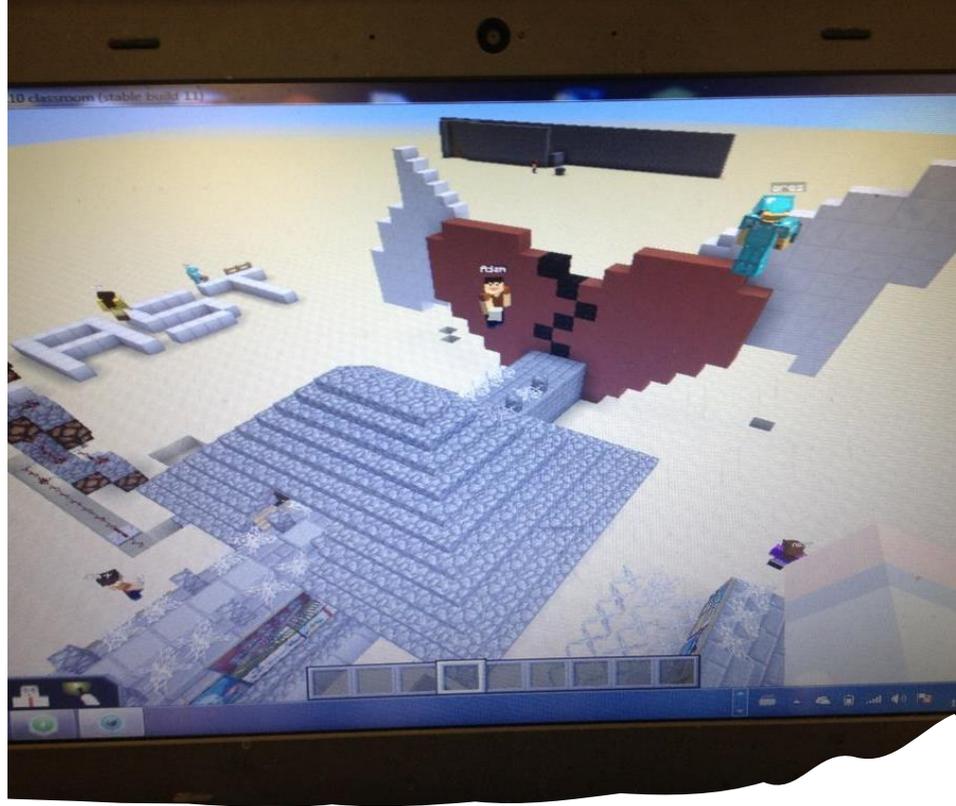
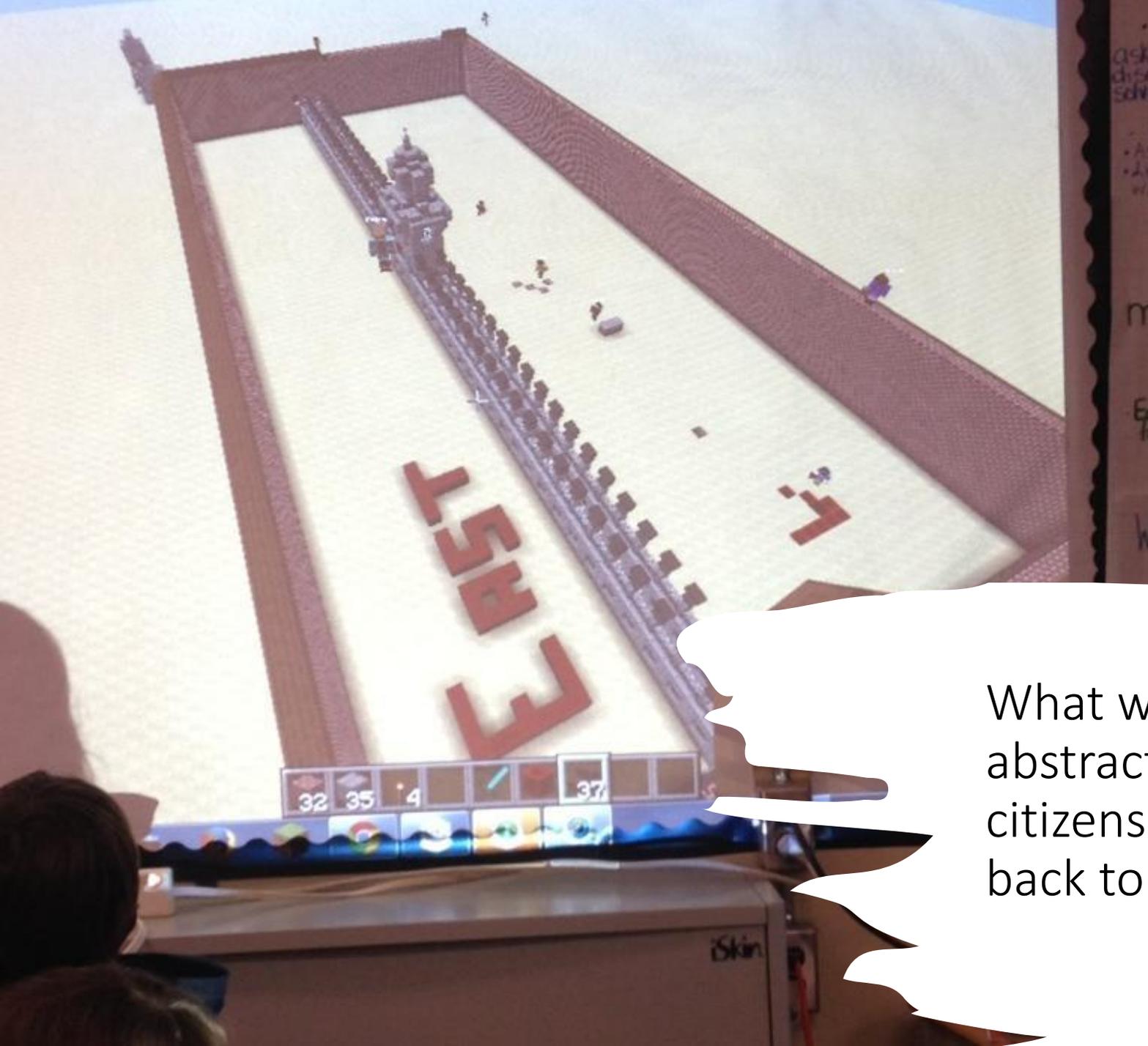
*Equity –
How can we establish an
environment where there is a
real belief that all children are
capable of constructing their
own learning*

