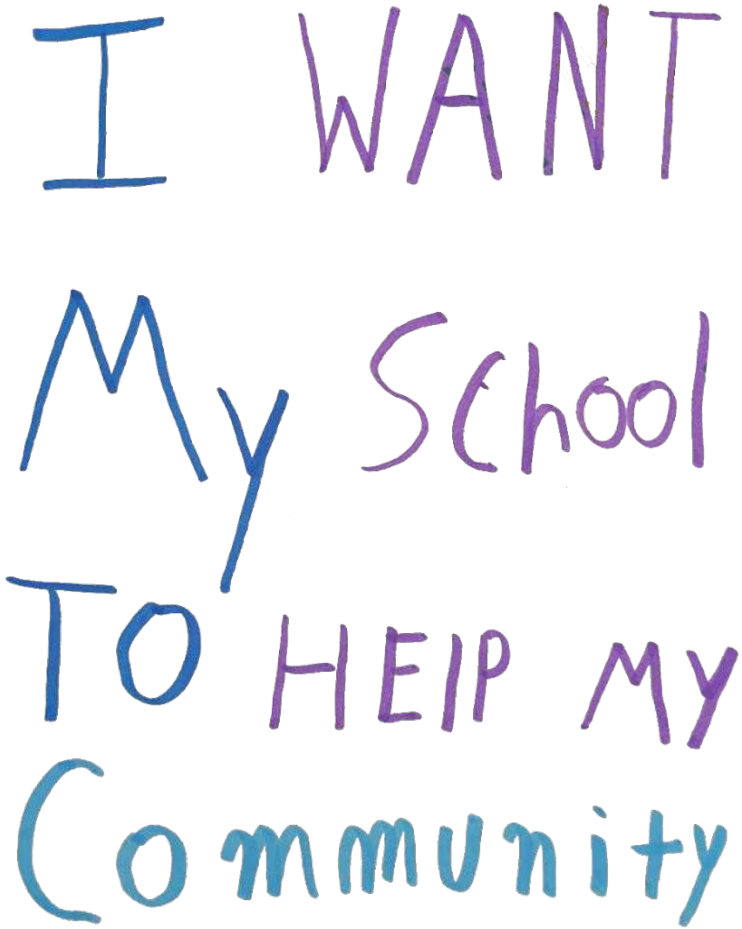
Kirksey
ARCHITECTURE



Siobhan – 8^{the} Grade

MIDDLE SCHOOL IS AWKWARD

Michelle

Jody

Ann

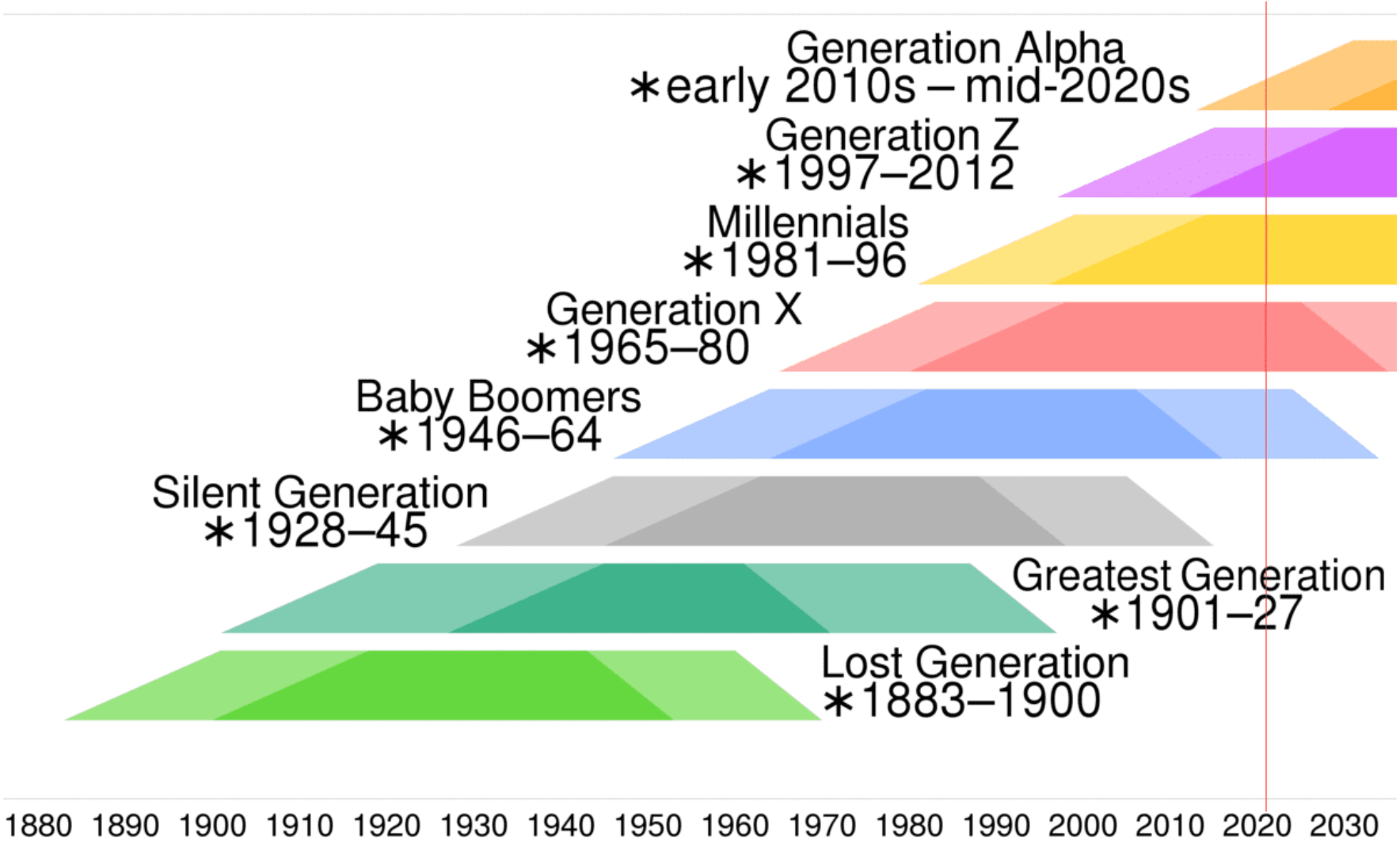

The Branch School
WHERE LOVE LEADS

WHO ARE THEY?

GENERATION ALPHA

What issues does your generation face that your parents didn't?


GENERATION ALPHA

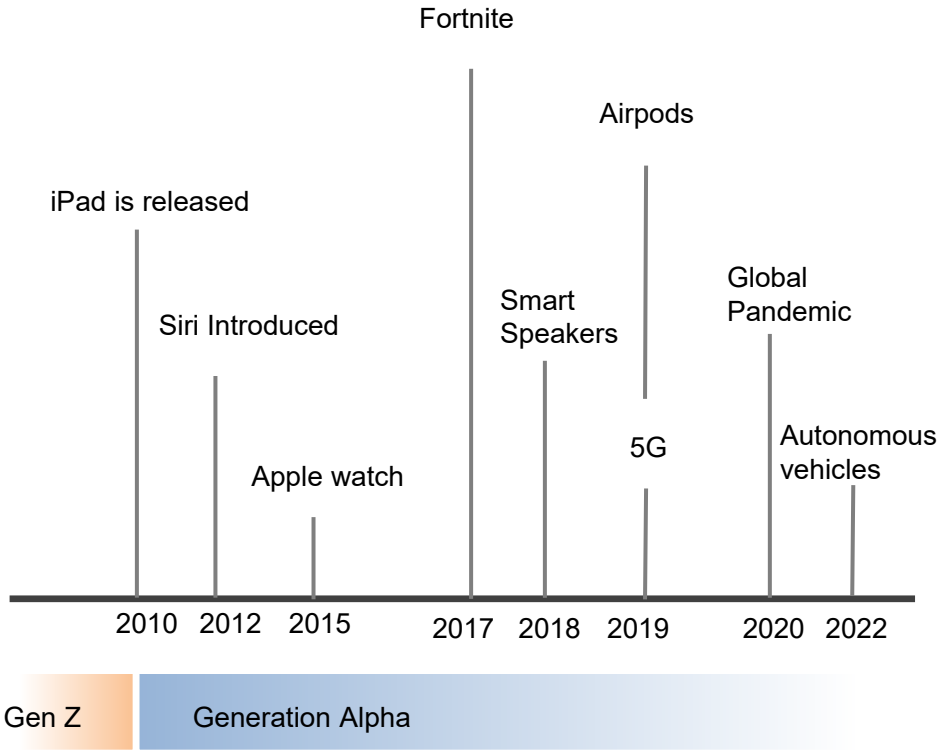

Generation Alpha
∗early 2010s – mid-2020s
Generation Z
∗1997–2012
Millennials
∗1981–96
Generation X
∗1965–80
Baby Boomers
∗1946–64
Silent Generation
∗1928–45
Greatest Generation
∗1901–27
Lost Generation
∗1883–1900
1880 1890 1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010 2020 2030

ON TRACK TO BE THE MOST VISIBLE GENERATION

Gen Alpha is being parented primarily by Millennials so many have had their names and faces online since birth

TRUE DIGITAL NATIVES

First Generation Born Entirely in the 21st Century



THE BREAK DOWN OF TRADITIONAL POWER

Kids in Gen Alpha know anyone has the power to get his or her voice heard. One person on Twitter can be heard by just as many people as the president on a nationally televised address.

CONCERNED ABOUT CLIMATE CHANGE

CONCERNED ABOUT SAFETY

CONCERNED ABOUT RACISM

CONCERNED ABOUT CYBER BULLYING

GEN ALPHA are accustomed to having immediate access to information which makes LECTURING and old models of learning OBSOLETE. They will learn at their own pace with PERZONALIZED learning experiences targeted to keep up with them.

CLASSROOMS
ONLINE LEARNING MODULES
TUTORIALS

ENGAGEMENT ACROSS THE GENERATIONS

	GEN Z	GEN ALPHA	GEN BETA
EDUCATION OUTCOMES	Employable	Adaptable	Entrepreneurial
SCHOOL FOCUS	Exam results	Learning skills	Life skills
MARKETING	Peers	Influencers	Artificial intelligence
WORK STYLE	Participative	Collaborative	Co-creators
IDEAL LEADER	Coordinator	Empowerer	Enlarger
PAYMENTS	Credit card	Digital	Virtual
TECHNOLOGY	Touchscreen	Voice-recognition	Gesture control
CONSUMER TRENDS	Customised	Personalised	Predictive
ADVICE	Professional credentials	Social validation	Peer influence
BUSINESS CONTEXT	Changing trends	Frequent disruption	Continuous volatility

IQ

Intelligence Quotient

EQ

Social and Emotional Quotient

AQ

Adaptability Quotient

"The way we think and adapt"

SMALLER LEARNING COMMUNITIES WITH OPPORTUNITIES FOR PEER TEACHING

INTEGRATED PHYSICAL ACTIVITY, ART, AND CREATIVE EXPRESSION

PLACES OF RESPITE AND REFLECTION

BUILDING AS TEACHING TOOL

STUDENT- OWNED SPACE

WHO WE ARE !

THE BRANCH SCHOOL- MS


The Branch School
WHERE LOVE LEADS

How The Branch School got here

Founded 1977

Added Middle School 2009

Acquired adjacent land 2017

Hired Kirksey Architects and Harvey

Construction 2020

Opened new building to middle school

September 2022

How The Branch School got here

Founded 1977

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September 2022


LOVE
LEARN

PROJECT BASED LEARNING AT THE BRANCH SCHOOL

SEQUOIA

Project-based Learning for Middle School

First decade: Sequoia
- Oil Exploration and recovery, and marine life impact
- Environmentally-sensitive home design
- Archeological exploration, interpretation, and curation
- And more…

Supported by community resources (parents, staff) and field trips

Hands-on activities

Presentation of final products to other parts of school
- Upper elementary students vote on go/no go for drilling
- Middle schoolers build online archeological museum and physical museum and act as docents to tour elementary students

Project-based Learning for Middle School

New site: Royal Branch Archipelago

First PBL project:

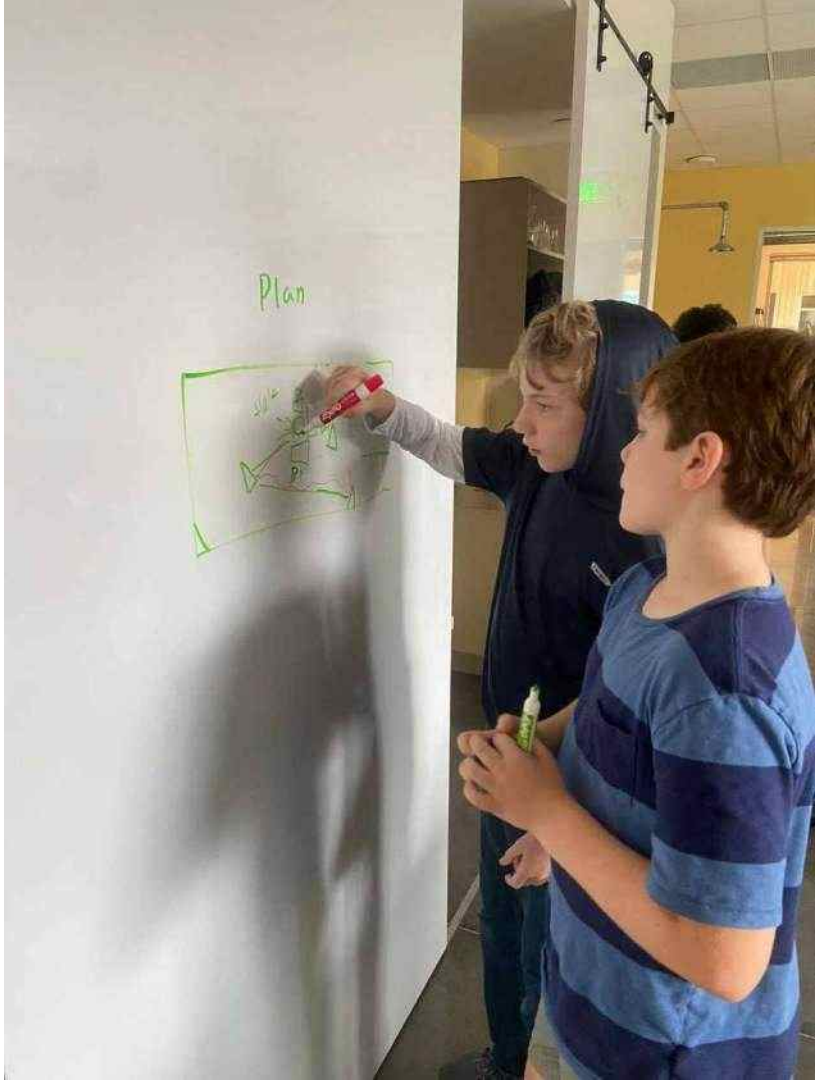
- Landforms/biomes
- Cities
- Economic activities
- Island/state maps
- State flags
- Archipelago constitution

