

A4LE PNW Conference – Banff, Alberta May 2017



McCOOL
CARLSON
GREEN

Gaming the System



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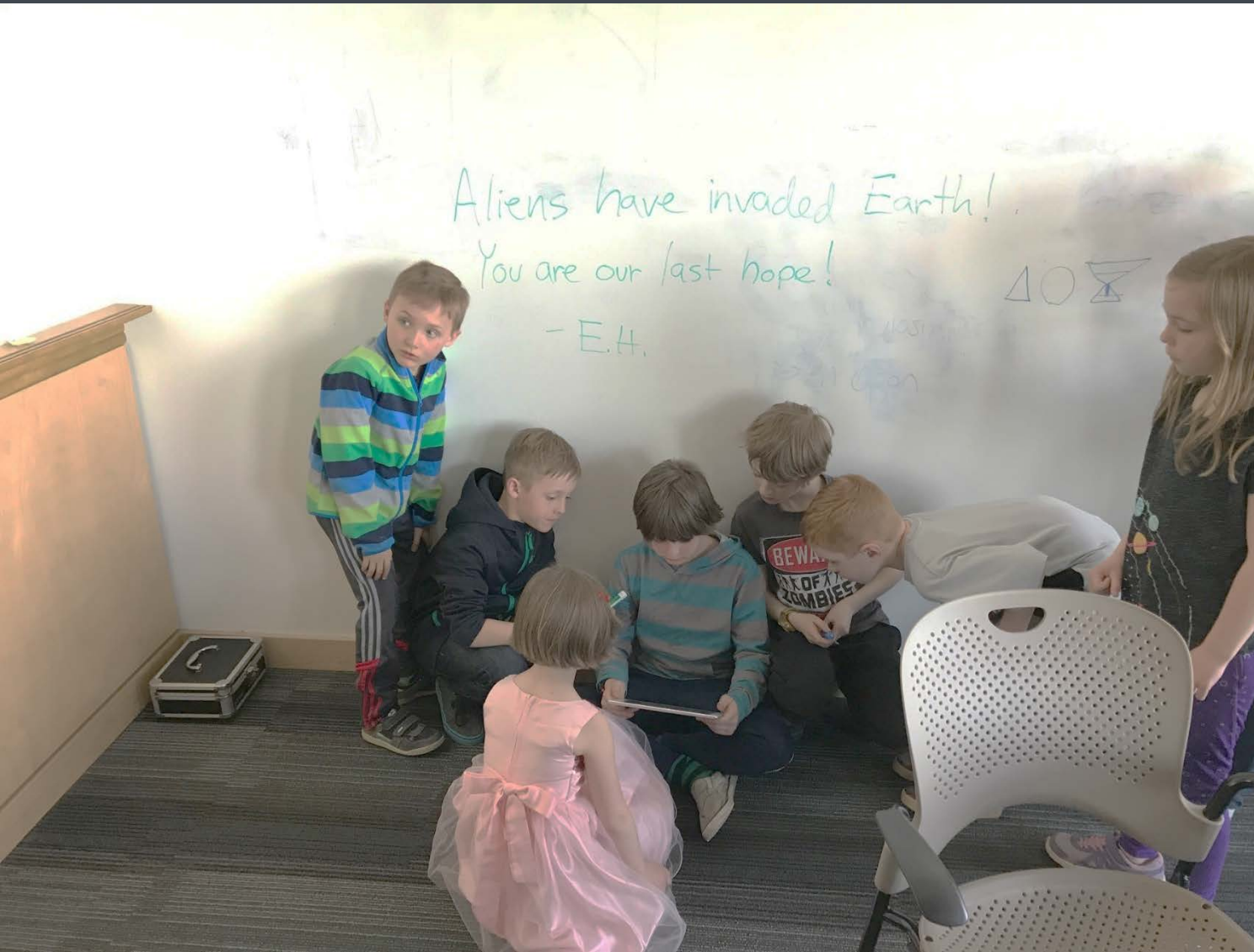
Session Outline

- 10 Min - Intro to Game-Based Learning
- 10 Min - Current Approaches and Practitioners
- 5 Min – Quiz!
- 20 Min - Group Activity
- 15 Min - Report out and Discussion

Learning Objectives

- To gain an understanding of Game-Based Learning concepts and practices.
- To understand how Game-Based Learning is being applied in current curriculums.
- To consider how school and classroom design can support Game-Based Learning.
- To explore how the process of design itself may be gamified to improve outcomes for learning environments.

What is Game-Based Learning?



