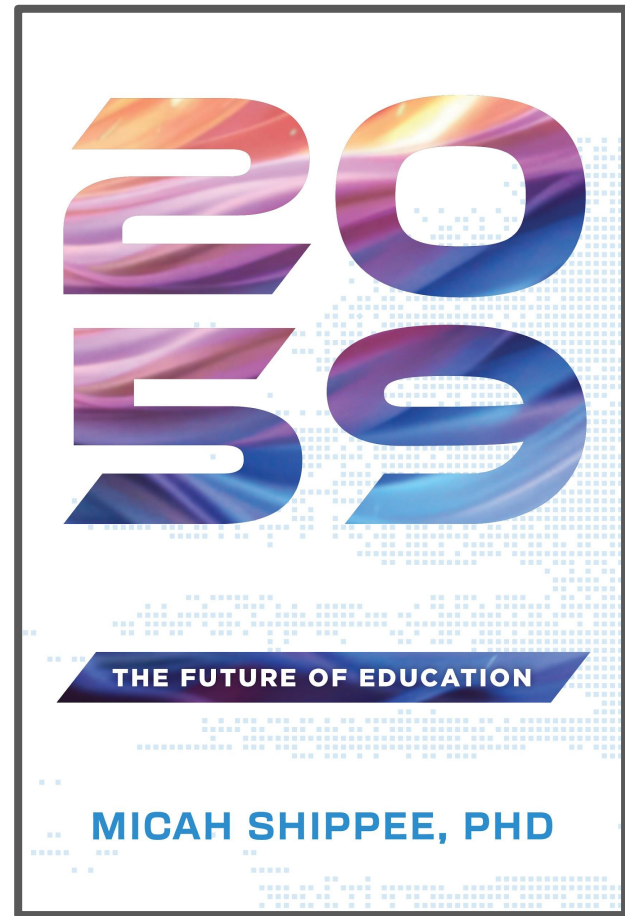


Design Thinking Workshop: Ideating and Articulating Learning Environments with AI