Construction-year projects

Harvey Construction: 3 hard-hat site tours
- Steel erection
- Building envelope
- Construction progress

Kirksey Architects: 3 presentations with student interactions
- Building design
- Sustainability / LEED
- Sustainable finishes

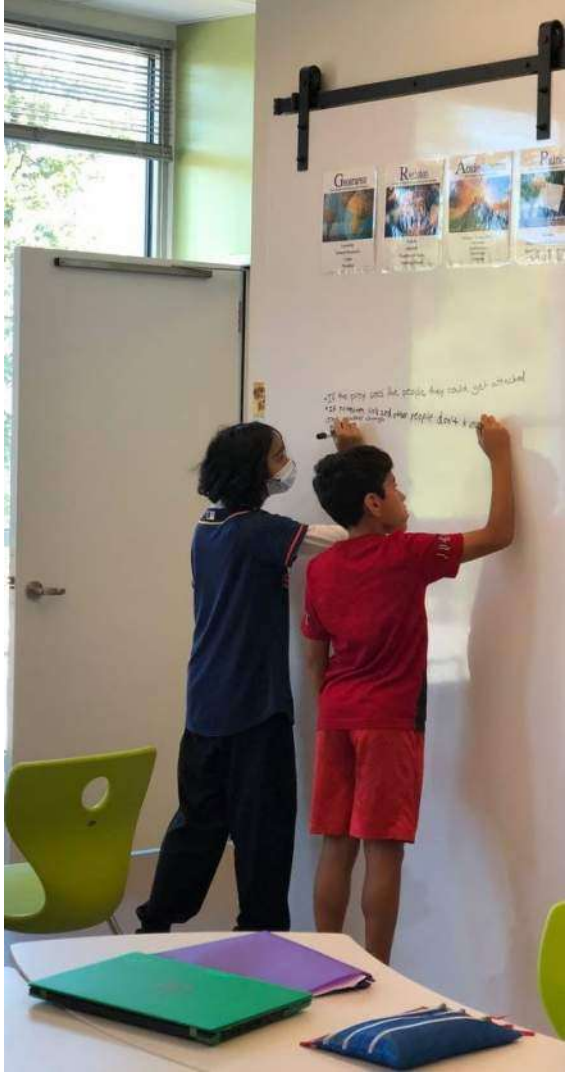
Outcomes:
- Guidance on career choices
- Interest in and commitment to sustainability
  - low-tech (passive energy conservation)
  - high-tech (geothermal wells, solar panels)



TOURS


GP
DensGlass
Sheathing

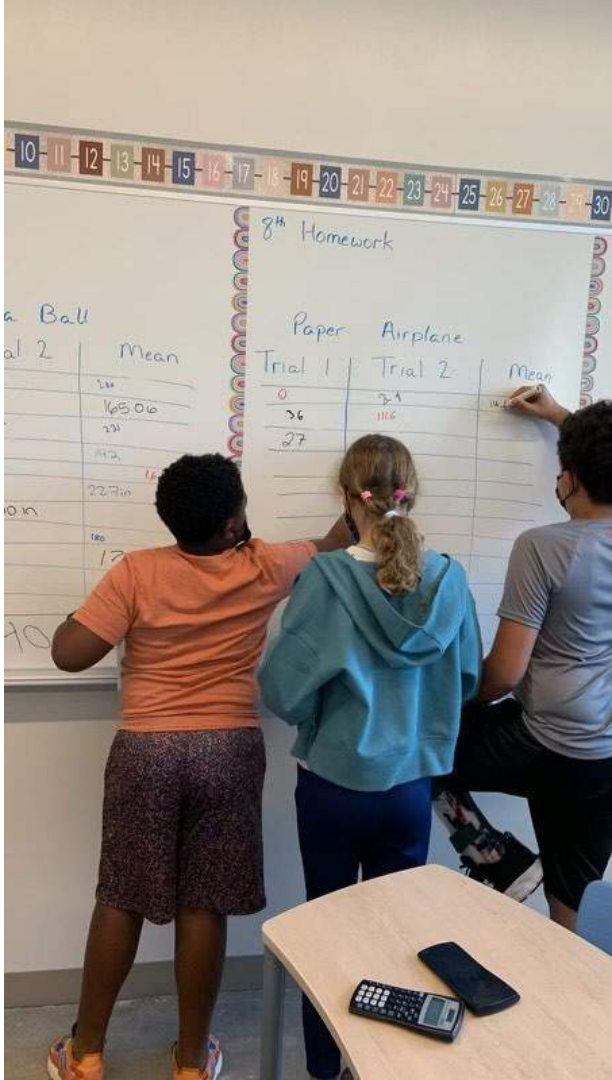

CAUTION
STILT
WALKERS



Classroom collaboration

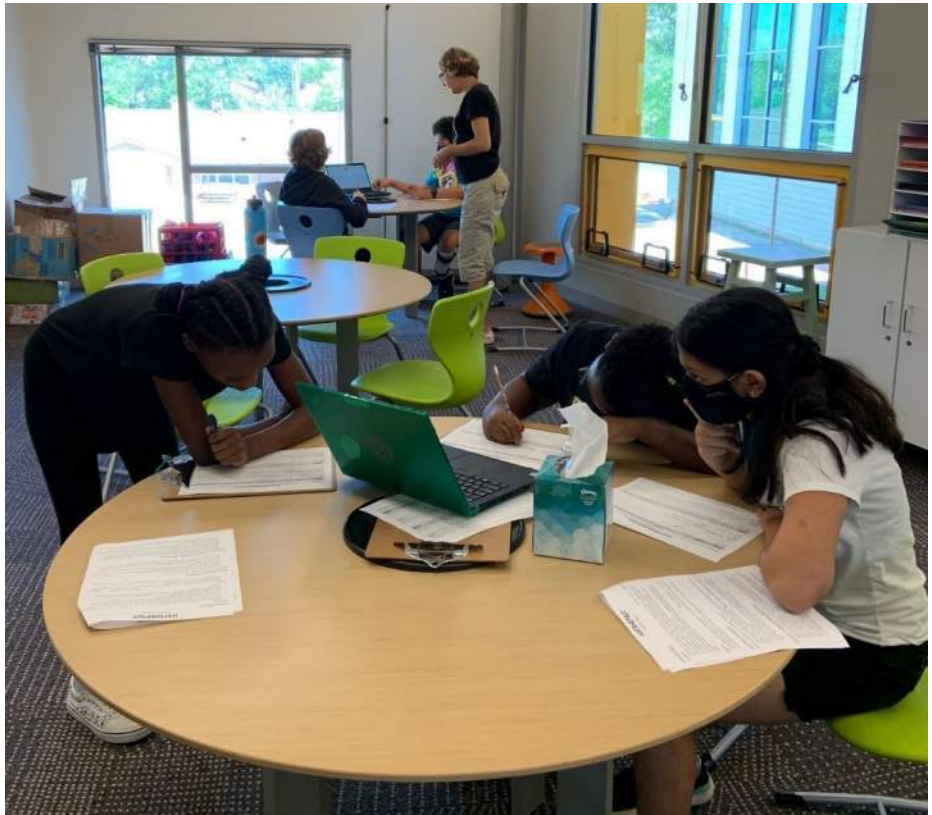
Individual student learning support

Collaboration support



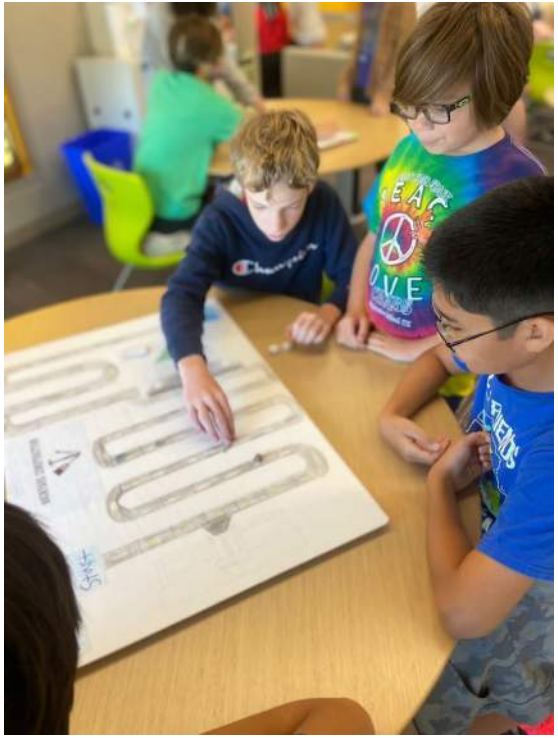
Collaboration spaces

Collaborate on projects



Collaboration spaces

Play student-designed games around life goals



What does The Branch School Mean to You?

design

DESIGN

STUDENTS TEACHING US

VISIONING

PLAY THEORY

Discussing a common project vision

“Kids vision summary”

A place that is modern, smart, and connected to nature, peaceful, colorful and bright and designed especially for us.. kids

“adult vision summary”

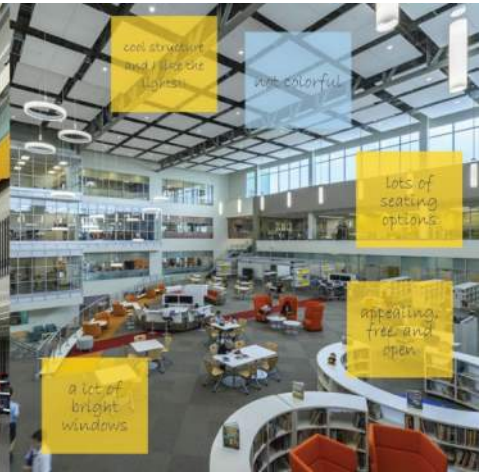
A campus where learning is integrated with nature, and a space that is inspired, and innovative and celebrates the unique diversity of this community

IMAGE EXTRAVAGANZA

Identifying project likes and dislikes

like

- outdoor learning spaces
- modern, and smart
- natural daylight and big windows
- open spaces and cozy spaces –



dislike

- monotonous, blank facades
- design elements that seemed dangerous and unstable
- too blocky , boring, traditional

POST CARDS

Identifying memories and future potential

"Bye Mom!" i say as i leap out of the car. I take the escalator up to the 2nd floor to my locker. I grab my math textbooks and go to math class. "Ok, go to the windows," Ms. Davis says. "Your equation to solve is $x=(24\cdot2)-3$." We wrote on the windows to solve the equation. As the bell rang, i leave and go to the coffee shop and café during passing period because i was getting tired and i needed some coffee and i needed a snack. I run to Spanish class with my coffee and food. "Hola Adriana, yo quiero comida," Ms. Mitchell said. "Ok," i say as i share food with the class. Because in this fictional world, we are allowed to share food and i am a good person. In the Spanish classroom, there is a lot of flexible seating and it is fun and colorful.

Kirksey

I come out of my car to see a Incredible new modern building. their are windows everywhere. The colors along the walls are black, white, purple & green. It makes me feel like im in the future. The inside is ten time better though, with a glass staircase and a mural of a tree. It really represents our School pride, thier are two floors I love them both the same though. and the classes have amazing windows & lights, it is really awesome. I feel so lucky to be one of the people who designed this building, so I walk Inside. Ana Alonso

Kirksey

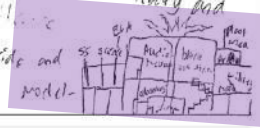
Aava

I would want our school to be two floors, but not super huge. Kinda like our current school with another floor on it, but with wider hallways. I would like it to have a modern look with lots of color and windows, with quite a bit of white. I would also like lockers that are rainbow, and classrooms that are specially designed for each class room. An example could be a science room with a wall with the solar system. It would be nice if we had an area for students to hang out and do home work with nice, modern and comfy chairs.

Kirksey

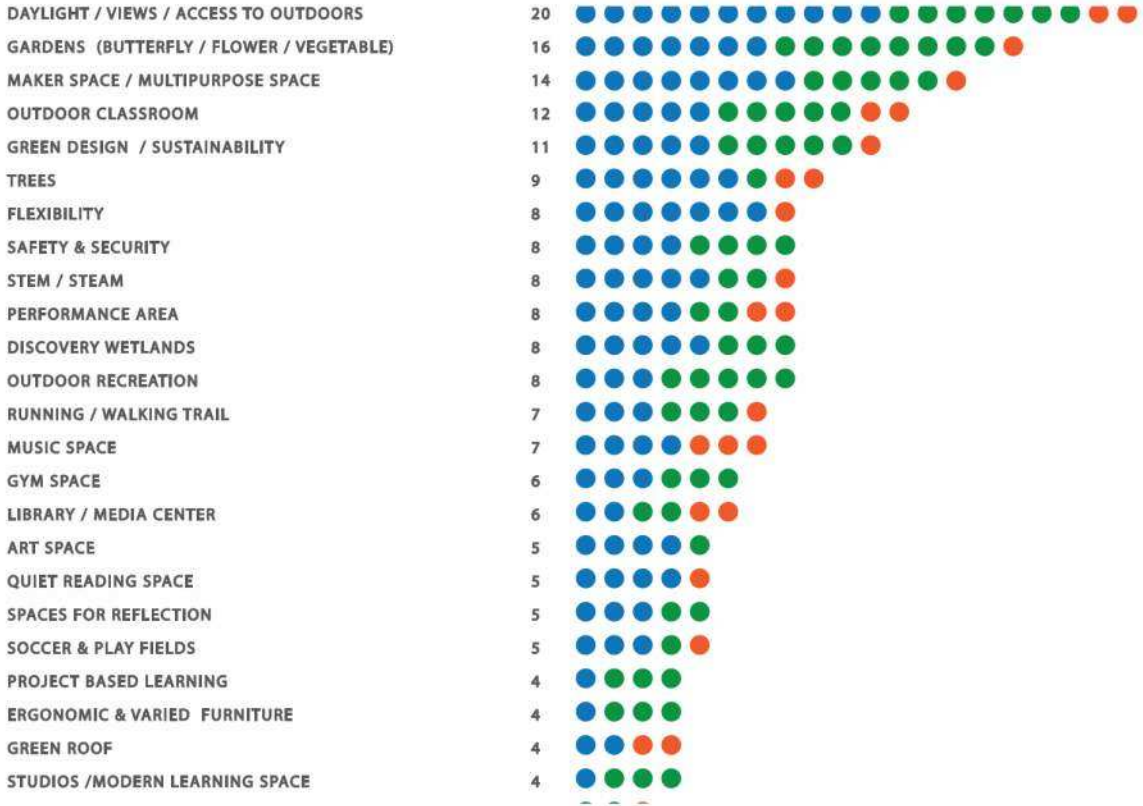
Patricia

I think that the building should have a modern type of architecture and if you colored it would likely have a type of lobby to it and 2 different sections. 1 section would lead to science ELA and SS and the other section would have the math and on the second floor there would be an audotorium a library and (if this ever gets added) a black box theatre (and would house plant life on the inside and outside)



PRIORITIES

Identifying project needs and advantages



FACULTY - PARENTS - STUDENTS

PRIORITIES BOARD SUMMARY

1424 Sherwood Forest St.

Welcome to Breaking Ground

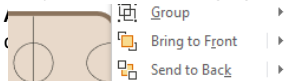
A game where we pick-and-place site elements to better understand the size, constraints, and opportunities of our site.