What is Game-Based Learning?

- **Game** - *a form of play or sport, especially a competitive one played according to rules and decided by skill, strength, or luck.*
- **Gamification** - *Applying typical elements of game playing (e.g., point scoring, competition with others, rules of play) to other areas of activity.*
- **Game Mechanics** - *The basic structural elements that make a game a game. Experience Points, Levels and Leveling Up, Boss Challenges, Achievements and Badges, Free Play (Sandbox), Special Events, Replay.*

What is Game-Based Learning?

- **Bartle's Player Types** – *Defines 4 different main types of gamers by their primary motivations: Achievers, Socializers, Explorers and Killers.*
- **Game-Based Learning** – *An educational approach that incorporates game play into the curriculum.*
 - » *Learning with games*
 - » *Gamification of lessons*

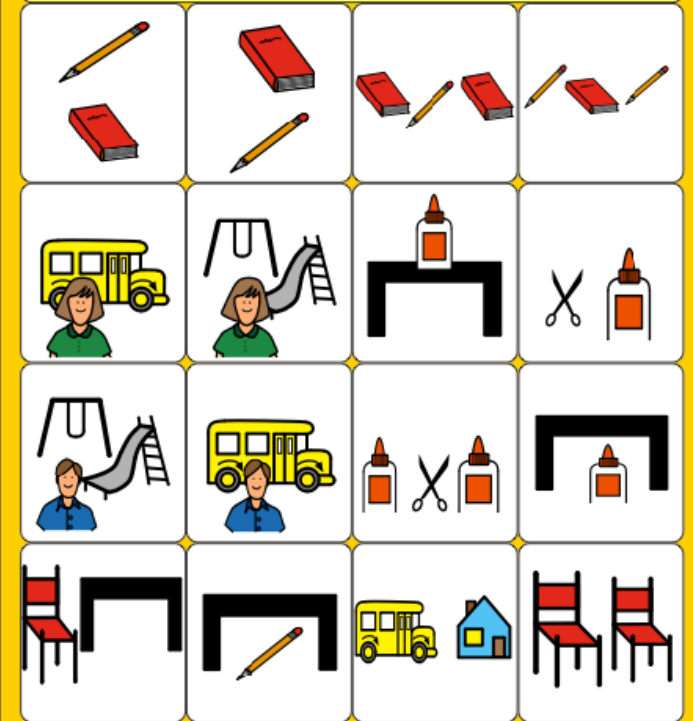
What kind of games?

- Quiz/ Bingo
- Puzzle
- Quest
- Sandbox
- Word Game
- Simulation
- Analog
- Digital
- Individual
- Group
- Local
- Networked