Dr. Micah Shippee

Director of Education Solutions |
Samsung





Coming December 2024

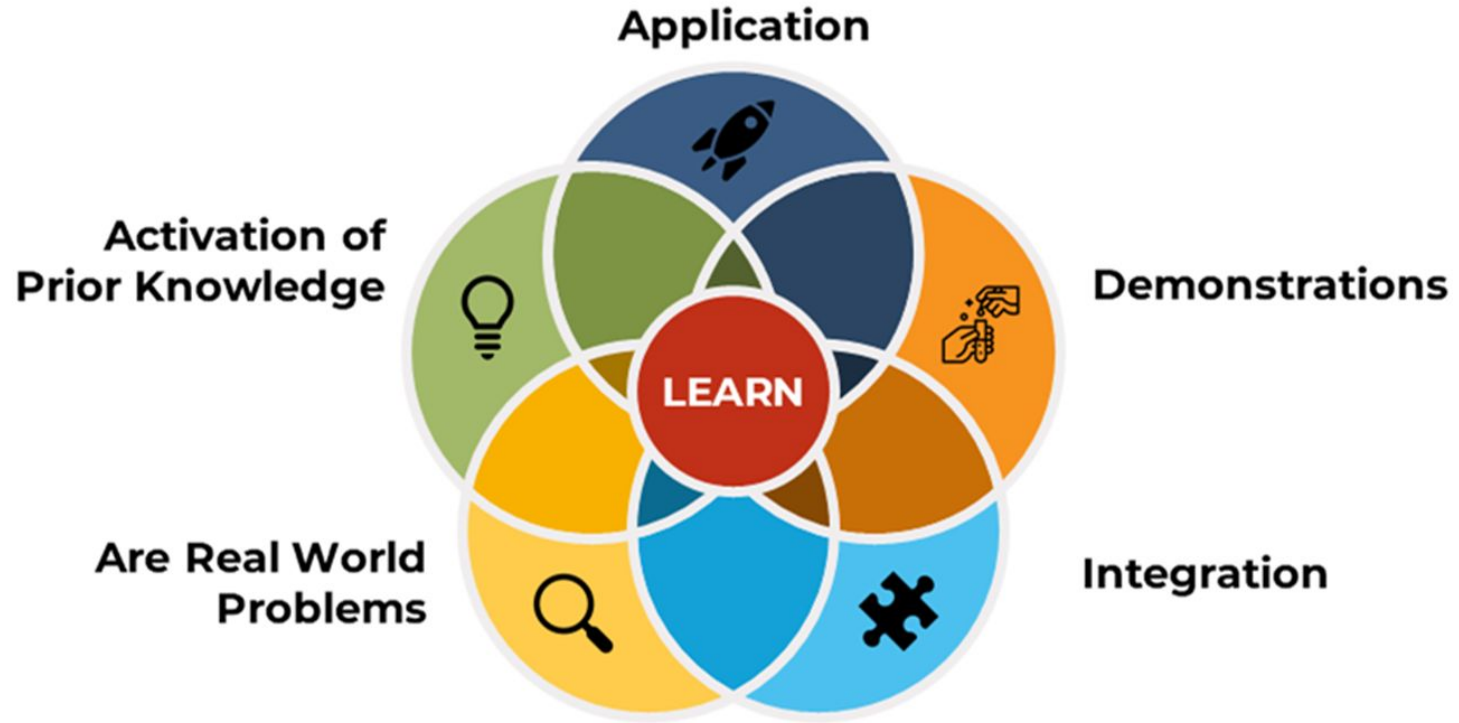
**Samsung
Education**

Workshop Objective:

**Explore how human creativity
and collaboration compares with
AI tools that are trying
to solve the same problem.**

Rise of the *Pinterest* Classroom





 **SUSTAINABLE DEVELOPMENT GOALS**





KNOWLEDGE

SKILLS

ENVIRONMENT

MOTIVATION

SUCCESS









Wanderlust... COLLABORATIVE PLAYLIST

#wanderlustEDU

Let's Do This MIX!

Created by theshippster • 5 songs, 14 min

[PLAY](#) [...](#)

Filter Download

TITLE	ARTIST	USER	
♥ Happy - From "Despicable Me 2"	Pharrell...	theshipp... a day ago	
♥ Sunflower - Spider-Man: Into th...	Post Mal...	theshipp... 2 minutes ago	
♥ Raining Tacos	Parry Gri...	theshipp... a minute ago	
♥ Old Town Road - Remix	Lil Nas X...	theshipp... a minute ago	
♥ When Can I See You Again? - Fr...	Owl City	theshipp... a minute ago	

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Choice



Choice



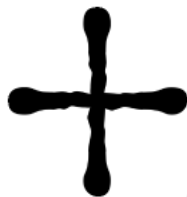
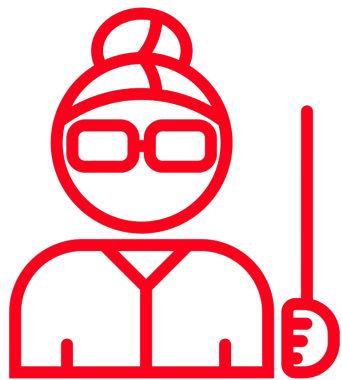
Need



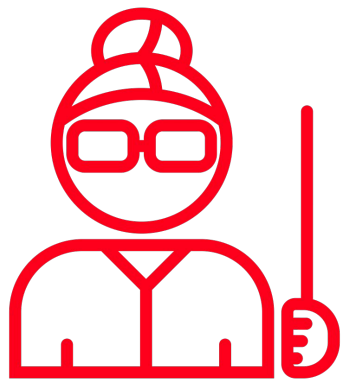
Strategic

Questions Driven by Innovation

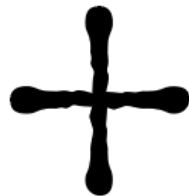
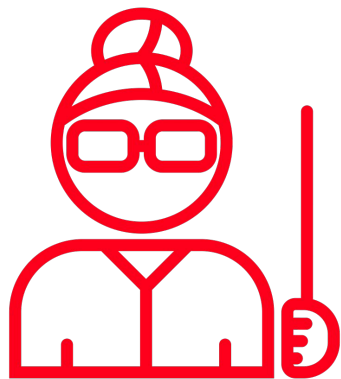
- **What will I do with it?**
- **What will my students do with it?**
- **How will I monitor their use?**
- **How will I maintain it?**