INSTRUCTIONS:

- On Slide #2 there are game pieces, **Cut and Paste** the objects onto Slide #1
- You can draw walking and

(remember to click the mouse when you want to move objects again)

- If objects aren't showing right,



- Th

Kirksey ARCHITECTURE

TEACHING STUDENTS AS WE DESIGN

THE DESIGN PROCESS

The Branch School

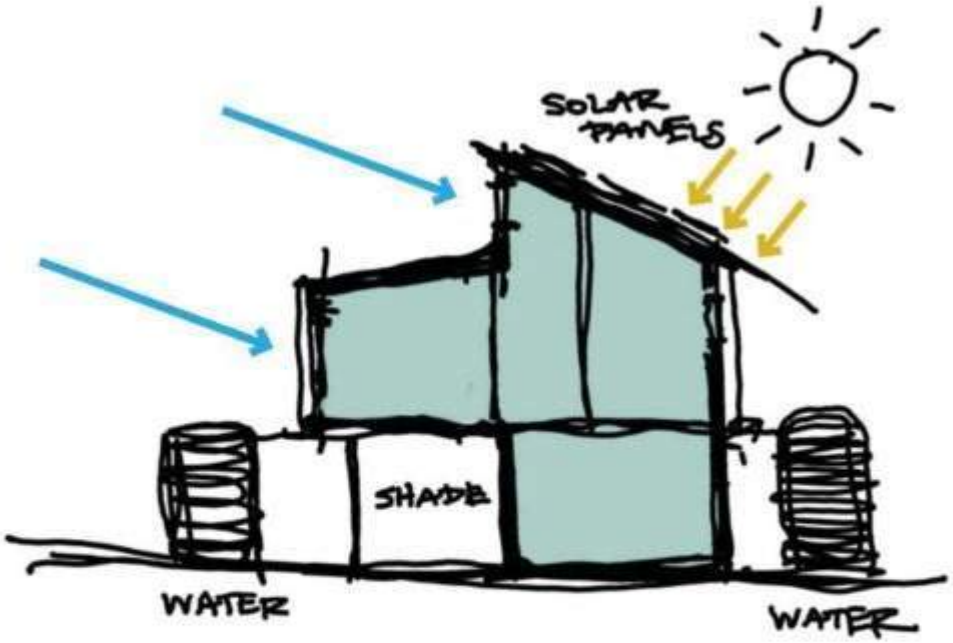
WHERE LOVE LEADS

STEAM
+
Outdoor Learning
+
Sustainability

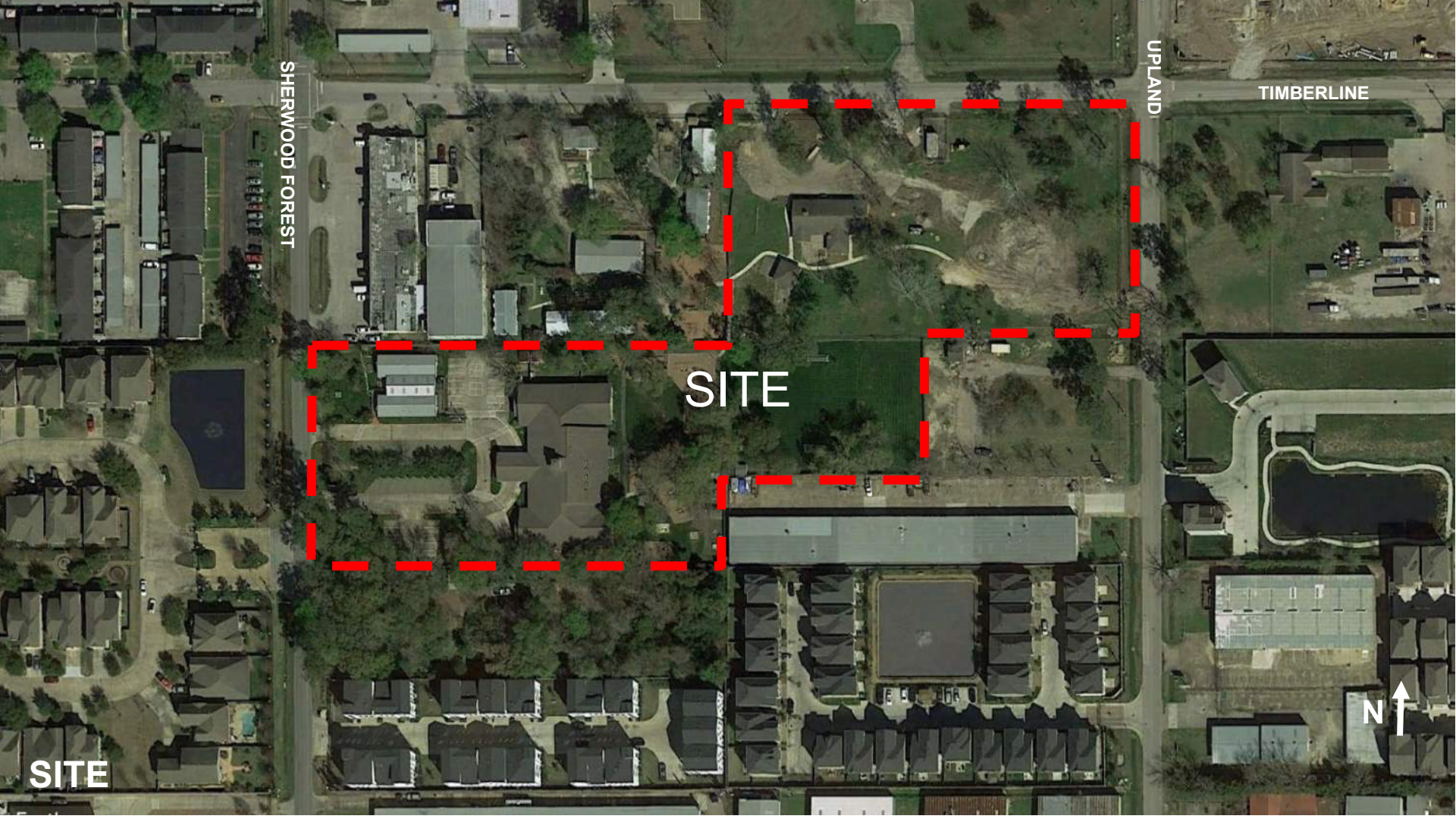
creating an **ECOSYSTEM**

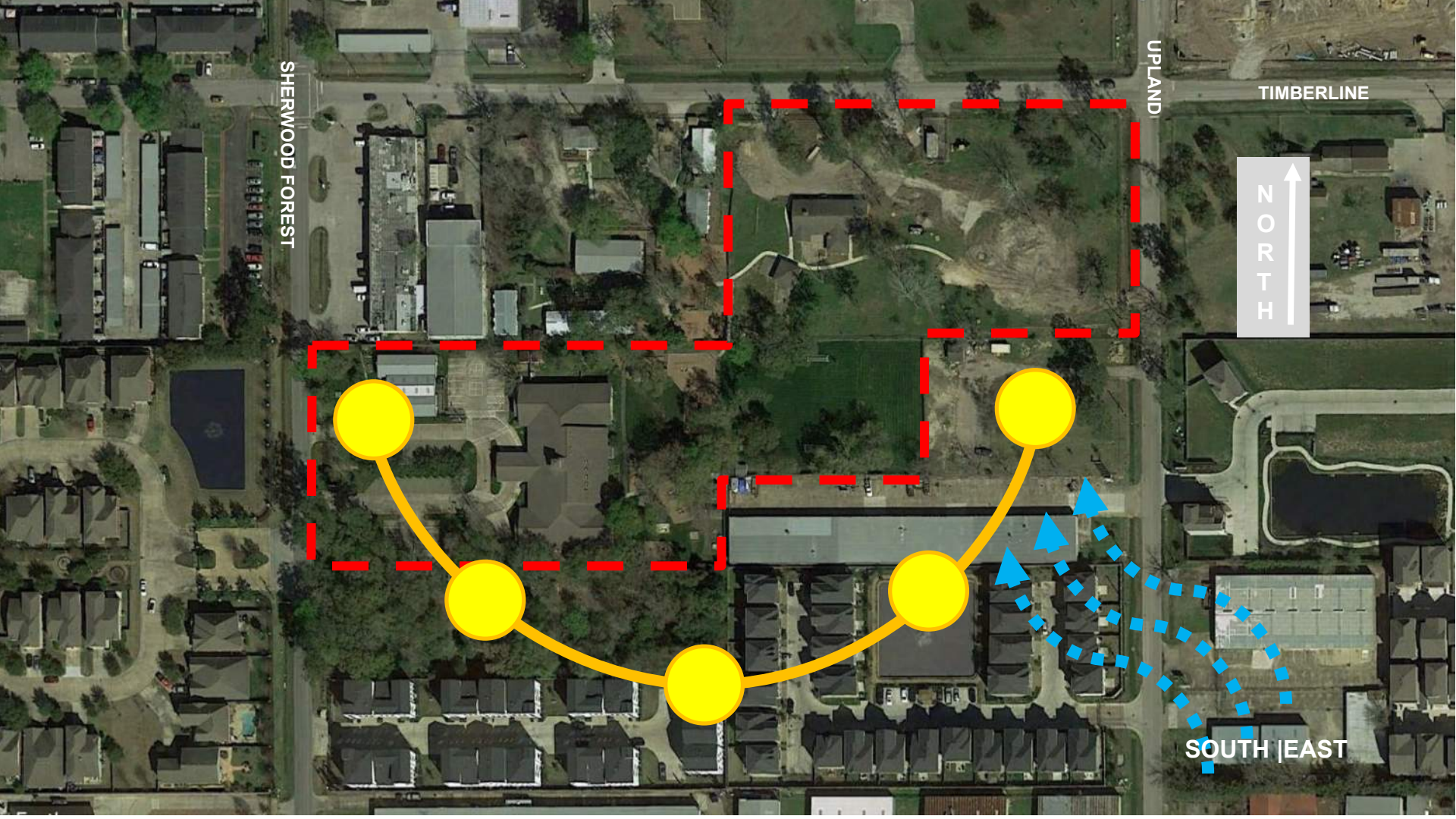
a ***learning organism***
that teaches through:
- *its systems*
- *its flexibility + diversity;*