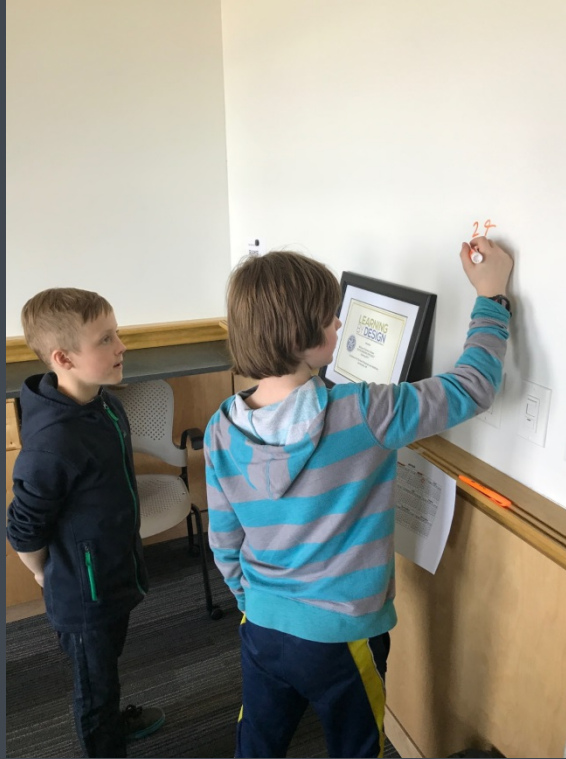


Quiz/ Bingo

Back to School Prepositions Bingo 1



Puzzle



Quest



NEVER ALONE <KISIMA INNITCHUNA>



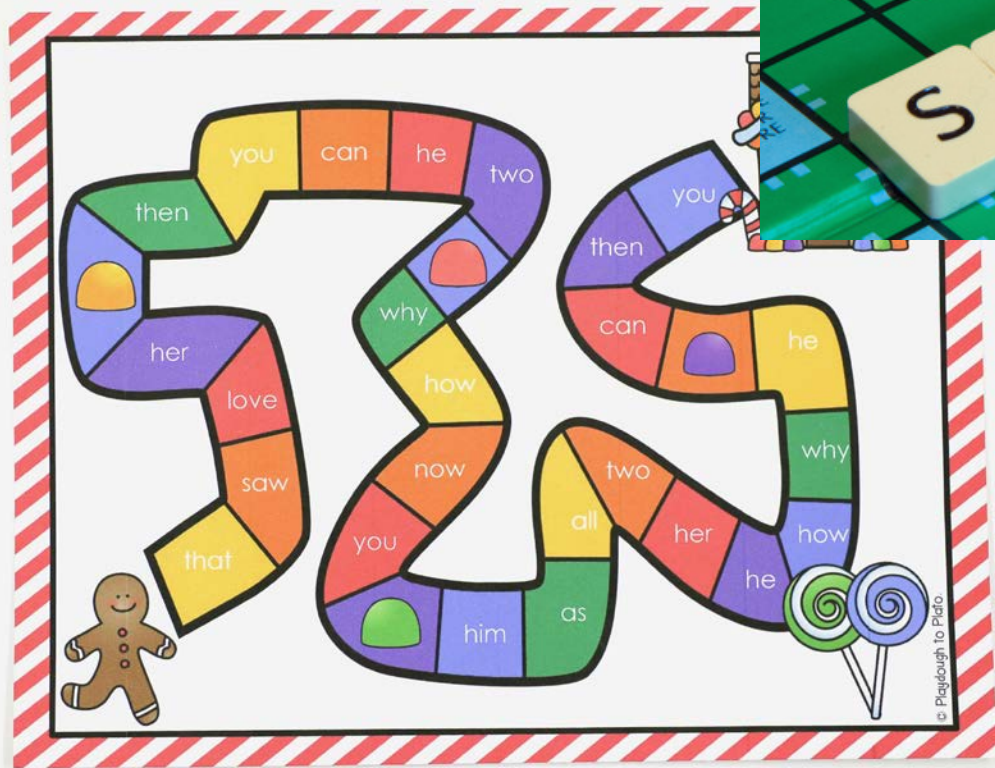
She would have died had she been alone.



Sandbox



Word Games



Simulations & Simulators

mission Establish Population Equality - 640,000 - 650,000 people / district Ver. 1.0.1

THE ReDISTRICTING GAME

- DRAW & REDRAW MAP**
- GET FEED BACK**
- SUBMIT FOR APPROVAL**

1 REP 56% DEM 62% UND 2% POP. 646,401 Tyree Hugger (D) 62%

2 REP 57% DEM 60% UND 3% POP. 643,266 Emma Powerment (D) 60%

3 REP 33% DEM 65% UND 2% POP. 645,004 Manny Pulative (D) 65%

4 REP 30% DEM 62% UND 2% POP. 646,294 Celia Coen-Valley (D) 62%

THE STATE OF JEFFERSON

PARTY TERRAIN HELP UNDO



What makes GBL effective?



What makes GBL effective?

- It's Fun? — Yes, but...
- It's Engaging
 - » Choice
 - » Collaboration
 - » Connection
 - » Challenge/Competition
 - » Communication
 - » Commotion