Big Idea:

How do Symbols in History help to understand ourselves?

How do lessons in history serve as metaphors to help understand and make meaning in own life?

What walls or barriers, concrete or abstract, are faced by our own citizens and how does this connect back to Berlin?



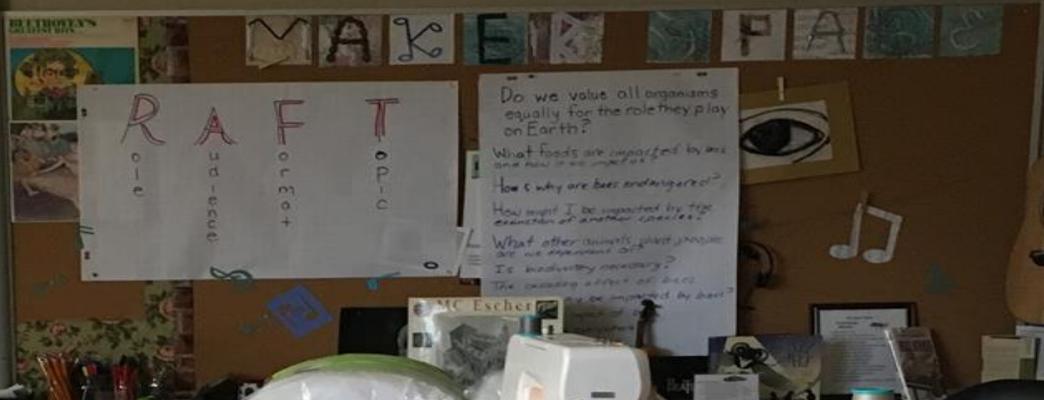
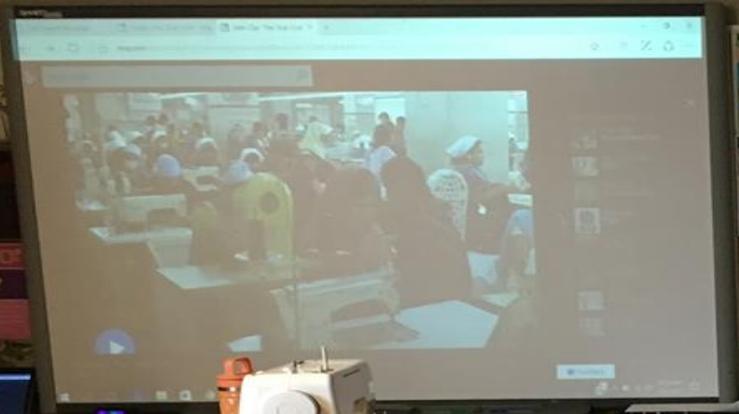
What walls or barriers, concrete or abstract, are faced by our own citizens and how does this connect back to Berlin?