and transcends through:
- *nature*
- *harmony*

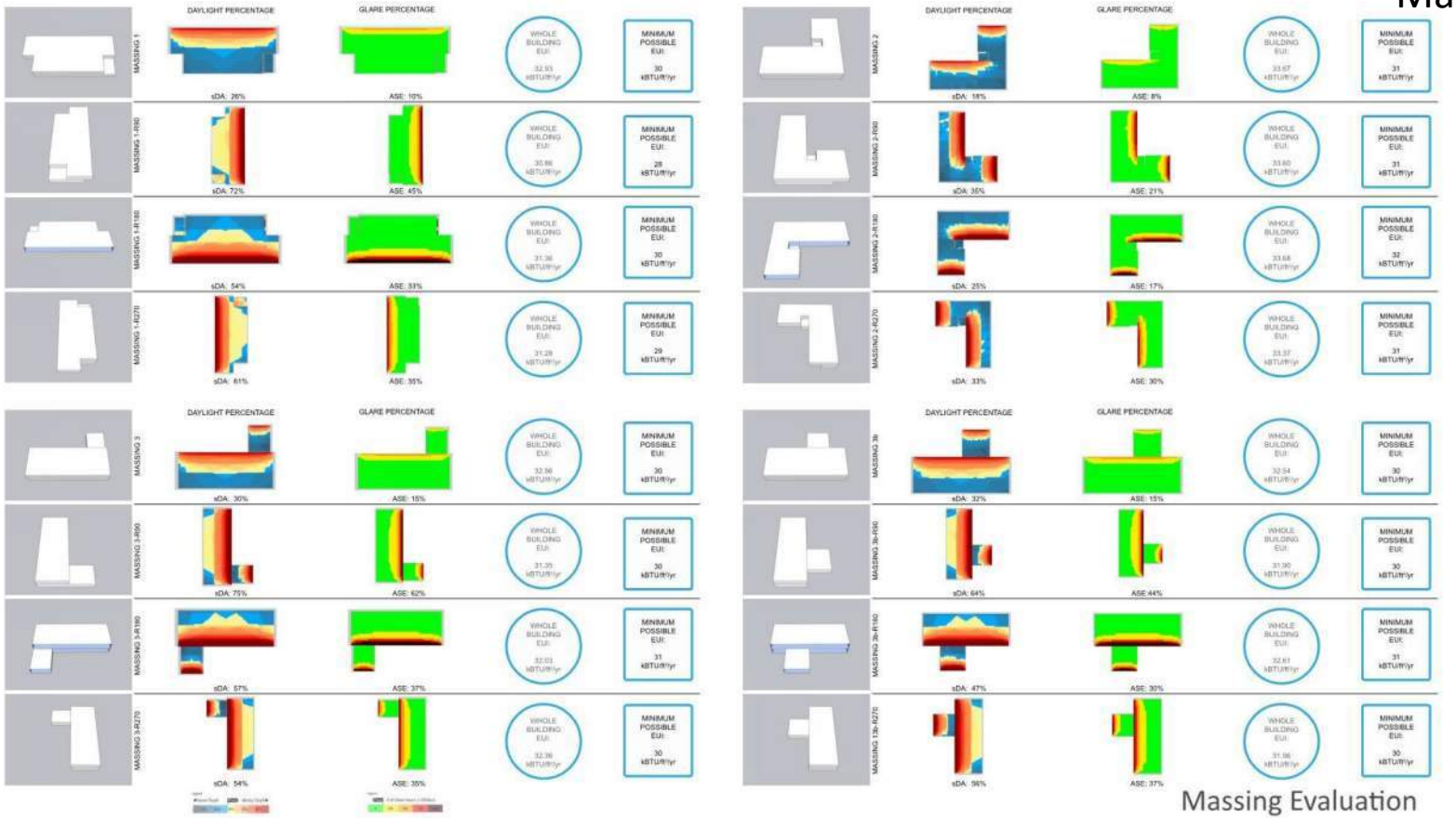


climate responsive


SHERWOOD FOREST
UPLAND
TIMBERLINE
SITE
SITE
N


SHERWOOD FOREST
UPLAND
TIMBERLINE
NORTH
SOUTH |EAST

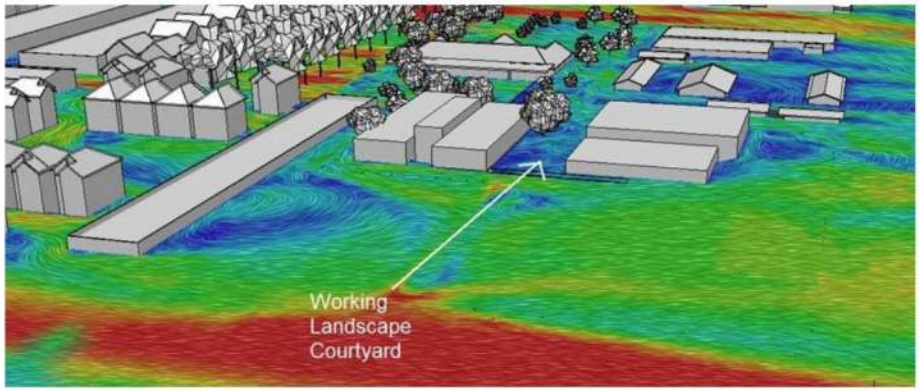
Massing

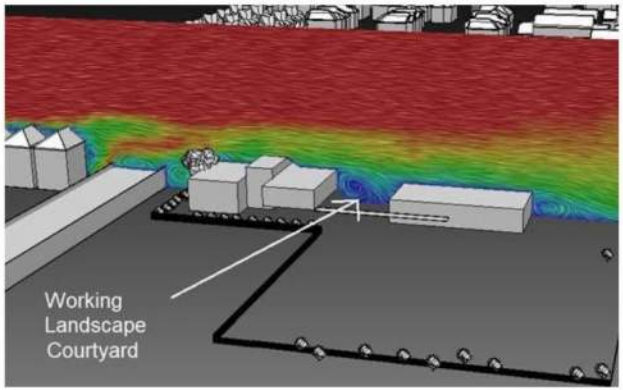


Massing Evaluation

Wind and Comfort

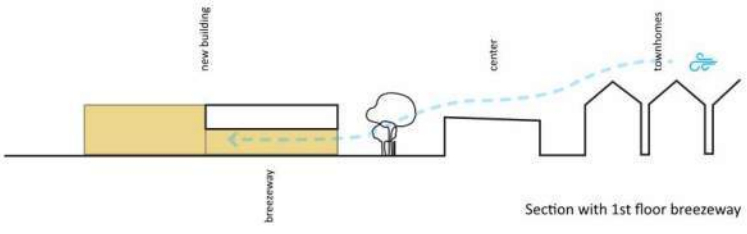
site section - heights



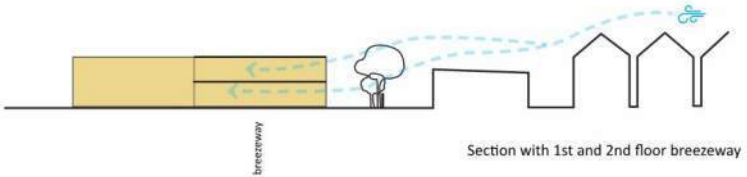


Preliminary Wind Study

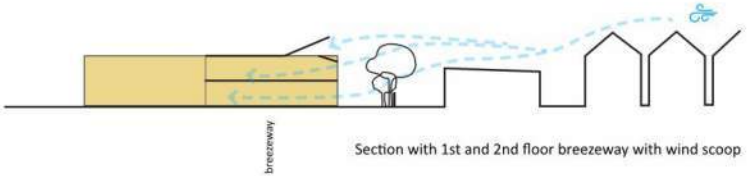
Wind and Comfort



Section with 1st floor breezeway



Section with 1st and 2nd floor breezeway



Section with 1st and 2nd floor breezeway with wind scoop

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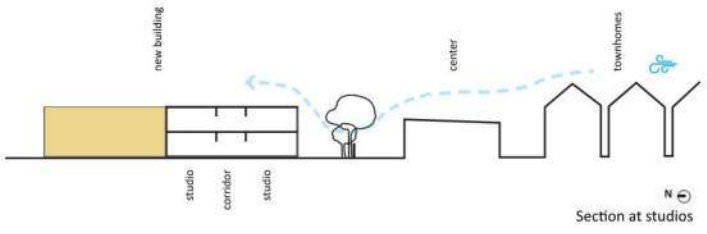
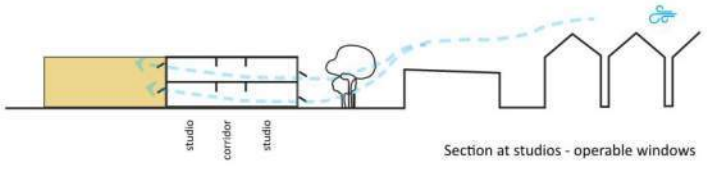
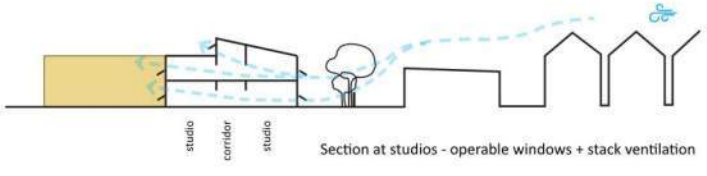
Diagrammatic Sections of Breezeway Options



Section at studios



Section at studios - operable windows



Section at studios - operable windows + stack ventilation

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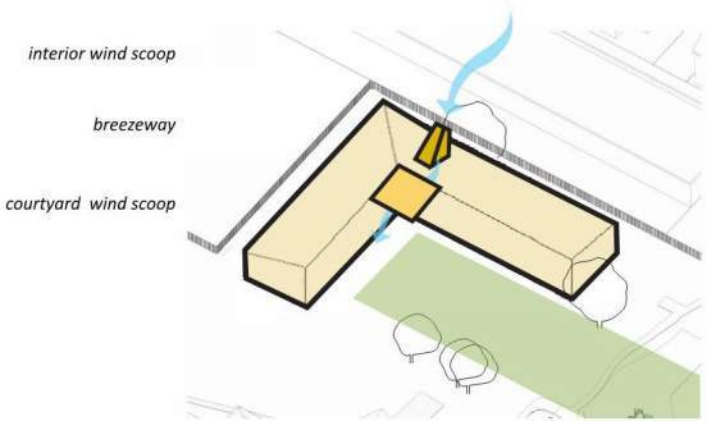
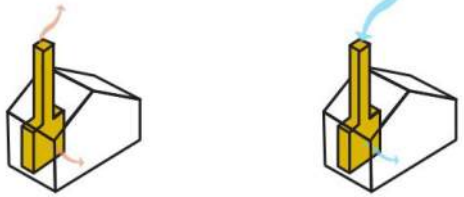
Diagrammatic Sections at Studios

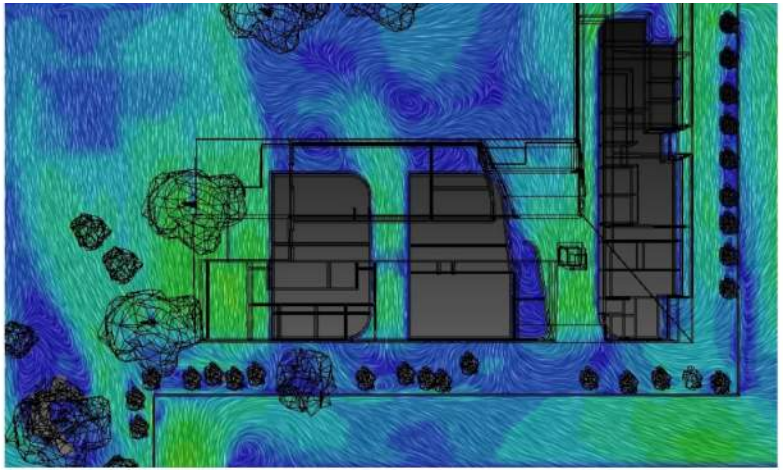
Wind and Comfort

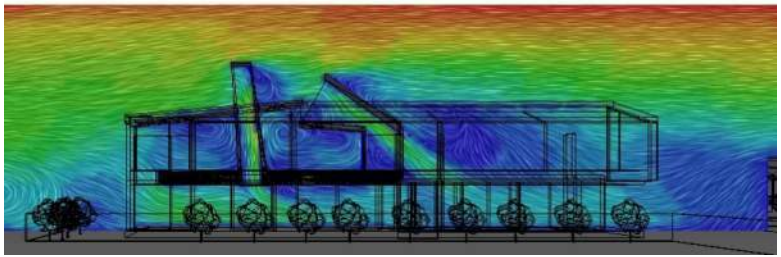


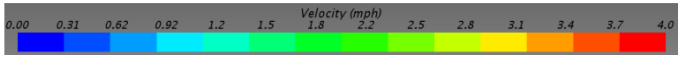


traditional hearth

WIND hearth







Learning organism – responsive design

Breathes - Wind flow

Drinks - Rain works

Absorbs - Energy and Daylight

Geothermal

		First Cost	Energy/ Life Cycle	Health/ Wellness	Nat. Vent. Compt.	Thermal Comfort	Maint.	Weighted Score
System Type and Heat Rejection		10.0%	17.0%	21.0%	11.0%	26.0%	15.0%	100.0%
Water Source Heat Pumps with DOAS	Geothermal	2.5	5	3	3	4	5	3.8
	Tower/Boiler	4.2	4	3	3	4	3.5	3.6
	Hybrid	3.3	4.5	3	3	4	3.5	3.6
Radiant Cooling w/DOAS	Geothermal	1.0	3.5	5	5	1	5	3.3
VRF w/DOAS	Classroom Ceiling Cassettes	4.6	2	2	2	3	2	2.5
Air-cooled Chilled Water	VAV	4.2	2.5	2	1	5	3	3.1
	Classroom FCU w/DOAS	4.2	2.5	3	3	4	3	3.3
Packaged RTU	Variable Air Volume (VAV)	5.0	1	1	1	3	1	1.9

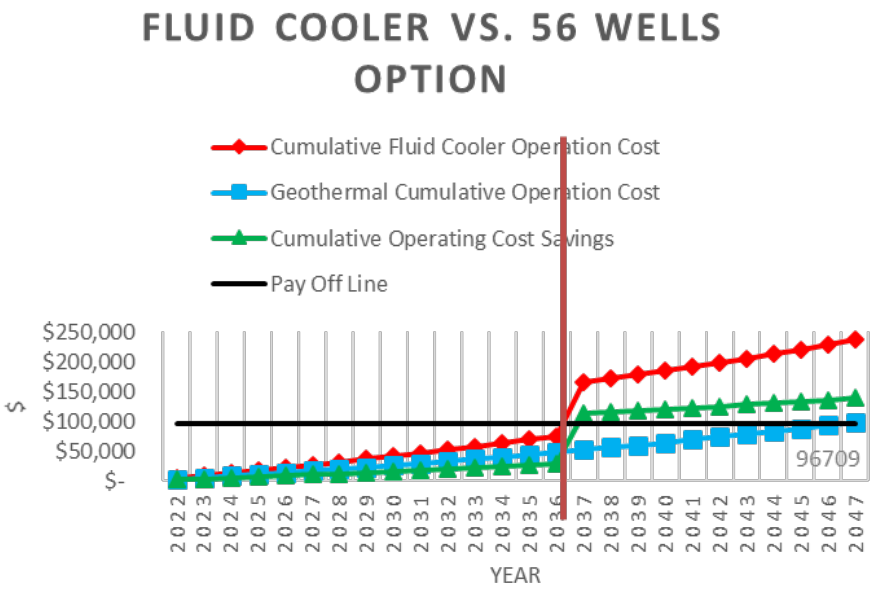
Mechanical Systems Comparison

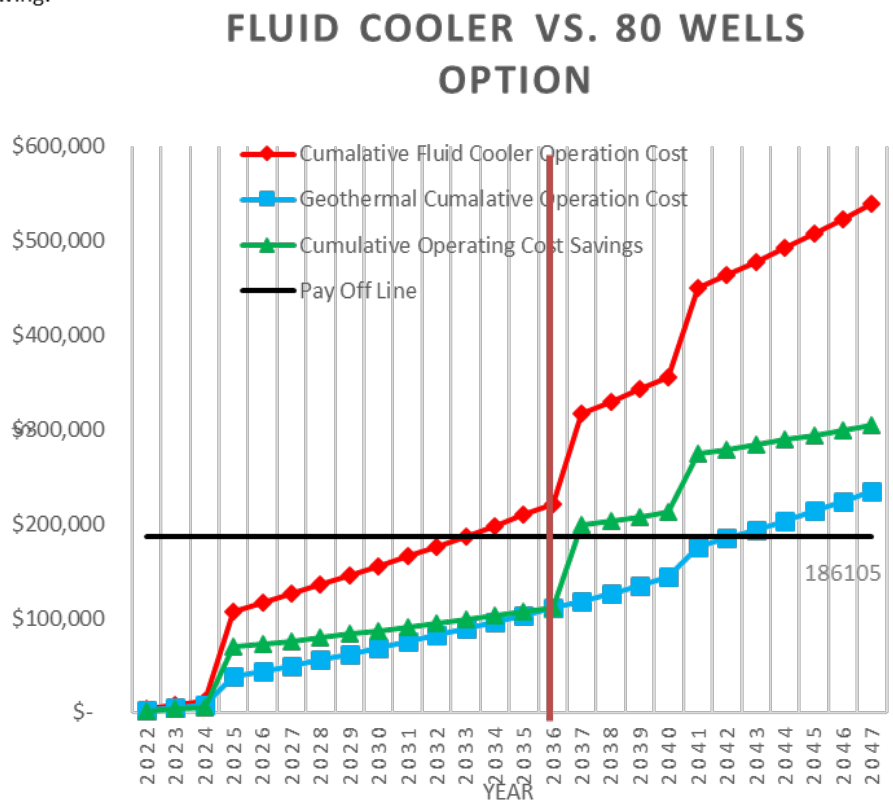
Life-Cycle Cost Considers The Following:

- Water Cost
- Chemical Treatment Cost
- Electricity Cost
- Equipment Replacement Cost

Life-Cycle Cost Does NOT Consider The Following:

- Yearly Maintenance Cost
- Reduced PV Purchase Cost





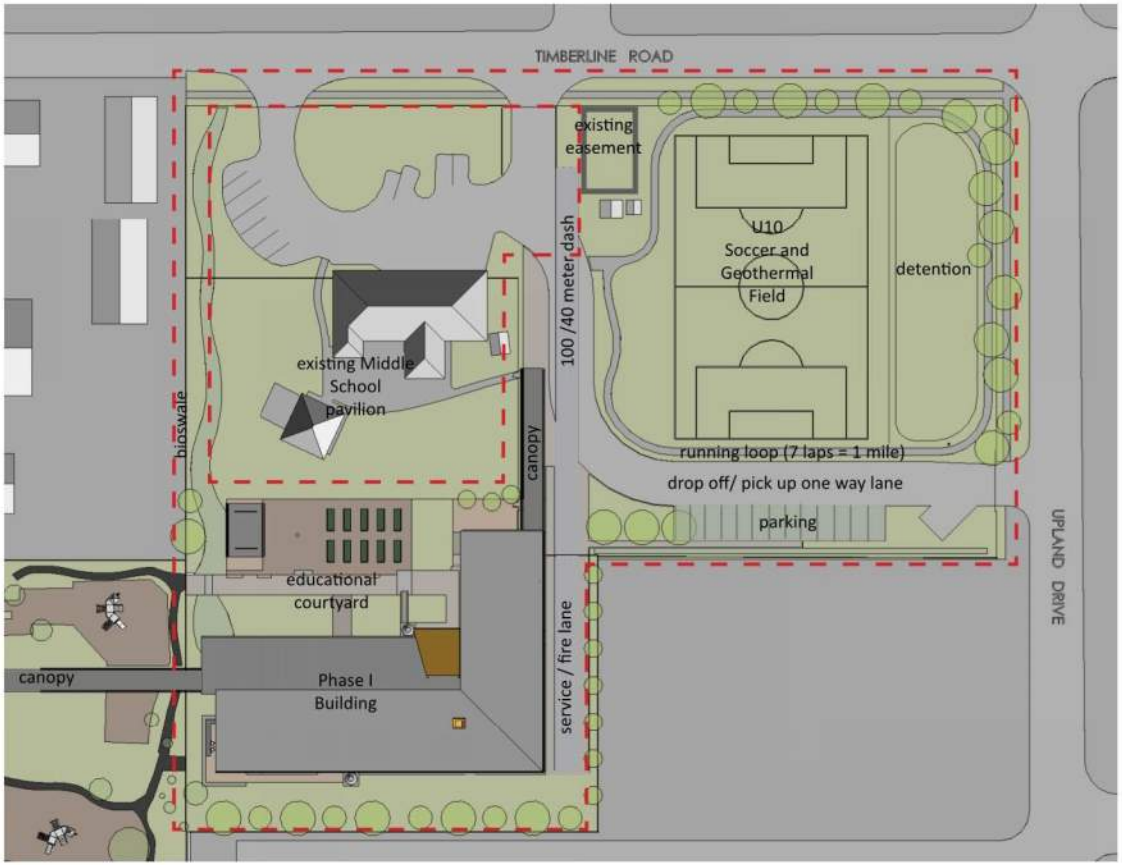
The Branch School Curriculum Integration Ideas

Learning Organism – Teaching Tool

	Idea	
1	Meter individual classrooms to allow competitions between classes for energy usage.	
2	Draw comparisons between building systems and living organisms systems	Pure Curriculum Integration
3	Use building as a teaching tool be designing systems to encourage occupants learn how to control the building and make decisions on how to save energy. Learn how to balance comfort and sustainability to make realistic decisions that can cause positive effect on school energy usage and more importantly create more sustainable people at a younger age.	Pure Curriculum Integration
4	Geothermal well-field temperature measurements for students to see how well-field temperature changes over time. Provide real readouts that the students can access by BAS or by actual measurements at well.	Design Components Required
5	In-Design curriculum integration. We can simplify our EUI goal estimations and use that to create a small project for The Branch School. They can do their own calcs and determine what they thing our EUI needs to be.	Pure Curriculum Integration
6	In-Design curriculum integration. We can simplify our WUI (Water Use Intensity gallons/sf) goal estimations and use that to create a small project for The Branch School. They can do their own calcs and determine what they thing our WUI needs to be.	Pure Curriculum Integration
7	Building Curriculum integration (during construction or after occupancy). Student project to calculate how much pipe we have buried in the geothermal well-field. Can tie this into actually seeing installed piping.	Pure Curriculum Integration
8	Install tunable white lighting in all classrooms that automatically adjusts to best match daylight. Override controls to select specific CCT. Students can experience how light can affect mood, the 'feel' of a space, and learn about effect on circadian rhythms. In art classrooms, they can see how the color of the light affects how their art appears.	Design Components Required
9	Add windows to the mechanical room, so students can see what type of HVAC equipment is installed in the building.	Design Components Required
10	Carbon Footprint. Student project to calculate carbon footprint of TBS; we can share our calculators as a starting point.	Pure Curriculum Integration
11	Carbon Handprint. Student project to calculate carbon handprint of TBS; we can share our calculators as a starting point.	Pure Curriculum Integration
12	Foodprint & Compost tracking - students can audit their food, bring compostable waste for composting & then use it in landscape.	Pure Curriculum Integration
13	Waste tracking - plastic, aluminum, glass and non-recycled waste can be tracked by estimated volume (or weighed) as part of student projects.	Pure Curriculum Integration
14	Educational gardens: different hieght planter boxes with drains	Design Components Required/ Curriculm
15	Sun dial: veritcal metal post	Design Components Required/ Curriculm
16	Rain works: cistern with meter; concrete trough with gates for experiments; concrete chanel or bioswale like converyance	Design Components Required/ Curriculm
17	Bioswales : collect samples	Design Components Required/ Curriculm
18	Wind Turbine with meter : students can monitor	Design Components Required/ Curriculm
19	Kinnetic wind sculptures: students to place at plaza	Design Components Required/ Curriculm
20	Solar panel on post at standing level: students can monitor; see it power soemthing	Design Components Required/ Curriculm
21	Art chalk mural at breezeway: teaching wall / art mural	Design Components Required/ Curriculm
22	Wind hearth: measuring wind; gravity experiments	Design Components Required/ Curriculm
23	Interior shadow study: mullions and colored glass at clerestory project color at dfferent areas and levels throughout year; could also be glass hanging sculpture	Design Components Required/ Curriculm
24	Stairs: applied graphics that can interchange - start with calorie count; art class could develop with math	Design Components Required/ Curriculm
25	Stair guardrail track friction test : provide painted steel track that ball can go down	Design Components Required/ Curriculm
26	Measurements in breezeway: control joints on floor in metric	Design Components Required/ Curriculm
27	Measurements in breezeway: marks on wall in imperical	Design Components Required/ Curriculm
28	Weather station pavilion	Design Components Required

Learning Organism – Teaching Tool

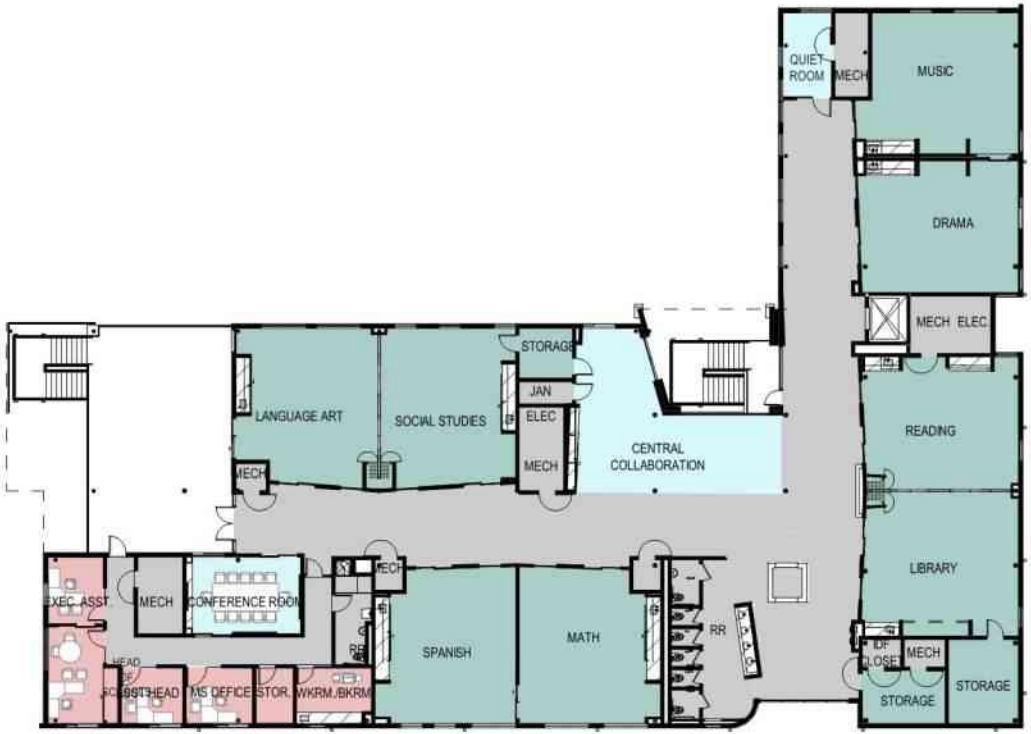
- energy dashboard
- submeter power consumption
- tunnable light at Art2D
- window into mechanical rooms
- CO2 sensors
- monitor geothermal
- sun dial plaza
- bottle fillers
- educational garden
- rainworks
- bioswales/ ditches
- chalk art murals
- wind hearth and scoop
- track at stair
- measuring metrics
- exposed utilities
- voice pipe


TIMBERLINE ROAD
existing easement
U10 Soccer and Geothermal Field
detention
100 /40 meter dash
existing Middle School pavilion
bioswale
canopy
running loop (7 laps = 1 mile)
drop off/ pick up one way lane
parking
UPLAND DRIVE
educational courtyard
canopy
Phase I Building
service / fire lane

N

Site Plan

First Floor Plan



Second Floor Plan


The Branch School

What do you like about your new school?

How will it change your learning?

TEACHING STUDENTS

THE LESSONS


CALM
BRIGHT
SMART


GAP



EXIT

EXIT

LESSON 1 - HOW DID WE GET HERE

WHY I'M AN ARCHITECT

WHAT DO WE DO? WE TELL A STORY

a) DEVELOP A CONCEPT
b) WHAT IS OUR CONCEPT

THE DESIGN OF TBS

a) TAKING THE CONCEPT AND INTO A BUILDING
b) WHAT MAKES IT UNIQUE – IT'S AN ECO SYSTEM

TEAM OF PEOPLE – COLLABORATION

THE SYSTEMS OF TBS

a) WHAT IS GEOTHERMAL
b) WHAT IS THE STRUCTURAL SYSTEM

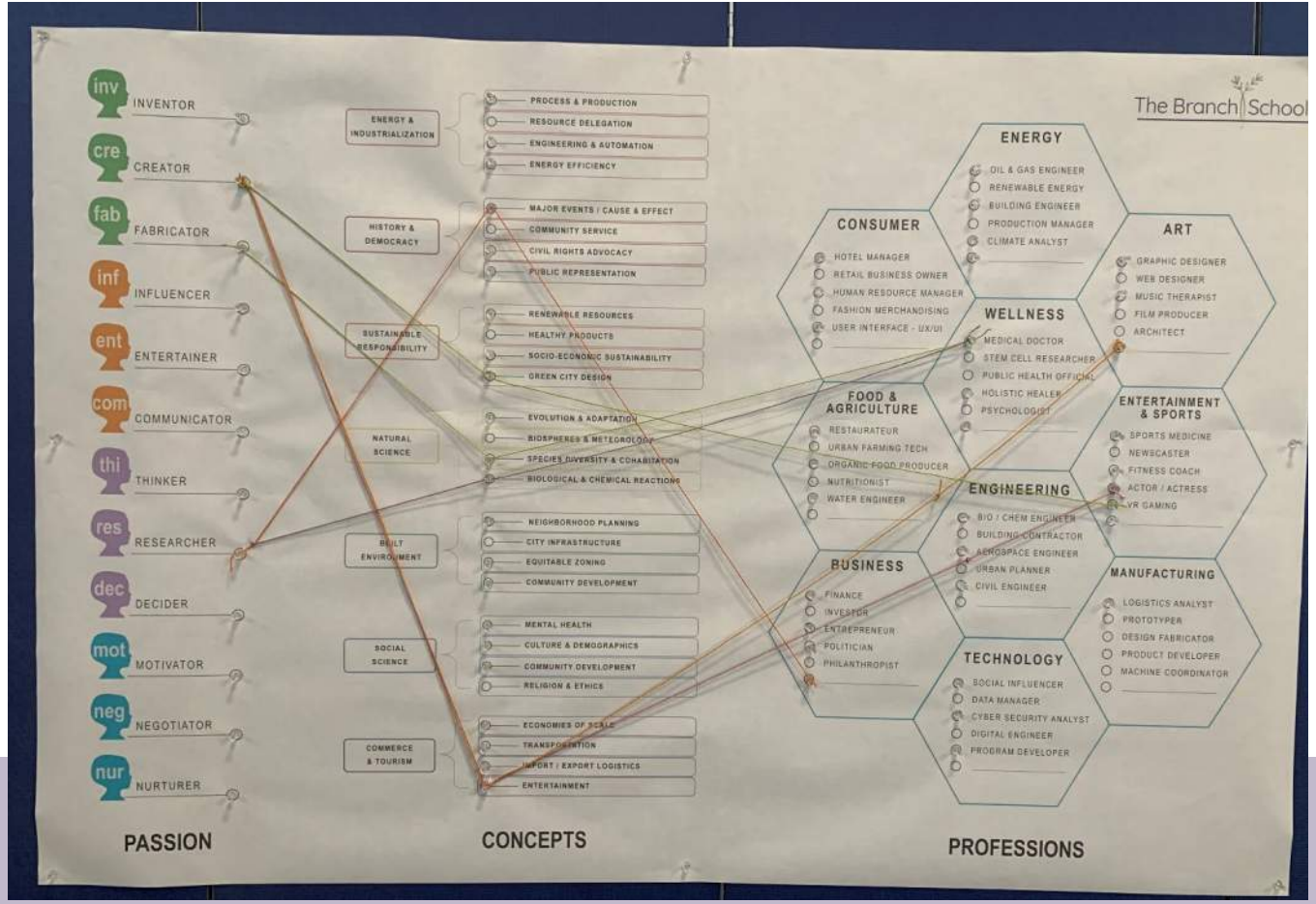
MATERIALS

a) EXTERIOR
b) INTERIOR

UNIQUE ARCHITECTURAL DETAILS AND MATERIALS

a) OPERABLE WINDOWS
b) RAIN WATER COLLECTION
c) RAIN WORKS

PASSION, PROGRAMS AND PROFESSIONS



LESSON 1

LESSON 2 – SUSTAINABILITY

What is your ecosystem?