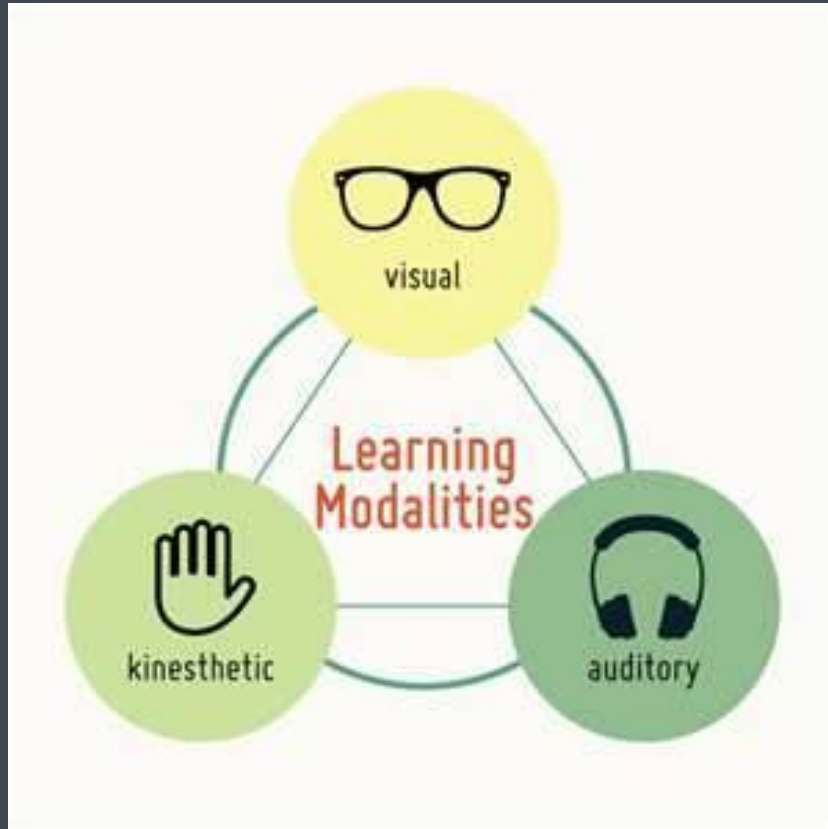
*"Don't confuse fun and engagement."
- Marylee Tung, Kindergarten Teacher*

What makes GBL effective?



Gardner's Theory

What makes GBL effective?



What makes GBL effective?



Bartle's Taxonomy of Player Types

What makes GBL effective?

- It's Low Risk

- » Embrace of failure
- » Replay again and again
- » Growth mindset



What makes GBL effective?

- It's Relevant

- » Most young people play games.
- » Game skills mirror 21st Century life skills.
- » “Serious” games can address real world wicked problems.

How does this affect school design?



How does this affect school design?

- GBL is among a host of techniques reshaping schooling.

- » Case-based learning

- » Challenge-based learning

- » Community-based learning

- » Design-based learning

- » Game-based learning

- » Inquiry-based learning

- » Land-based learning

- » Passion-based learning

- » Place-based learning

- » Problem-based learning

- » Proficiency-based learning

- » Service-based learning

- » Studio-based learning

- » Team-based learning

- » Work-based learning

- » Zombie-based learning (look it up!)

How does this affect school design?