Can we redefine what it means to be a consumer?

- What is the social impact of mass textile production?
- How can repurposing address Global Goals?
- How do logos and branding work against individuality?
- Can you create a logo that represents you
 - as a person distinct from commercial brands?







**“Wherever making happens
is a makerspace”**

**(Burke 2014; OPP Research Brief Series
2015).**

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Experiential Learning

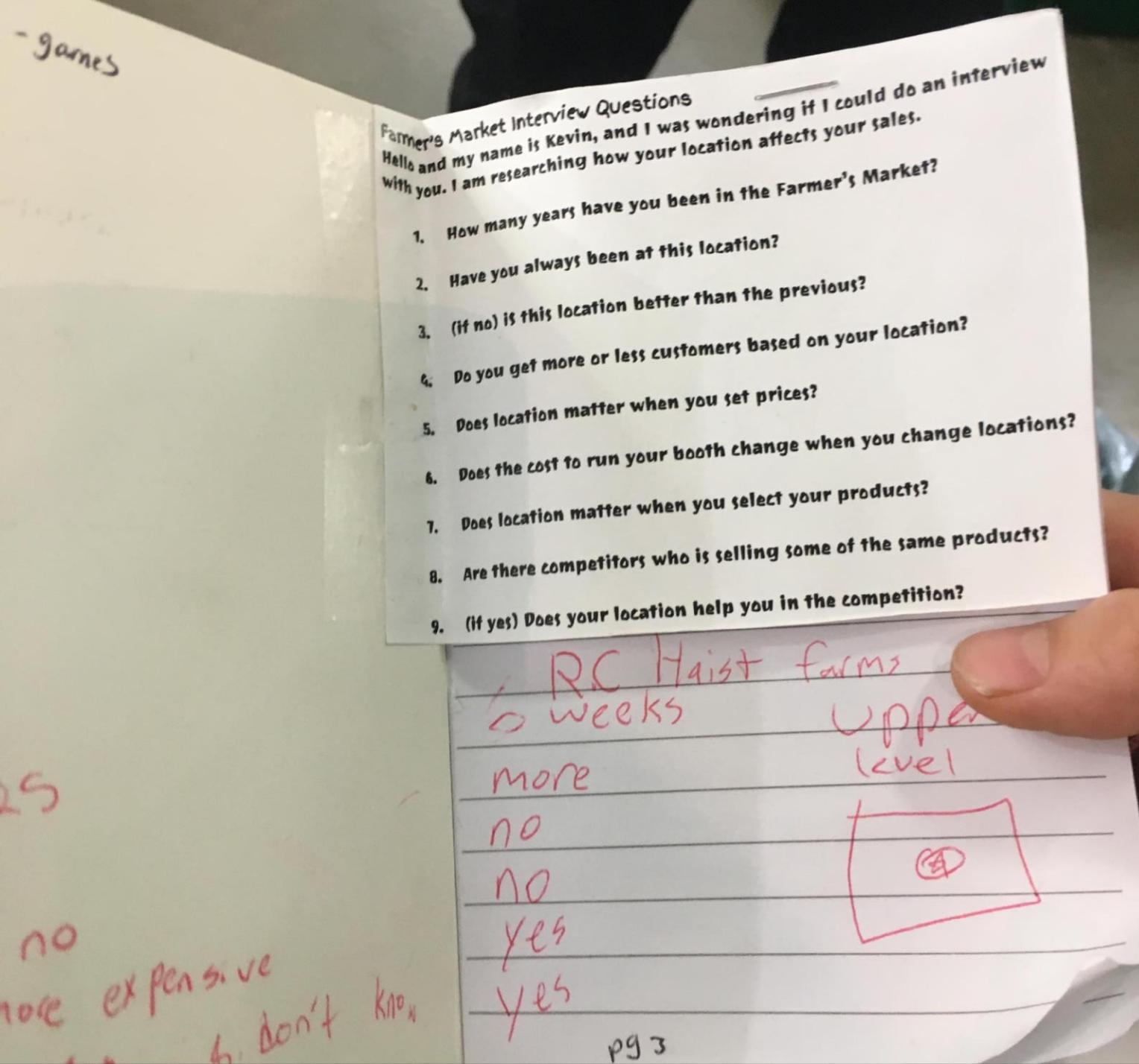
Respect for Traditional Knowledge

Importance of Values

Connection to the Land

Mentorship





Farmer's Market Interview Questions