Activity – show me your ecosystem

Sustainable and resilient

- how is LEED incorporated into your school

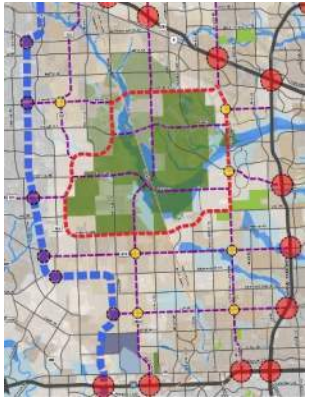
Activity – managing our natural resources

Geothermal system

- how do you use the earth to create an energy efficient system

Activity – cycles and systems


YOUR ECOSYSTEM



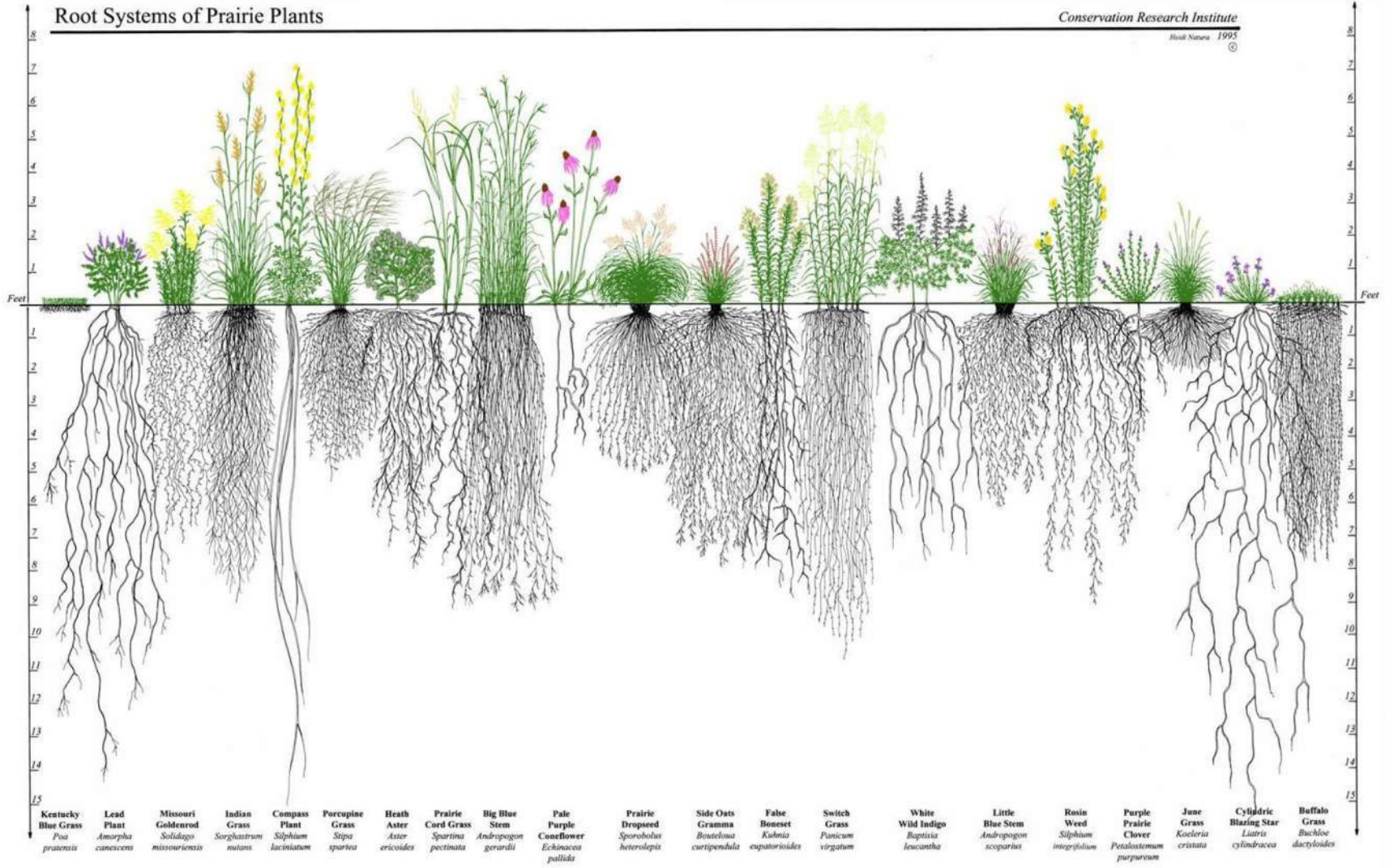
YOUR SITE HISTORY

identifying what's special about this place

Root Systems of Prairie Plants

Conservation Research Institute

Heidi Natura 1995 ©




1944


1953


1978


1995


2002


2020

Bear Creek Pioneers Park

The Branch School

Memorial Park

Buffalo Bayou

Downtown

Rice University

Herman Park

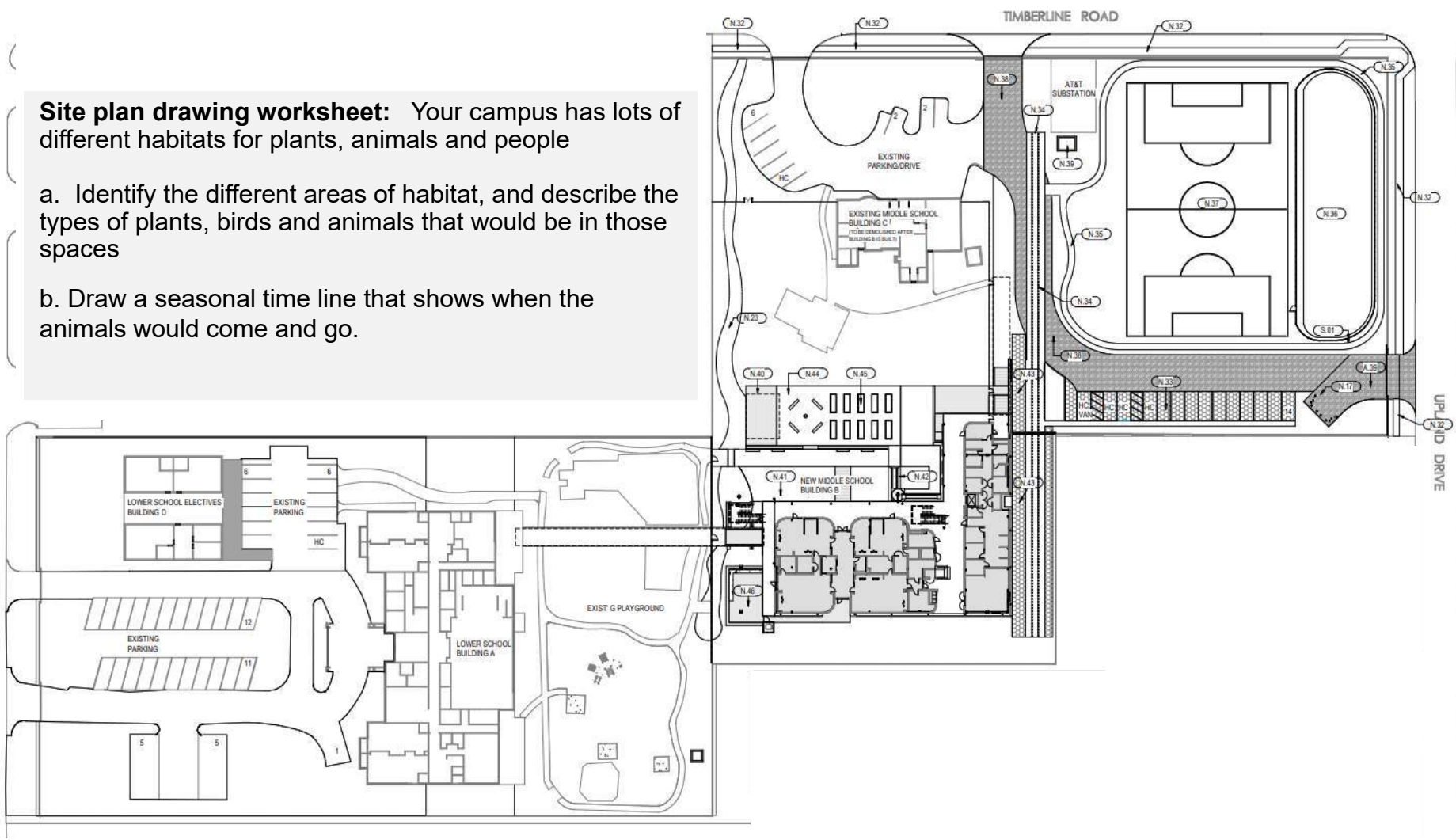
Houston Zoo

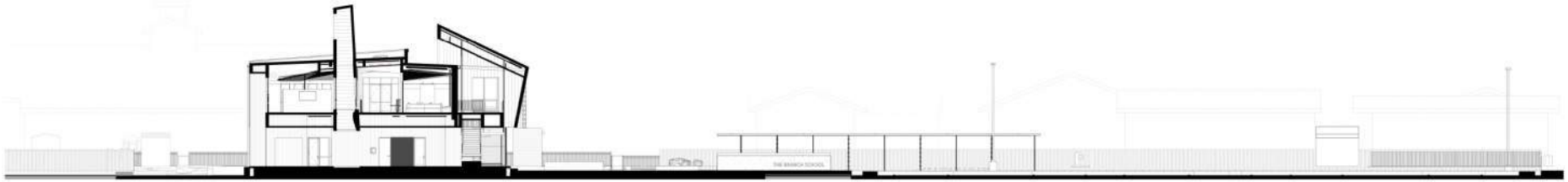
University of Houston

Site plan drawing worksheet: Your campus has lots of different habitats for plants, animals and people

a. Identify the different areas of habitat, and describe the types of plants, birds and animals that would be in those spaces

b. Draw a seasonal time line that shows when the animals would come and go.



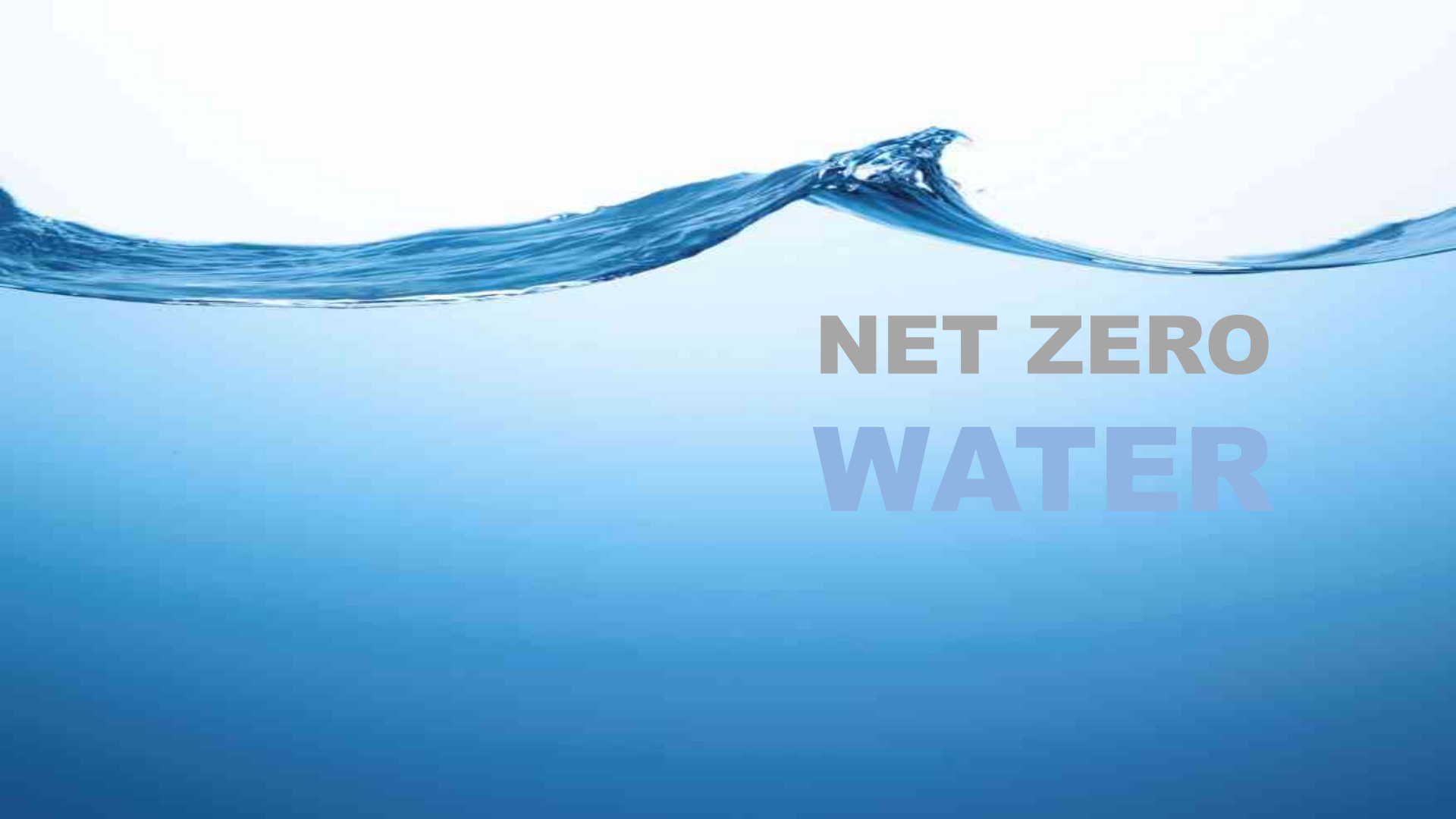


Site Section worksheet: The climate around your campus is created by the way the **wind blows** and the way the sun goes.

a. Show us you think the wind will move across your site and through the building, and how the wind might be affected by the buildings and trees.

b. Show us where you would put additional elements on campus, like picnic tables, wind mills, or a weather station, to create the best micro climate for different activities