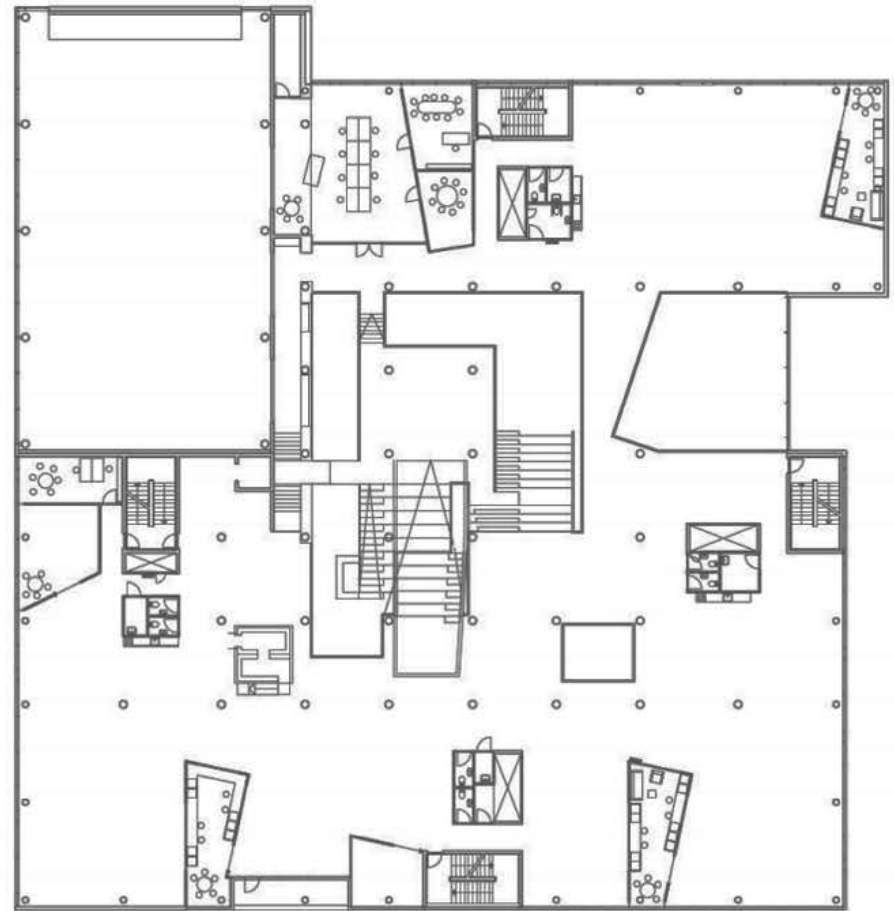
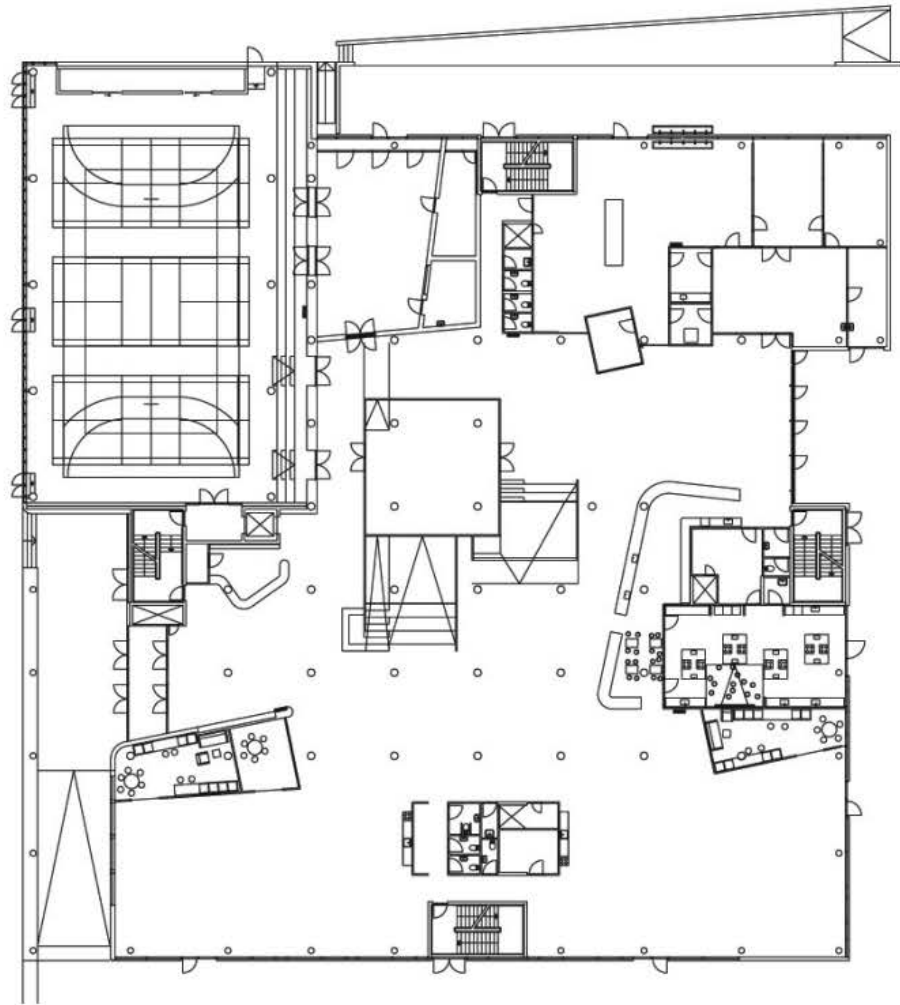
- All of these approaches are:
 - » Integrated
 - » Experiential

Traditional (Authoritarian) methods	Modern methods
Teacher-centred	Student- centred
Text book-centred	Learning by doing extra-curricular, co-curricular and out-of-the-classroom activities
Learning through recitation, explanation and examination (rote)	Learning socially, psychologically, naturally, experimentally and logically
Teacher is conspicuously in control and focuses on the content of the textbook	Teacher is mediator and facilitator
Study is systematic and through didactic method	Study through dialogue, participation and interactive communication
Allow for competition, mastery, habit and accuracy in learning	Allow for holistic and conceptual education