Hello and my name is Kevin, and I was wondering if I could do an interview with you. I am researching how your location affects your sales.

1. How many years have you been in the Farmer's Market?
2. Have you always been at this location?
3. (if no) is this location better than the previous?
4. Do you get more or less customers based on your location?
5. Does location matter when you set prices?
6. Does the cost to run your booth change when you change locations?
7. Does location matter when you select your products?
8. Are there competitors who is selling some of the same products?
9. (if yes) Does your location help you in the competition?

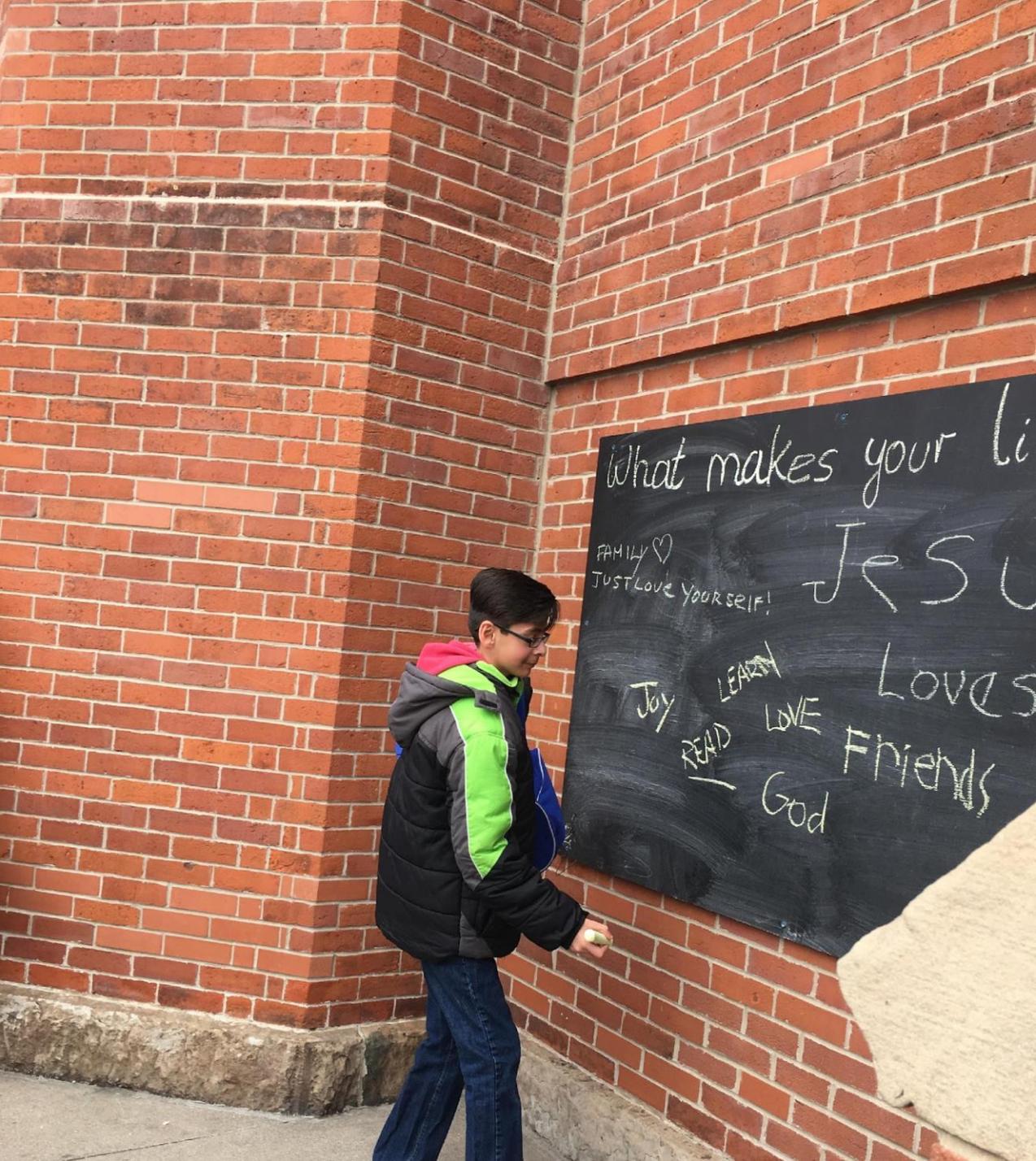
RC Haist farms
6 weeks
more
no
no
yes
yes