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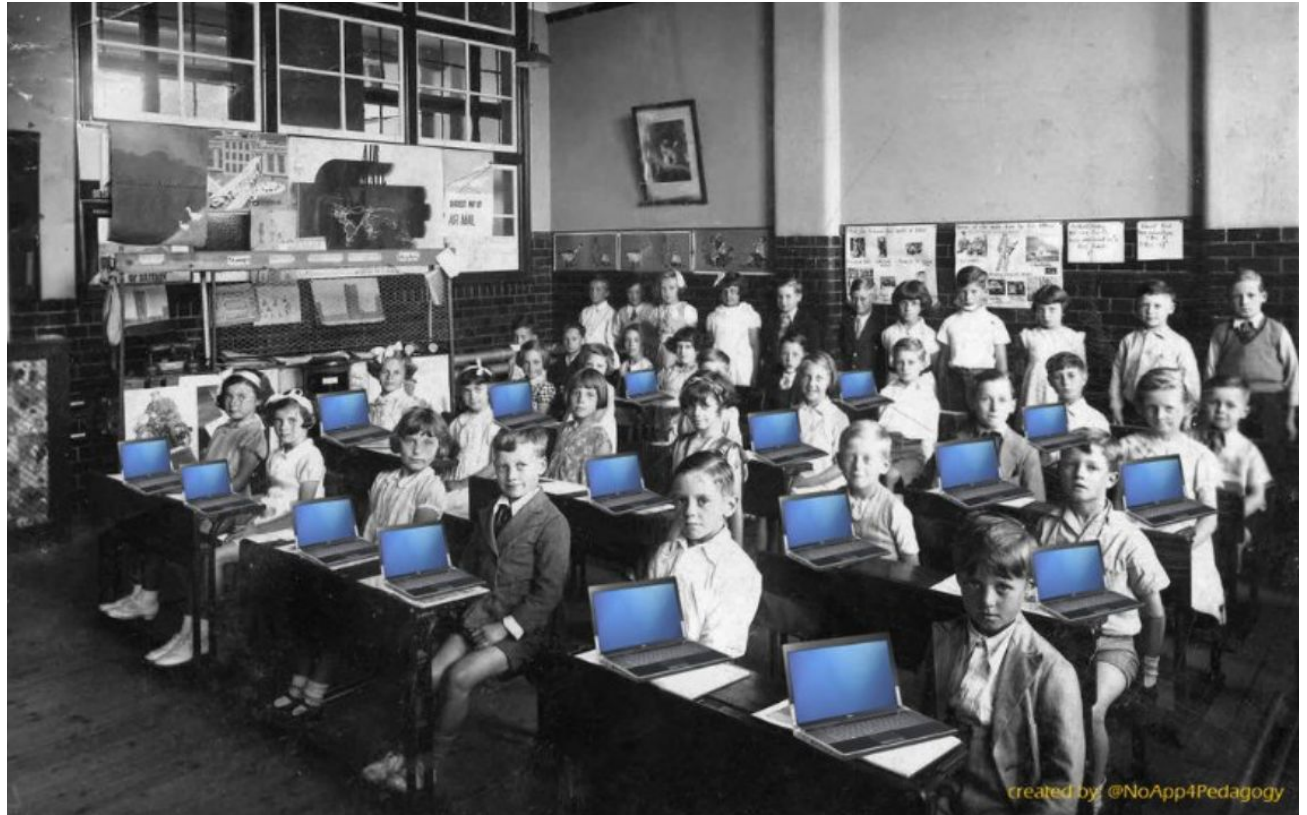


Classroom design can explain up to 16% of variation in students' academic progress.