Changing Pedagogy



Innovative Trends



The New Open School

Hellerup School, Copenhagen, Arkitema Architects



Hellerup School, Copenhagen, Arkitema Architects

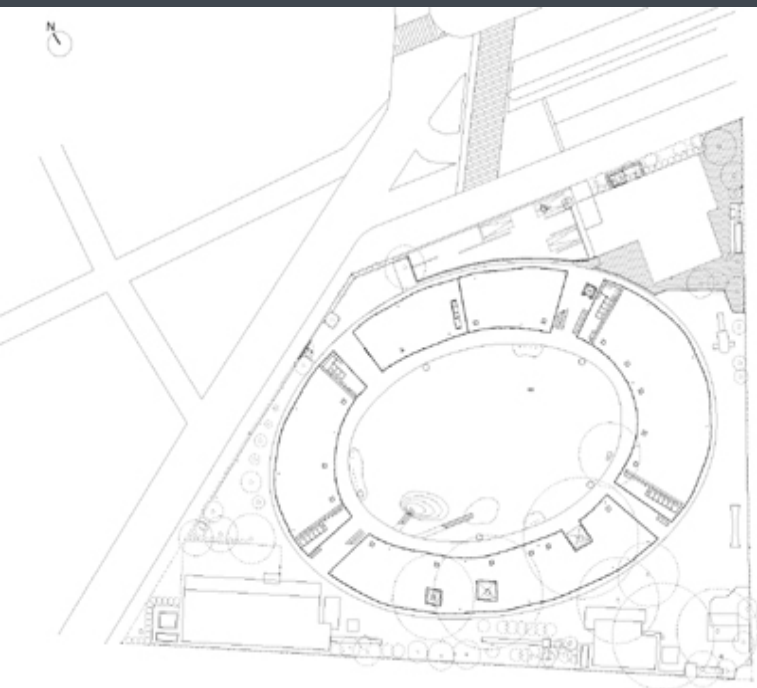


Hellerup School, Copenhagen, Arkitema Architects

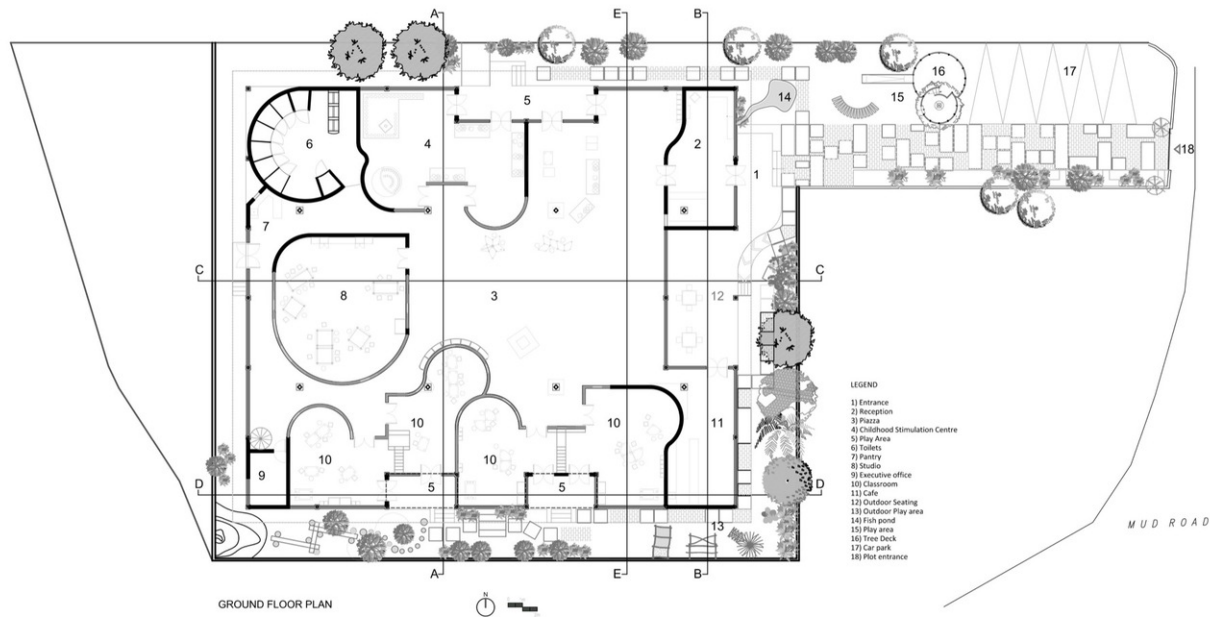


Re-think the Box

Fuji Elementary School, Tokyo, Takaharu Tezuka



Fuji Elementary School, Tokyo, Takaharu Tezuka



Adaptable

The Atelier, Bengaluru, India, Biome Environmental Solutions



The Atelier, Bengaluru India, Biome Environmental Solutions