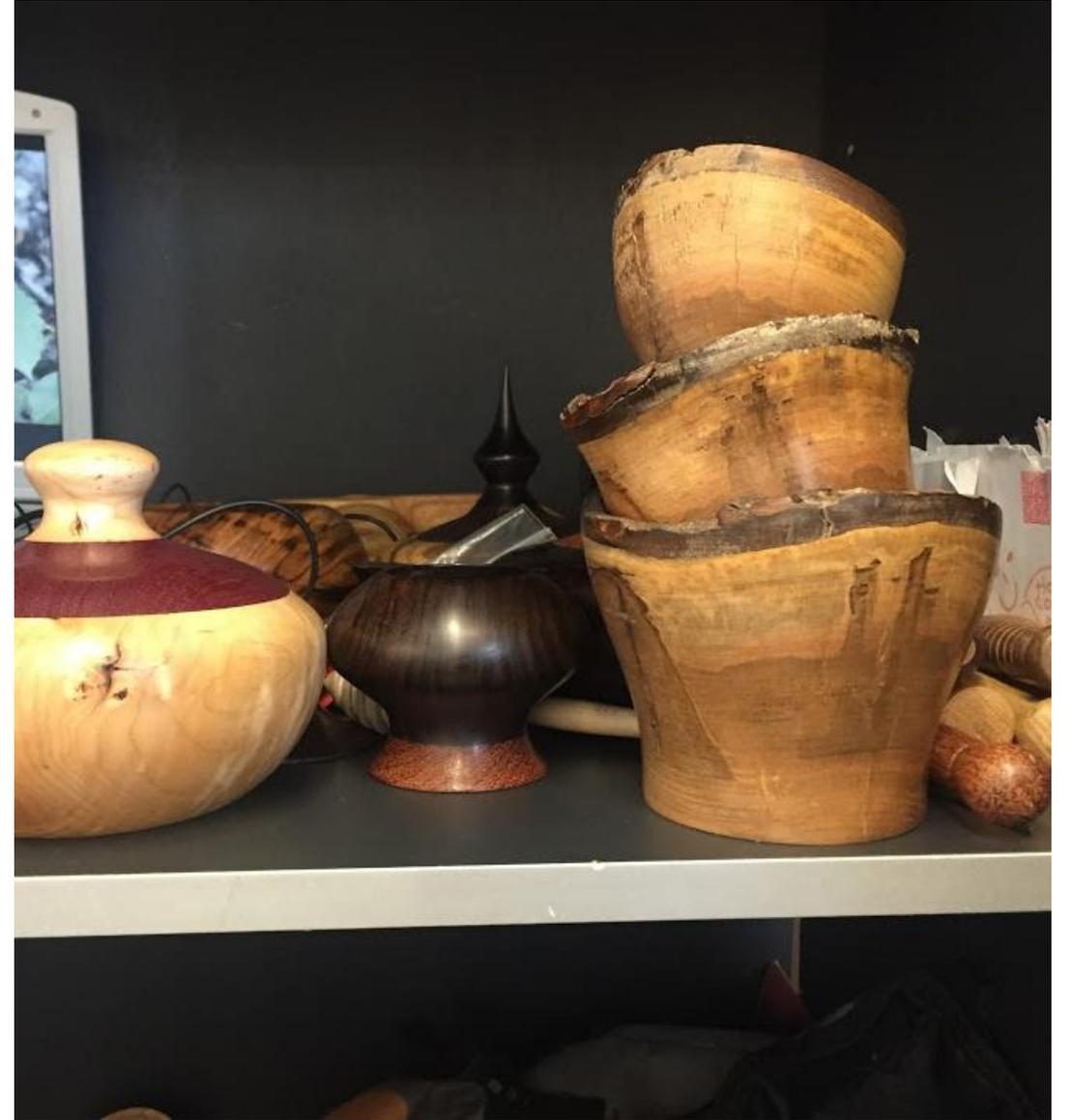
pg 3



In the Field







A large, dense pile of unsorted, multi-colored LEGO bricks and pieces scattered on a wooden floor. The pieces are in various colors including red, blue, yellow, white, grey, and black. The text "How do you define Play?" is overlaid in the center in a white, sans-serif font.

How do you define Play?

The proposed benefits of play, in the context of education, often fall into two categories:

- developmental learning (e.g., social and emotional skills, and self-regulation)
- academic learning (e.g., literacy and numeracy).

<https://www.journalofplay.org/sites/www.journalofplay.org/files/pdf-articles/13-1-Article-4-Portrayals-of-Play-Based-Learning.pdf>

<https://chessinstitute.ca/programs/stem/>

Spatial skills – learning spatial relations, orientation and awareness

Logic – playing games that require comparative reasoning assists in developing abstraction

Problem-solving – this includes trial and error, dividing complex problems into smaller, easier elements, or reverting to a problem that's already solved

Mathematics on the chessboard – chess is a great way to lay the foundations of mathematical logic, set and graph theory, geometry and combinatorics

Simple algorithms – rules systems to apply when solving a problem or completing a task; helps with learning the concepts of searching, sorting, operator precedence, and mapping.

“[Gaming] is literally the opposite of depression,” McGonigal said. “How can we bring the opposite of depression to everyday life?”

<https://www.nypl.org/blog/2011/04/01/jane-mcgonigal-and-nypl-present-find-future-game>

The benefits of play are recognized by the scientific community.

There is now evidence that neural pathways in children's brains are influenced by and advanced in their development through **the exploration, thinking skills, problem solving, and language expression that occur during play.**