Key design parameters include:

- Light
- Temperature
- Air quality
- Flexibility
- Complexity
- Color
- **Ownership**

All are significant factors affecting learning outcomes.



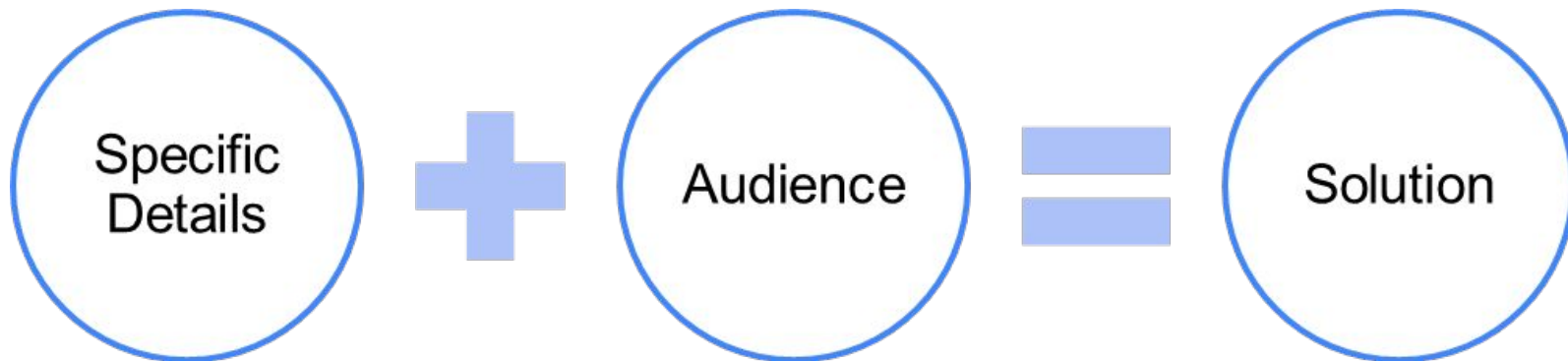


Designing Learning Environments: What the Research Says

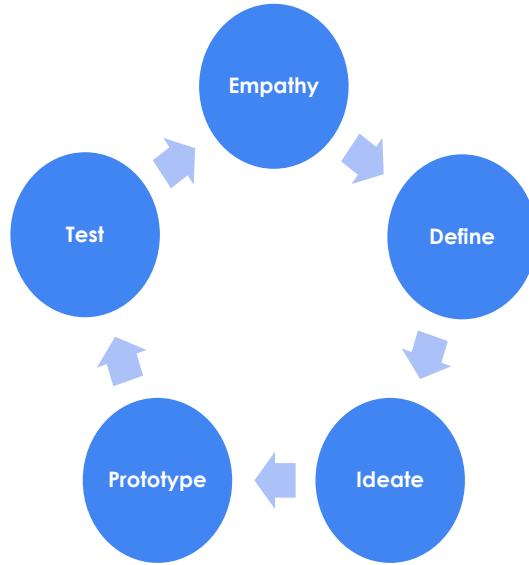
- 1. Space is only one factor:** there exists a relationship between design, learning activities and learning results. Space cannot be isolated as a single cause to positive learning outcomes, but people, space, interaction and learning are intertwined.
- 2. Perception is reality:** Closely connected is the theme on how space is perceived by teachers and students. Perception of space is emotional but also intertwined with the pedagogy used in the space.
- 3. Involve Users in Design:** Only when a learning environment is seen to support learning and create a positive experience can we say it is designed successfully. While researcher explore different aspects of the design process, design principles and participatory design projects, they largely agree on one key point: **the need to involve educators early in the design process.**
- 4. Teacher Professional Development** is critical for effective use of space to amplify learning.

What is Design Thinking?