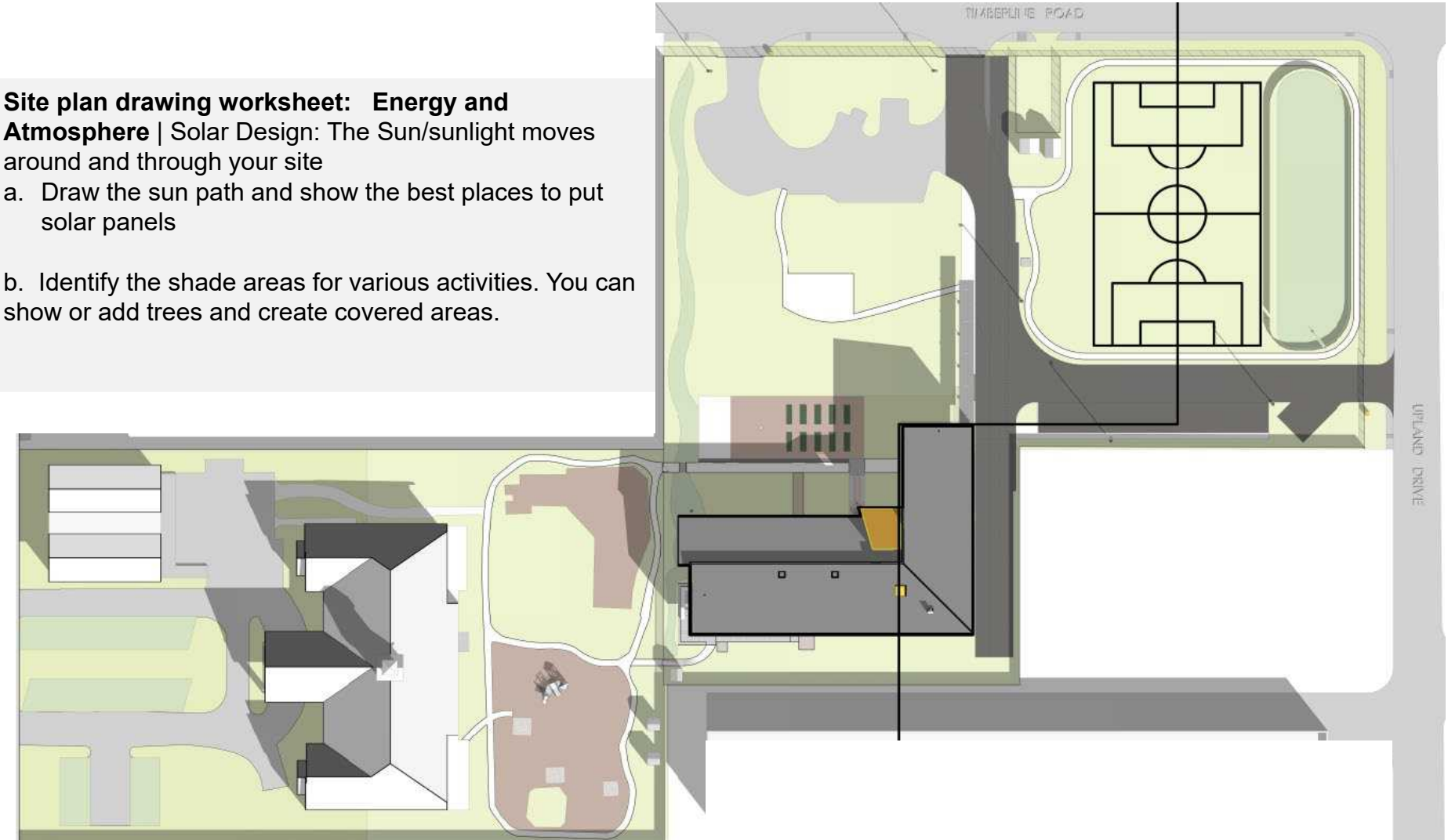

NET ZERO
ENERGY

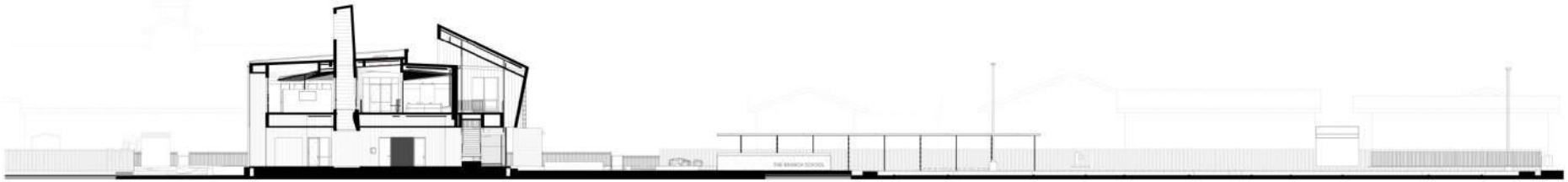

NET ZERO
WATER

Site plan drawing worksheet: Energy and Atmosphere | Solar Design: The Sun/sunlight moves around and through your site

a. Draw the sun path and show the best places to put solar panels

b. Identify the shade areas for various activities. You can show or add trees and create covered areas.





Site Section worksheet: Water Efficiency | Water Use and Management: The rain can be collected and water can be saved on your site and in your building

a. Draw the water path from the roof to the site showing how it can be collected and how it drains

b. Toilets can use less water through the use of low flow fixtures. Calculate the water savings that you have in your building.

Site Section worksheet: Water Efficiency | Water Use and Management: The rain can be collected and water can be saved on your site and in your building

a. Draw the water path from the roof to the site showing how it can be collected and how it drains

b. Toilets can use less water through the use of low flow fixtures. Calculate the water savings that you have in your building.

Occupancy Type	Employees (FTE)	Students (K-12)	Gender Ratio (%)
Total	26	144	100%
Male	13	72	50%
Female	13	72	50%

Annual days of operation	270

BASELINE

Fixture Information		Flush Rate	Uses per Day		Total Daily Uses	Total Daily Water Use
Fixture Family	Fixture Type	Baseline (gpf)	Employees	Students (K-12)		Baseline (gallons)
Urinal	Conventional Urinal	1.00	2.0	2.0	170.0	
Toilet (female)	Conventional Water Closet	1.60	3.0	3.0	255.0	
Toilet (male)	Conventional Water Closet	1.60	1.0	1.0	85.0	

Total Daily Flush Volume (gallons per day)	
Total Annual Flush Volume (gallons per year)	

BASELINE

DESIGN

Fixture Information		Flush Rate	Uses per Day		Total Daily Uses	Total Daily Water Use
Fixture Family	Fixture Type	Baseline (gpf)	Employees	Students (K-12)		Design (gallons)
Urinal	Waterless Urinal	0.0	2.0	2.0	170.0	
Toilet (female)	Low-Flow Water Closet	1.1	3.0	3.0	255.0	
Toilet (male)	Low-Flow Water Closet	1.1	1.0	1.0	85.0	

Total Daily Flush Volume (gallons per day)	
Total Annual Flush Volume (gallons per year)	

DESIGN

Total Annual Water Savings (gallons per year)	

Air Conditioning – A Quick Engineering Lesson

Law of Conservation of Energy: ***Energy can neither be created nor destroyed.***
AKA The First Law of Thermodynamics

Thermodynamics describes the relationship between heat, work, temperature, and energy

Work (Electricity)

Lowering This Amount of Work Required Is Our Goal
Less Work Required = More Energy Efficient = More Sustainable

HOT (96 °F)

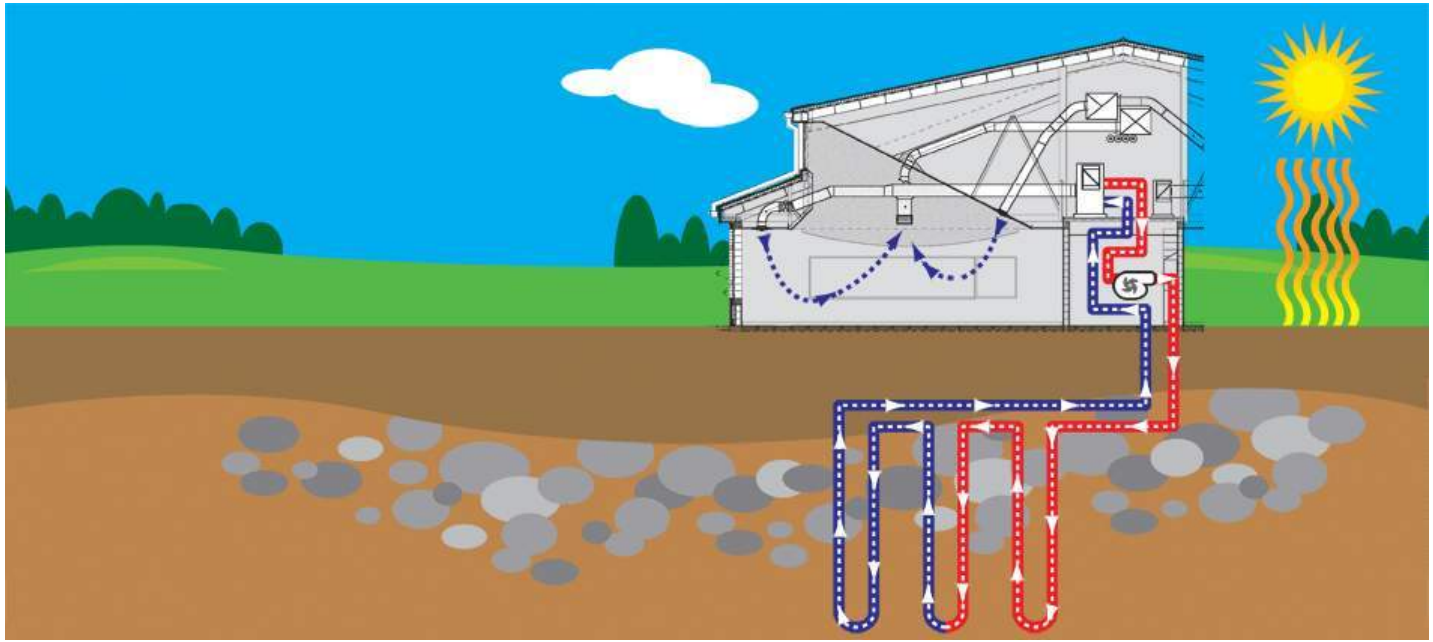
Refrigeration Process

COLD (74 °F)

How Do You Make a Hot Room Turn Cold

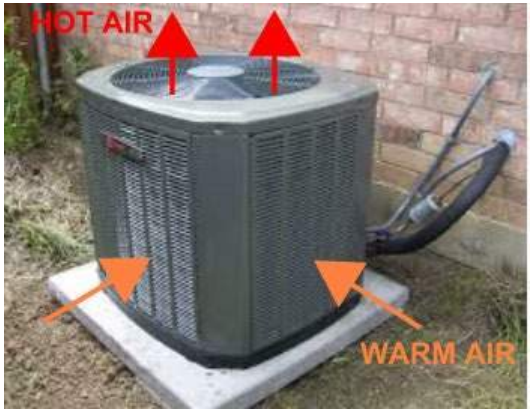
What is Geothermal Air Conditioning?

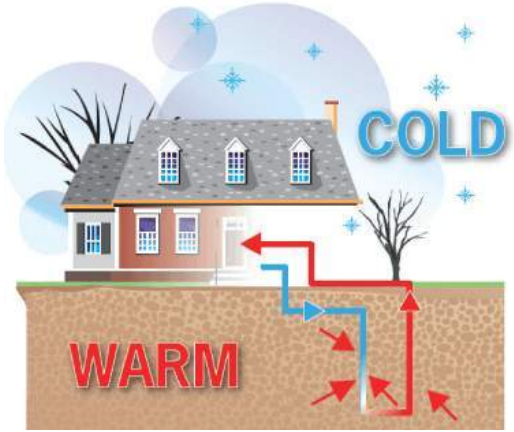
Geothermal Air Conditioning uses underground pipes filled with water to condition the building by transferring heat to (summer) and from (winter) the ground. Unlike the air temperature, ground temperatures stay relatively the same year-round which makes the transfer of heat more efficient than traditional air conditioning methods.

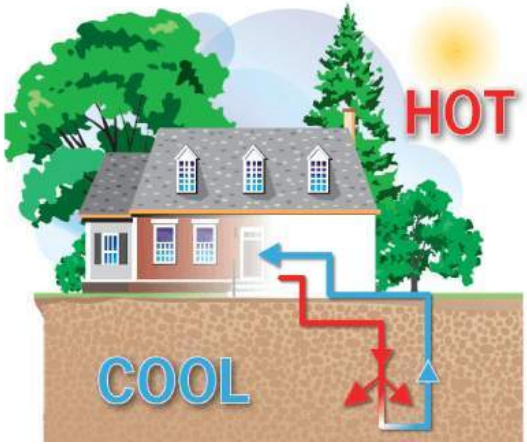


Remember: Energy Can Neither Be Created Nor Destroyed.

Heat is a form of energy, so, where does the heat go when it leaves your house?







Traditional Air Conditioning

The air outside is already hot, and Now we have to work to push more heat into it. That takes more work!

More Work

Geothermal Air Conditioning

The ground is cool so we do less work to push

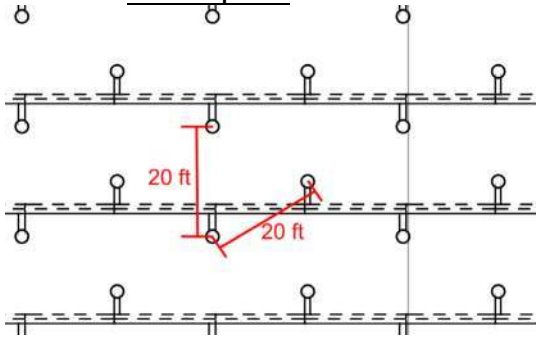
Less Work

Goal Achieved!