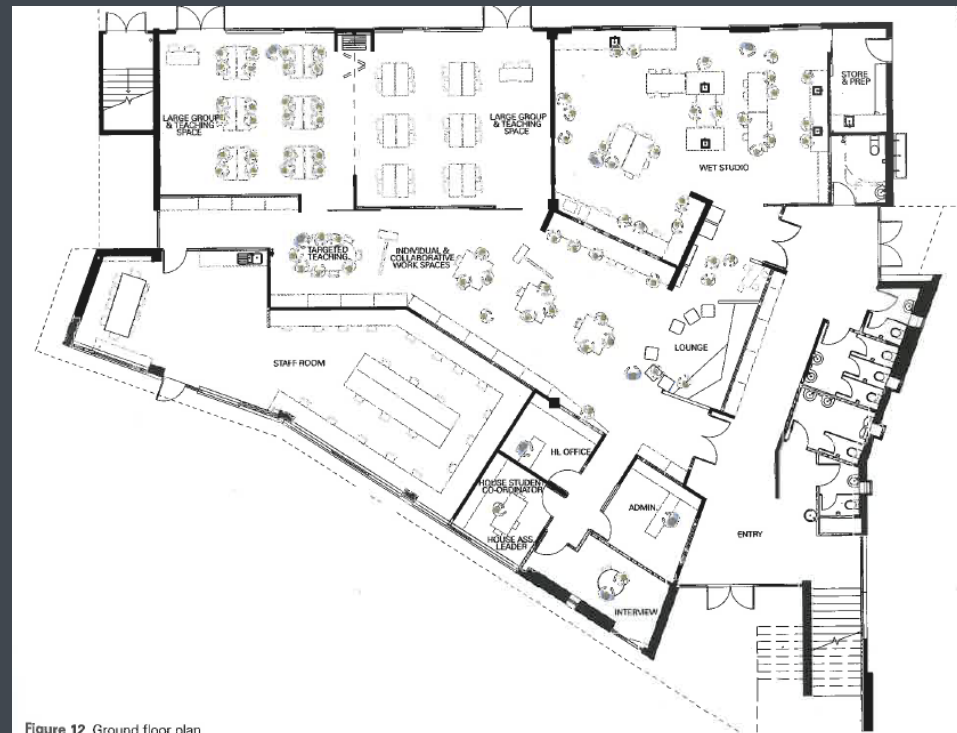


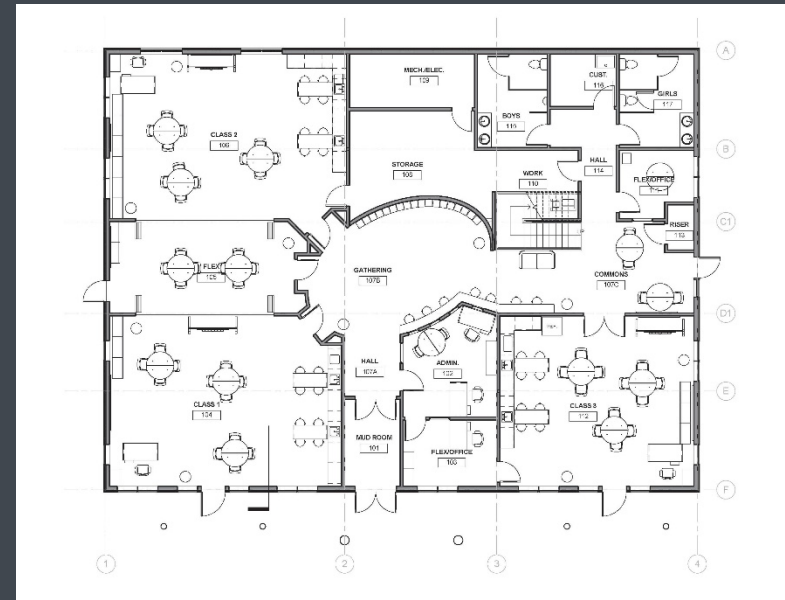
Figure 12. Ground floor plan.

Neutral Spaces



Variety of Spaces & Environments

Epping Views Primary School, Australia, Gary Pucksand



Variety of Spaces & Environments

Pacific High, Sitka, Alaska, MCG Architects



The Active Classroom



The Active Classroom

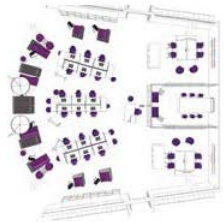
Odegaard Library & Learning Commons, Seattle, Miller Hull

Collaborative areas support teams and small group lessons.