Research also demonstrates **that play-based learning leads to greater social, emotional, and academic success.** Based on such evidence, ministers of education endorse a sustainable pedagogy for the future that does not separate play from learning but brings them together to promote creativity in future generations.

In fact, play is considered so essential to healthy development that the United Nations has recognized it as a specific right for all children.

(CMEC, 2012)

<https://www.ontario.ca/document/kindergarten-program-2016/play-based-learning-culture-inquiry>



BENEFITS OF PLAY ARE RECOGNIZED BY SCIENCE

- Research also demonstrates that play-based learning leads to greater social, emotional, and academic success.
- Play expands intelligence, stimulates the imagination, encourages creative problem solving, and helps develop confidence, self-esteem, and a positive attitude toward learning. (Dr. Fraser Mustard)
- Learning through play is supported by many early years experts including Lev Vygotsky identified play as the leading source of development in terms of emotional, social, physical, language, or cognitive development.
- Psychologist David Elkind that “play is not only our creative drive; it’s a fundamental mode of learning.” Wood, E. (2004).

“Developing a pedagogy of play.” In J. Cullen (Ed.) Early childhood education: Society and culture. London, UK: Sage.

https://www.cmec.ca/Publications/Lists/Publications/Attachments/282/play-based-learning_statement_EN.pdf

- *Play sets the foundation for the development of critical social and emotional knowledge and skills.*
- *Through play, children learn to forge connections with others, and to share, negotiate and resolve conflicts, as well as learn self-advocacy skills.*
- *Play also teaches children leadership as well as group skills.*
- *Furthermore, play is a natural tool that children can use to build their resilience and coping skills, as they learn to navigate relationships and deal with social challenges as well as conquer their fears*

<https://www.unicef.org/sites/default/files/2018-12/UNICEF-Lego-Foundation-Learning-through-Play.pdf>