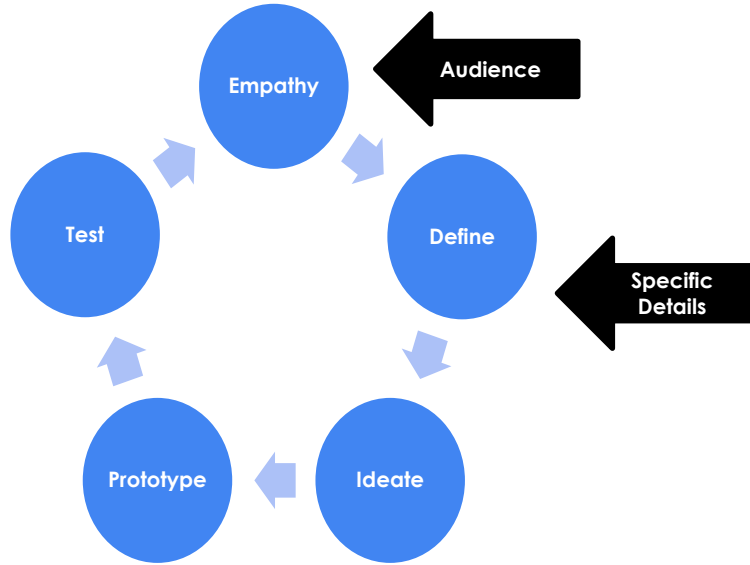
PROBLEM



What is Design Thinking?



What is Design Thinking?



Design Thinking: **Creating Scenarios**

AUDIENCE: Who are we designing for? Name a character (fact or fiction): **ex. Witches**

PROBLEM: What are we trying to solve?: **ex. Learning to Read**

SPECIFICS: What is one adjective to describe your audience?: **ex. Shy**



AUDIENCE



PROBLEM



SPECIFICS

*Design Thinking: **Creating Scenarios***

Scenario template:

Develop a creative plan to help _____ (Specific)
_____ (Audience) _____ (Problem).

Step #1 Collaborate on a solution: 5 minutes

Step #2 Share your solution with another group: 5 minutes



**Co-create
with AI?**

Step #3 Individually visit copilot.microsoft.com and enter your scenario: 5 minutes

Step #4 Compare findings with your team: 5 minutes

Design Thinking: **Sample Scenario's AI Solution**

Develop a creative plan to help **shy** (Specific) **witches** (Audience) who are learning to read (Problem).

"The Shy Witch's Book Nook"

Overview: "The Shy Witch's Book Nook" is a cozy and magical space designed specifically for introverted witches who want to explore the world of literature. It's a place where shy witches can embrace their love for books, learn to read, and connect with other magical beings—all while feeling safe and comfortable.

	Ingredients:	Activities:
Glowing Lanterns: Hang soft, glowing lanterns made from enchanted fireflies. They provide just enough light for reading without overwhelming the senses.	Spellbinding Tea Set: A delicate tea set that brews calming chamomile tea. The cups change color based on the reader's emotions—blue for calm, pink for excitement, and gold for wonder.	Spellbinding Storytime: Gather shy witches in a circle. Each takes turns reading a paragraph from their favorite book. The magic in their voices brings the stories to life.
Whispering Bookshelves: These bookshelves are imbued with a spell that makes them whisper encouraging words to shy witches as they browse through the titles. "You've got this!" and "Magic awaits within these pages!" are common phrases.	Bookmarks with Personality: These bookmarks have tiny personalities of their own. They chat with the reader, share book recommendations, and occasionally tell jokes. One might say, "I'm your loyal bookmark. Let's explore this magical tale together!"	Whispered Book Reviews: Shy witches write book reviews on parchment scrolls. They leave them in a magical mailbox, and the reviews are whispered to other witches during the night.
Comfy Cushions: Scatter plush cushions on the floor. Each cushion has a unique enchantment: when a shy witch sits down, it molds itself into the coziest shape for her comfort.	Introvert's Corner: A secluded nook with a velvet curtain. Shy witches can retreat here when they need a break from socializing. Inside, they'll find a cozy bean bag, a soft blanket, and a stack of introvert-friendly books.	Invisible Book Club: An introvert-friendly book club where witches discuss books via enchanted mirrors. No need to attend in person—just share thoughts and reflections from the comfort of your own nook.
		Herbology and Literature: Combine reading with herbology. Shy witches learn about magical plants mentioned in books and create their own bookmarks infused with herbal scents.