Geothermal Air Conditioning = Less Work Required = More Energy Efficient = More Sustainable

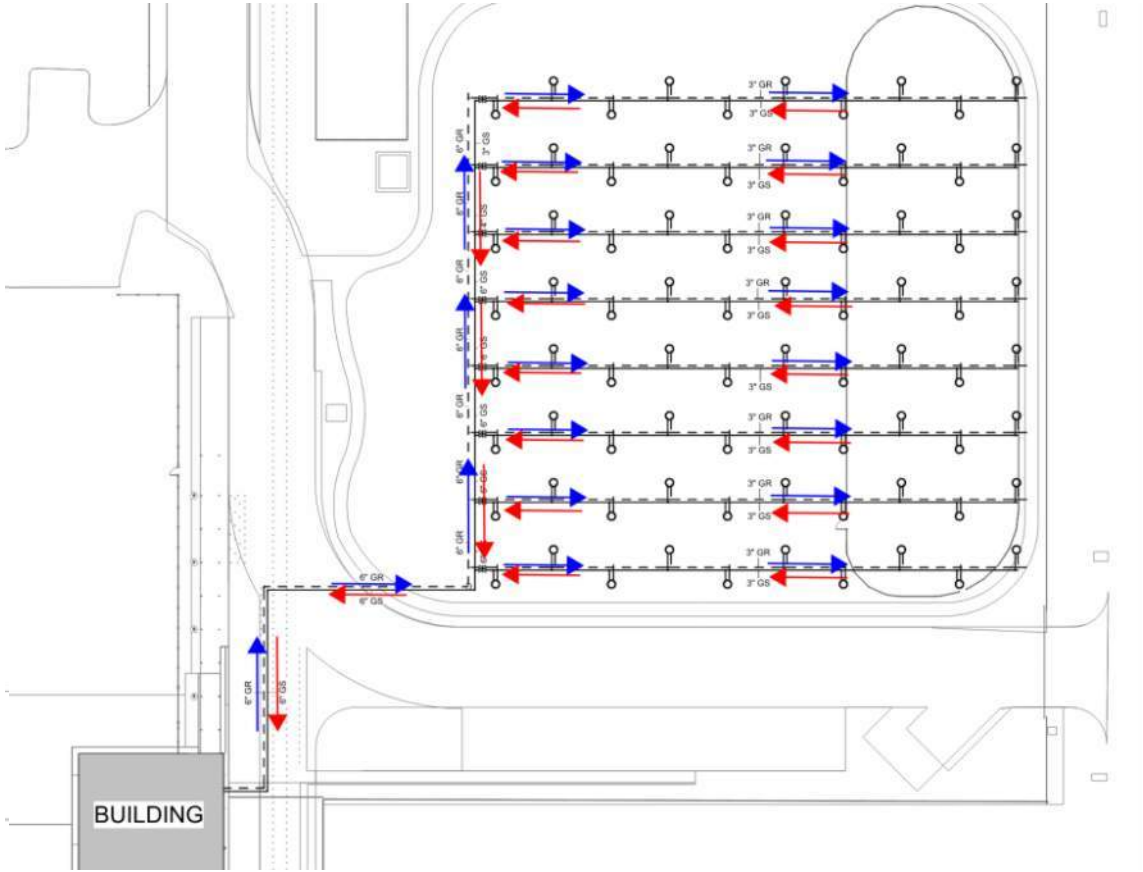
Geothermal Facts – The Branch School

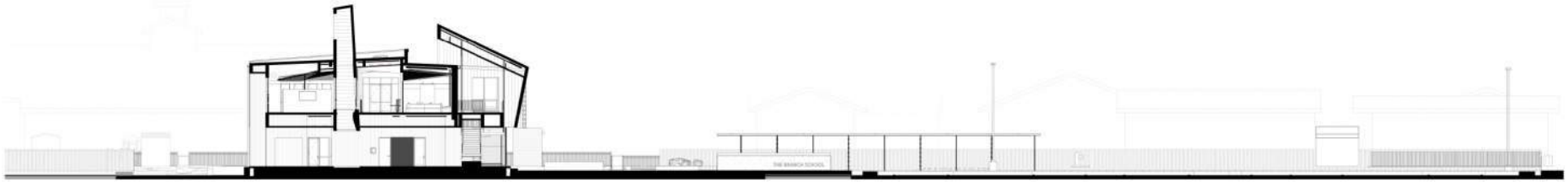
- The geothermal well-field consists of 80 wells. Each well is 300 ft deep. That's the same length as a football field or the height of the Statue of Liberty.
- Each well is 20 ft apart from the next



- The geothermal well-field is made up of 10 miles of buried pipe.
- There are 4700 gallons of water in the geothermal well-field.

- In summer time, the geothermal return pipes flow warm water from the building to the well-field. The geothermal supply pipes flow cold water from the well-field to the building.
- In winter time, the geothermal return pipes flow cold water from the building to the well-field. The geothermal supply pipes flow warm water from the well-field to the building.





Site Section worksheet: Geothermal| Heating and Cooling:

1) Draw in all 80 well locations. Show each well with a small circle. Remember, keep all wells located within the dashed line above, and keep the wells at least 20 feet apart.
2) Draw in the geothermal supply and geothermal return lines from the Building to the Well-Field. Show the Geothermal Return line as a dashed line labeled "GR". Show the Geothermal Supply line as a solid line labeled "GS".
3) Show the direction of flow of warm water with a red arrow.
4) Show the direction of flow of cold water with a blue arrow.

Helpful Information:

1) In the winter time, the geothermal return line flows cold water from the building to the well-field.
2) In the winter time, the geothermal supply line flows warm water from the well-field to the building.
3) In the summer time, the geothermal return line flows warm water from the building to the well-field.
4) In the summer time, the geothermal supply line flows cold water from the well-field to the building

LESSON 3 – INTERIORS

WHAT IS INTERIOR DESIGN?

ACTIVITY – SHOW ME YOUR ROOM

MATERIAL RESEARCH
- HEALTHY MATERIALS

ACTIVITY – SCAVENGER HUNT

COLOR MEANING

COLOR MEANING



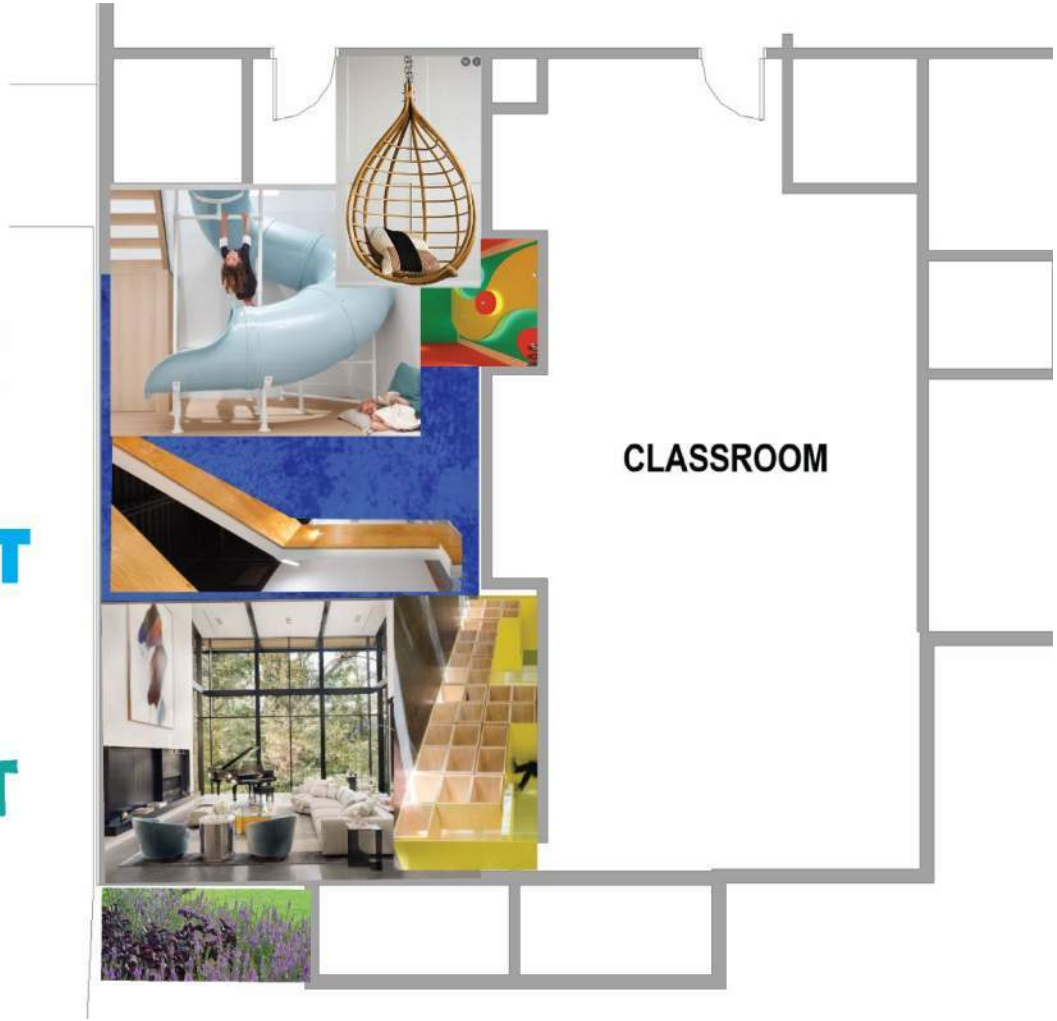


Site Colors

CALM

BRIGHT

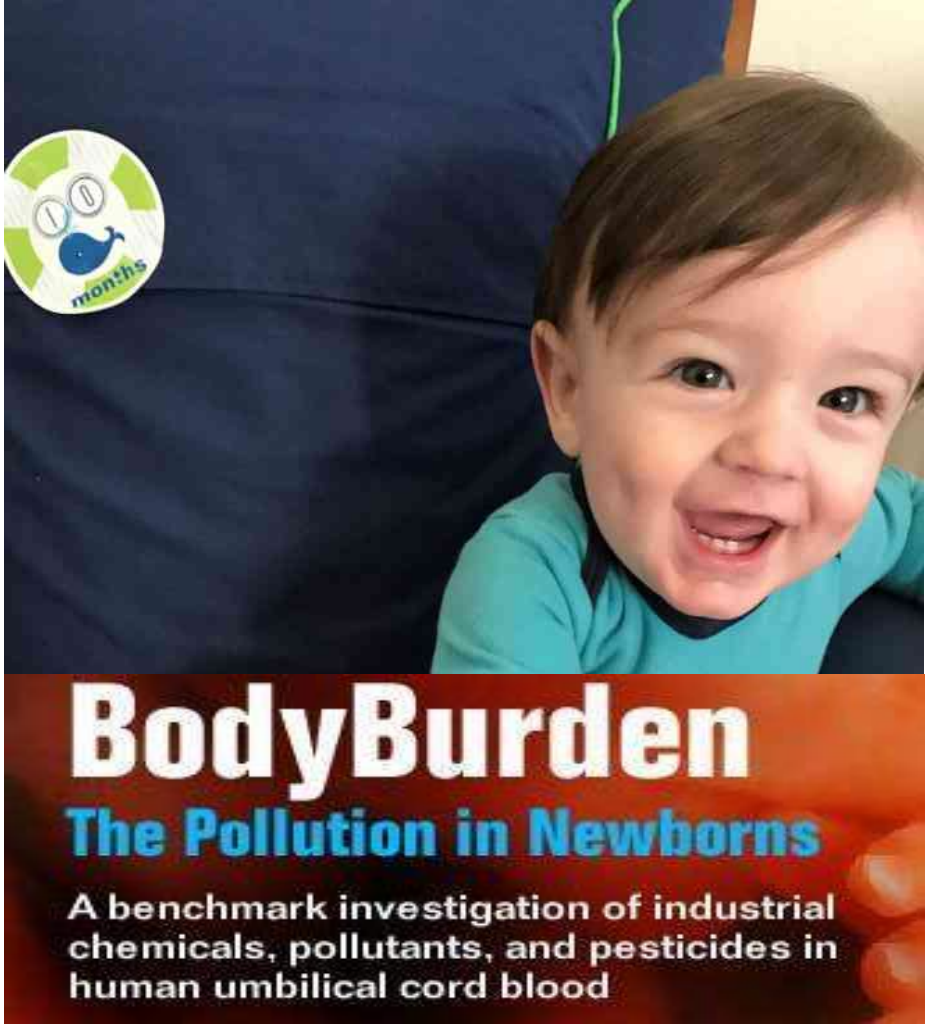
SMART



1. As a team, select 2-3 descriptive words that you want the existing school to portray.
2. On the existing plan, each group member to pick a space.
3. Using magazines, cut out inspirational images that relate to team descriptive words. Include images of spaces, furniture, etc. to visually describe your space.
4. As a team, discuss each space if it falls into a united vision of the descriptive words.


COLOR MEANING


MATERIALS



MATERIALS
TOXICITY

Hg	**Mercury (Hg) - tested for 1, found 1** Pollutant from coal-fired power plants, mercury-containing products, and certain industrial processes. Accumulates in seafood. Harms brain development and function.
PAH	**Polyaromatic hydrocarbons (PAHs) - tested for 18, found 9** Pollutants from burning gasoline and garbage. Linked to cancer. Accumulates in food chain.
BD/F	**Polybrominated dibenzodioxins and furans (PBDD/F) - tested for 12, found 7** Contaminants in brominated flame retardants. Pollutants and byproducts from plastic production and incineration. Accumulate in food chain. Toxic to developing endocrine (hormone) system
PFC	**Perfluorinated chemicals (PFCs) - tested for 12, found 9** Active ingredients or breakdown products of Teflon, Scotchgard, fabric and carpet protectors, food wrap coatings. Global contaminants. Accumulate in the environment and the food chain. Linked to cancer, birth defects, and more.
D/F	**Polychlorinated dibenzodioxins and furans (PCDD/F) - tested for 17, found 11** Pollutants, by-products of PVC production, industrial bleaching, and incineration. Cause cancer in humans. Persist for decades in the environment. Very toxic to developing endocrine (hormone) system.
OC	**Organochlorine pesticides (OCs) - tested for 28, found 21** DDT, chlordane and other pesticides. Largely banned in the U.S. Persist for decades in the environment. Accumulate up the food chain, to man. Cause cancer and numerous reproductive effects.
PBDE	**Polybrominated diphenyl ethers (PBDEs) - tested for 46, found 32** Flame retardant in furniture foam, computers, and televisions. Accumulates in the food chain and human tissues. Adversely affects brain development and the thyroid.
CN	**Polychlorinated Naphthalenes (PCNs) - tested for 70, found 50** Wood preservatives, varnishes, machine lubricating oils, waste incineration. Common PCB contaminant. Contaminate the food chain. Cause liver and kidney damage.
PCB	**Polychlorinated biphenyls (PCBs) - tested for 209, found 147** Industrial insulators and lubricants. Banned in the U.S. in 1976. Persist for decades in the environment. Accumulate up the food chain, to man. Cause cancer and nervous system problems.

http://www.ewg.org/research/body-burden-pollution-newborns

cradle to cradle

Declare

Pharos

GREEN SCREEN FOR SAFER CHEMICALS

Health Product DECLARATION™

Materials and Resources Scavenger Hunt

1. What product is Cradle to Cradle certified and made from windshield film?

2. What product has a PVC-Free WellBAC comfort cushion standard backing? AND that same backing is 40.9% Pre-Consumer Recycled Content?

(Hint: It also has a UL Certified Environmental Product Declaration)

3. What product has a Solar Heat Gain Coefficient that equals 0.28 and a UV Transmission at 8%?

4. What product is PVC free, Phthalate Free and Red List Chemical free? This product also has a plan that has used the IMPACT program to recycle more than 30,100,000 pounds of rubber in the past 7 years. (They use this to make municipal mulch and rubber truck flaps)

5. What product, made of ceramic, has a Health Product Declaration from V.2.2?

6. What product is made by a company called Koroseal and is sometimes referred to as "wallталKers"

7. This product, made by Johns Manville, is Formaldehyde-free and will not off-gas formaldehyde in the indoor environment. It also has been Certified for Recycled Content by SCS Global Services. (The North American average is 30% post-consumer recycled content.)

8. What product provides LEED v3 Credit Assistance for Recycled Content offering 85% pre-consumer and 0% post-consumer for the entire assembly? (Hint: It is made in Wisconsin, 1200 miles away)

9. What product is used more than any other for the interior finishes and has ZERO VOC?

10. What product has 3 Third Party Sustainability Certifications and a BioShield Treatment included for added mold and mildew resistance?

EPD AVAILABLE

HPD AVAILABLE

What did you learn about Architecture and Construction?

WORLD CHANGERS

THEIR VOICE MATTERS

What else do you want to leave us with?


The Branch School
WHERE LOVE LEADS
Kirksey
ARCHITECTURE

Kirksey
ARCHITECTURE