Pedagogical approaches

collaborative learning

cooperative learning

experiential learning

guided discovery learning

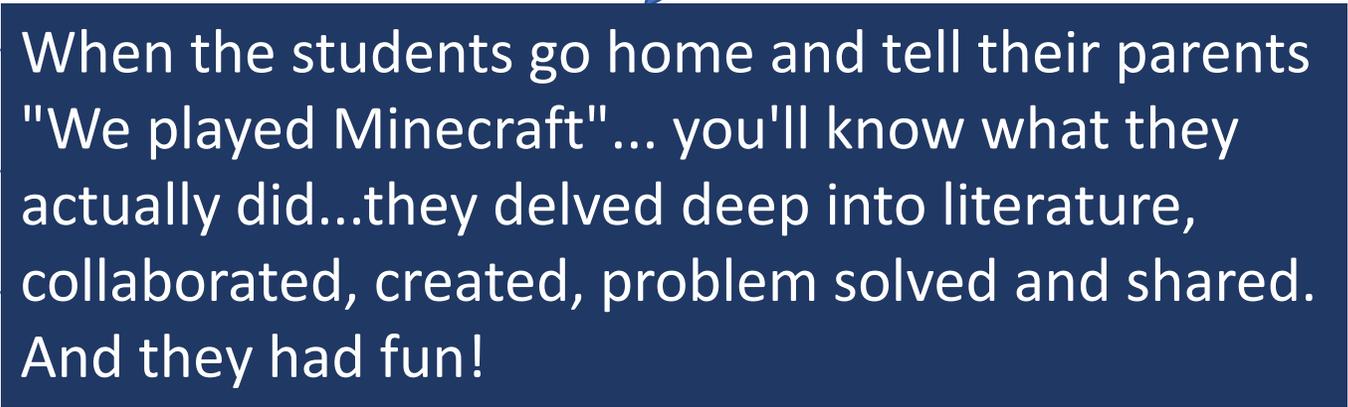
inquiry-based learning

problem-based learning

project-based learning



Connected to PLAY/GAME
And
Social Emotional Learning



When the students go home and tell their parents "We played Minecraft" ... you'll know what they actually did...they delved deep into literature, collaborated, created, problem solved and shared. And they had fun!



Gaming SEL

Games as
Transformational
to Social and
Emotional Learning

Matthew Farber



- “When playing games, children feel a sense of agency, they are in control, they drive the experience”
- (Farber, 2020)



Art Credit: Marie Cardouat, Frank Dion

Dixit (Latin: **dixit**, Latin pronunciation: ['di:ksitə], "he/she/it said"), is a French card game created by Jean-Louis Roubira, illustrated by Marie Cardouat, and published by Libellud.