Be prepared to TRAIN AI on best practices

Color Psychology for Students

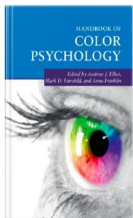


Table 2

Students desired color in classrooms

Preference	Male		Female		Total	
	Frequency	%	Frequency	%	Frequency	%
Yellow	2	6.9	7	19.44	9	14
Green	8	27.6	4	11.12	12	18.5
Blue	8	27.6	7	19.44	15	23.1
Purple	2	6.9	6	16.66	8	12.3
Grey	1	3.45	2	5.55	3	4.6
Black	1	3.45	0	0	1	1.6
White	7	24.1	10	28	17	26.1
Total	29	100	36	100	65	100

Table 3

Students sensations and emotion toward colors

Colors	Male perception	Female perception
Yellow	Hope (%30)	Hope (%24), Excitement (%12)
Green	Proud (%21), Peace (%15)	Peace (%18), Satisfaction (%15)
Blue	Curiosity (%28)	Curiosity (%13), Peace (%12)
Purple	Satisfaction (%23)	Hope (%29)
Grey	Weird (%38)	Weird (%40)
Black	Fear & Worry (%46)	Fear & Worry (65)
White	Active and energetic (%52)	Active & energetic (%37)

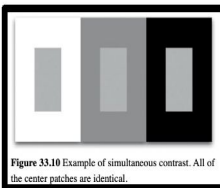


Figure 33.10 Example of simultaneous contrast. All of the center patches are identical.

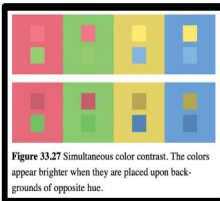


Figure 33.27 Simultaneous color contrast. The colors appear brighter when they are placed upon backgrounds of opposite hue.

Visual Acuity for Displayed Words and Graphics

Visual contrast in the classroom is an **essential** aspect of effective learning. It aids in highlighting key information, guiding students' attention, and improving **comprehension**. **High contrast between text and background on teaching materials can enhance readability**, making it easier for students to focus and absorb information. Moreover, for students with visual impairments or specific learning difficulties, such as dyslexia, adequate visual contrast can make a significant difference in their learning experience. Thus, educators should consider the importance of **visual contrast when designing classroom materials** to ensure an inclusive and effective learning environment for **ALL** students.

		Background								
		Red	Orange	Yellow	Green	Blue	Violet	Black	White	Gray
Foreground	Red	Poor	Poor	Good	Poor	Poor	Poor	Good	Good	Poor
	Orange	Poor	Poor	Poor	Poor	Poor	Poor	Good	Poor	Poor
	Yellow	Good	Good	Poor	Poor	Good	Poor	Good	Poor	Good
	Green	Poor	Poor	Poor	Good	Good	Poor	Good	Poor	Good
	Blue	Poor	Poor	Good	Good	Poor	Poor	Poor	Good	Poor
	Violet	Poor	Poor	Good	Poor	Poor	Good	Good	Good	Poor
	Black	Poor	Good	Good	Good	Poor	Good	Good	Good	Poor
	White	Good	Good	Good	Poor	Good	Good	Good	Good	Good
	Gray	Poor	Poor	Good	Good	Poor	Poor	Poor	Good	Good

Technology across the campus

Samsung
Education

Gymnasium & Stadium

Use signage for scoreboards, pep rallies, concerts, performances, back to school night, recognition, etc.

Administration & Department Offices

Use signage to create social and critical info dashboards.

Computer Labs & Study Rooms

Use signage to help students locate labs with free space and give them the ability to schedule or reserve times.

Student Unions & Common Areas

Display news, announcements, activities, student achievements, broadcast sports games and critical information

Libraries

Use signage to announce study groups, help students locate materials and schedule workspaces.

Dining Halls & Campus Eateries

Use menu boards to promote menus and nutritional information.