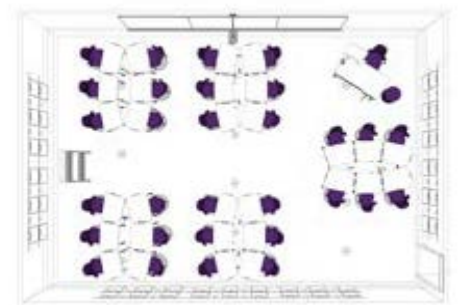
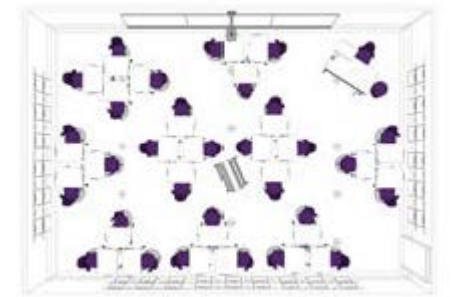
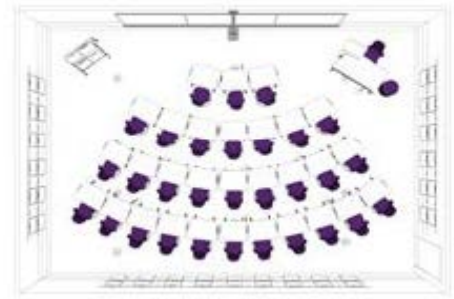


Lounge seating with privacy screens offers locations for rejuvenation and solace.

Layout supports sightlines to multiple locations within the classroom.



Choice and control are prevalent for students and instructors alike, allowing them to choose the best space for the activity at hand.



Furniture

Get out your Smartphone!

Go to <https://kahoot.it/#/>

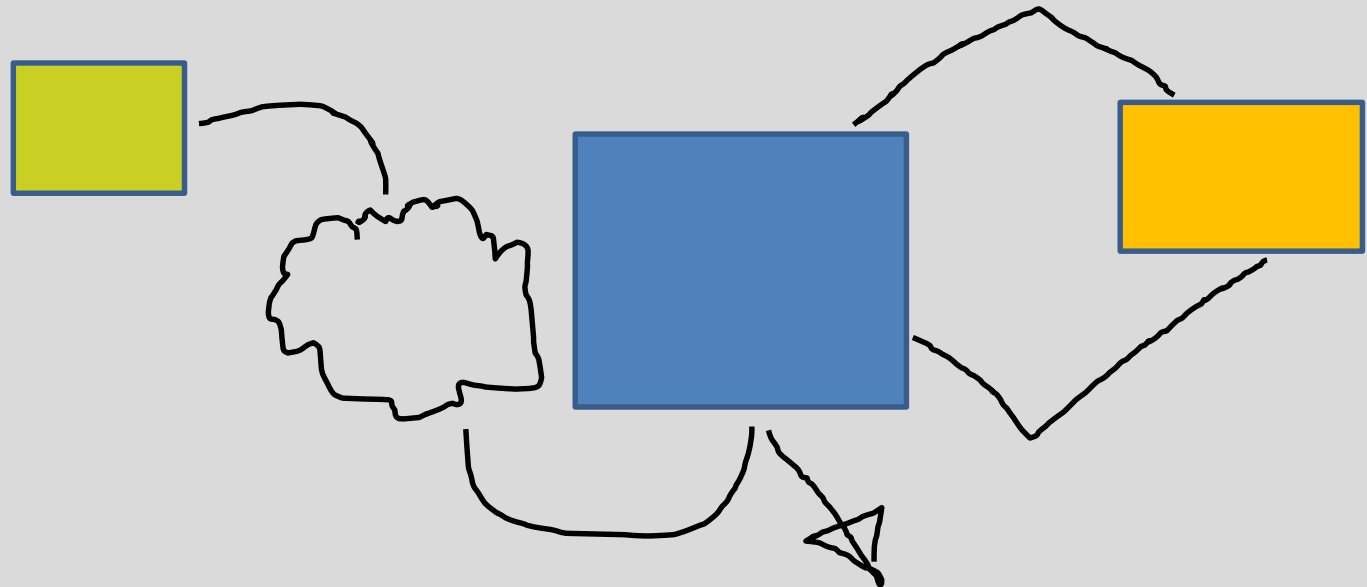
Set up a user name and lets begin!

Time for a Quiz!

Now let's play a game!

GamePlanTM

The gamified school planning activity



- Service
- Innovation
- Stewardship

“We measure architecture through our bodies, therefore health shall be reflected in the building experience.”

- MCG Team

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