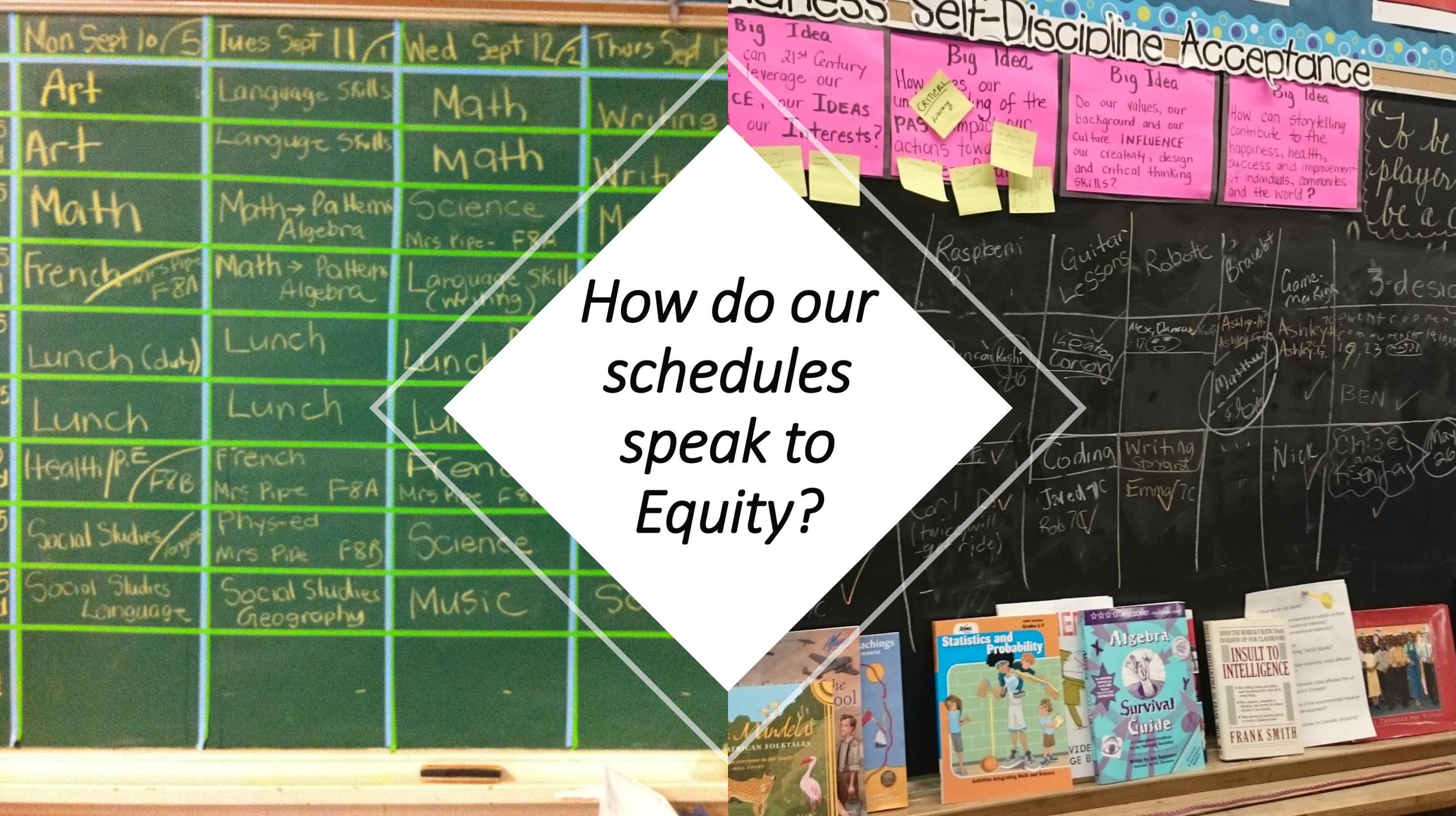
I am trying to find the original creator of some of the slides, those with wood background (and the lovely title page). I would like to credit them and thank them for adding the images. I did contact the Dixit creators and was informed I may use the images and game in my remote classes as long as it is not for commercial and I must credit the creator of the image. If you use these slides, please do the same.

Please contact me: zoe.branigan.pipe@gmail.com or @zbpipes for questions or thoughts. It is a great game. I wrote about it at my blog: <https://pipedreams.edublogs.org/wp-admin/post.php?post=1523&action=edit>



Caption?

ONE WORD?



Mon Sept 10 (5)	Tues Sept 11 (1)	Wed Sept 12 (2)	Thurs Sept 13
Art	Language Skills	Math	Writing
Art	Language Skills	Math	Writing
Math	Math → Patterns Algebra	Science	M
French Mrs Pipe F8A	Math → Patterns Algebra	Language Skills (writing)	
Lunch (duty)	Lunch	Lunch	
Lunch	Lunch	Lunch	
Health/PE F8B	French Mrs Pipe F8A	French Mrs Pipe F8A	
Social Studies Longpe	Phys-ed Mrs Pipe F8B	Science	
Social Studies Language	Social Studies Geography	MUSIC	

How do our schedules speak to Equity?

Business Self-Discipline Acceptance

Big Idea: can 21st Century leverage our CE, our IDEAS our Interests?

Big Idea: How can our PAS actions toward...

Big Idea: Do our values, our background and our Culture INFLUENCE our creativity, design and critical thinking SKILLS?

Big Idea: How can storytelling contribute to the happiness, health, success and improvement of individuals, communities and the world?

Raspberry
Guitar Lessons
Robotics
Braebury
Game-making
3-design
Alex Duran
Ashley H
Ashley G
Ashley G
19, 23 (521)
BEN ✓
Coding
Writing Storyard
Emma 7C
Nick
Chloe and Ksenia
May 26

Maths
The Pool
Mandelst
AMERICAN FOLKTALES
Statistics and Probability
Algebra Survival Guide
INSULT TO INTELLIGENCE
FRANK SMITH
TOWARDS THE WATER



Erika Garcia @flyingmonkey13 · Oct 6



Today was our first day of Crews. Crews are multi-age teams built around shared interests. We have coloring, fish crews, Paralympics, gardening...

Our goal is for all students to feel a sense of belonging without having to compromise who they are.



How would your space be different?





Thank You!