Teaching Spaces

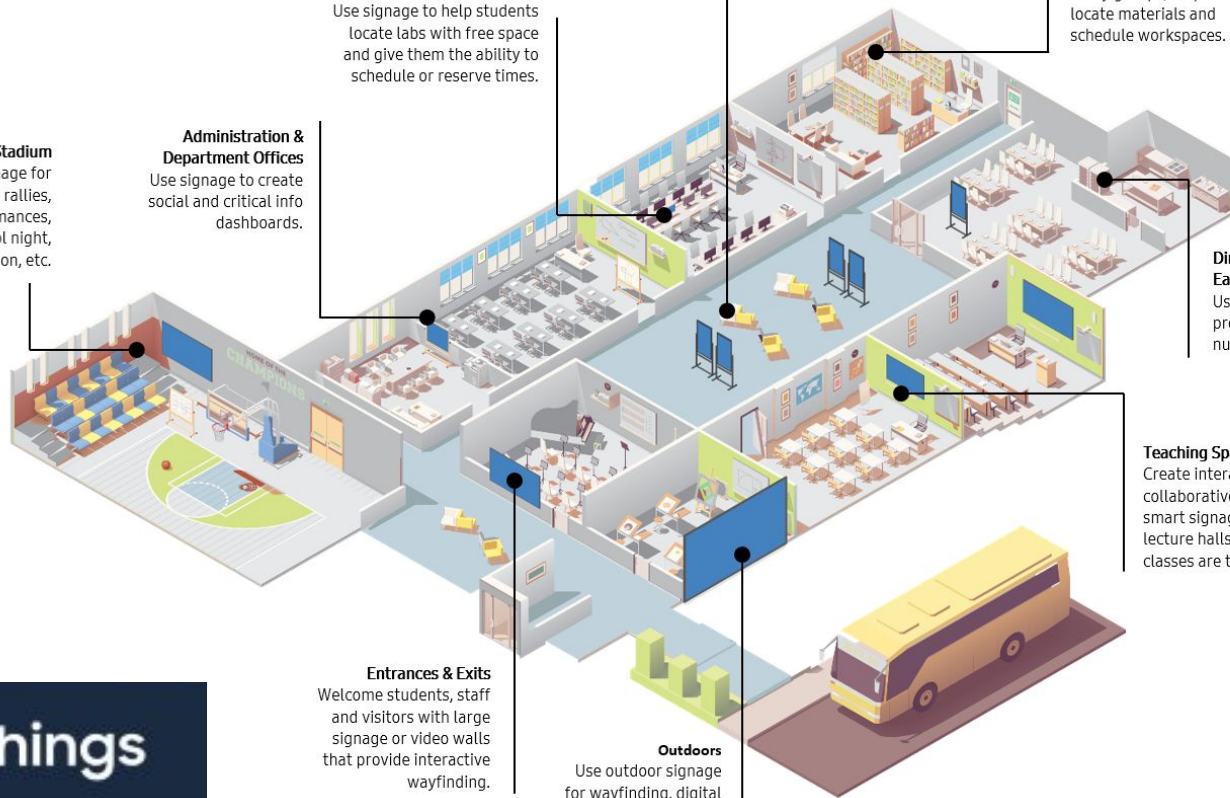
Create interactive and collaborative spaces with smart signage in classrooms, lecture halls or anywhere classes are taught.

Entrances & Exits

Welcome students, staff and visitors with large signage or video walls that provide interactive wayfinding.

Outdoors

Use outdoor signage for wayfinding, digital directories and announcements.





P360

A Holistic Approach to Design

METEOR
EDUCATION
accelerating engagement

forbo

SAMSUNG

STUDIO GC
architecture + interiors



Height Adjustable Mounts
BalanceBox and e-Box



Solve for Tomorrow

Ready to inspire lasting change?
Your #STEM-powered solutions
could transform your community.

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[@solvefortomorrow](https://twitter.com/solvefortomorrow)

Solve for Tomorrow

Tackle real-world challenges.
Compete for your share of \$2M!

Enter the Samsung
Solve for Tomorrow
STEM competition.

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