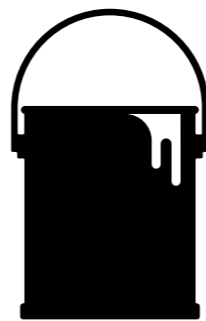


Cre8 Design

A presentation, presented a little different, influenced by the Neo Futurist Theater and the Too Much Light Makes the Baby Go Blind play.

Greg Allen (the creator of TMLMTBGB) came up with the name from a young child with autism who would smash light bulbs and say, "Too much light makes the baby go blind". Later, when he was creating this show, the saying came back to his mind.

Trial and Error + Some Fun
+ Active Listening +
Honesty + Speed + Brevity



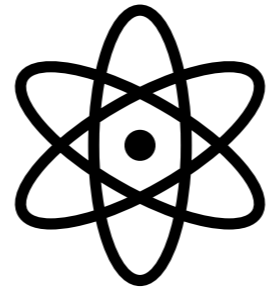


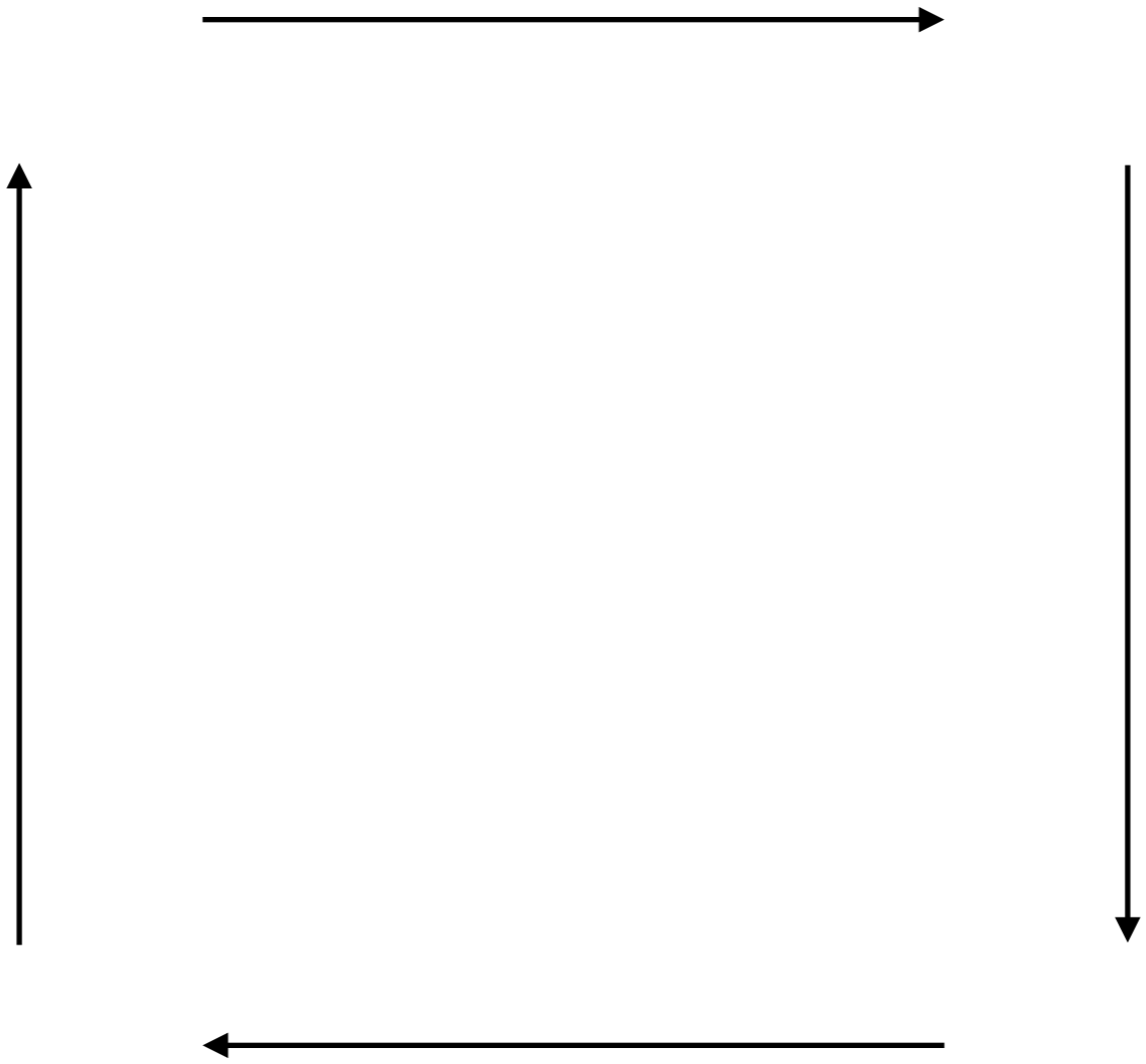
Menu

1. Integrated Design
2. So you have an idea, now what?
3. Atoms and Molecules
4. Tell that story, visually
5. Process or Product?
6. Interpretable
7. Design.Lit
8. Think Reverse

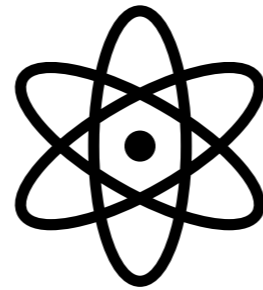


Atoms and Molecules





Atoms and Molecules



- Heuristics: At your tables list the rules of thumb for using or debugging the Beebot that you discovered when making a square.
- Algorithms: What is the equation for how to make a square.

Atoms and Molecules

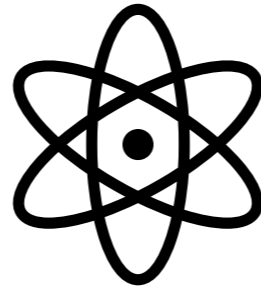
- Solving a problem always requires a certain system of knowledge units and operations. (Landa, 1974)

heuristics
“rules of thumb”

- The “atoms” and “molecules” of problem-solving (Landa, 1974)

algorithms
“set procedures”

Atoms and Molecules



- Turn and Talk. What do you (or could you) do in your own practice to get students to ...
- Identify rules of thumb when success is not guaranteed? **(heuristics)**
- Get students identifying the required steps for success every time? **(algorithms)**

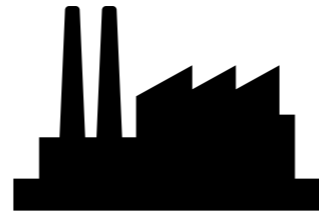


Menu

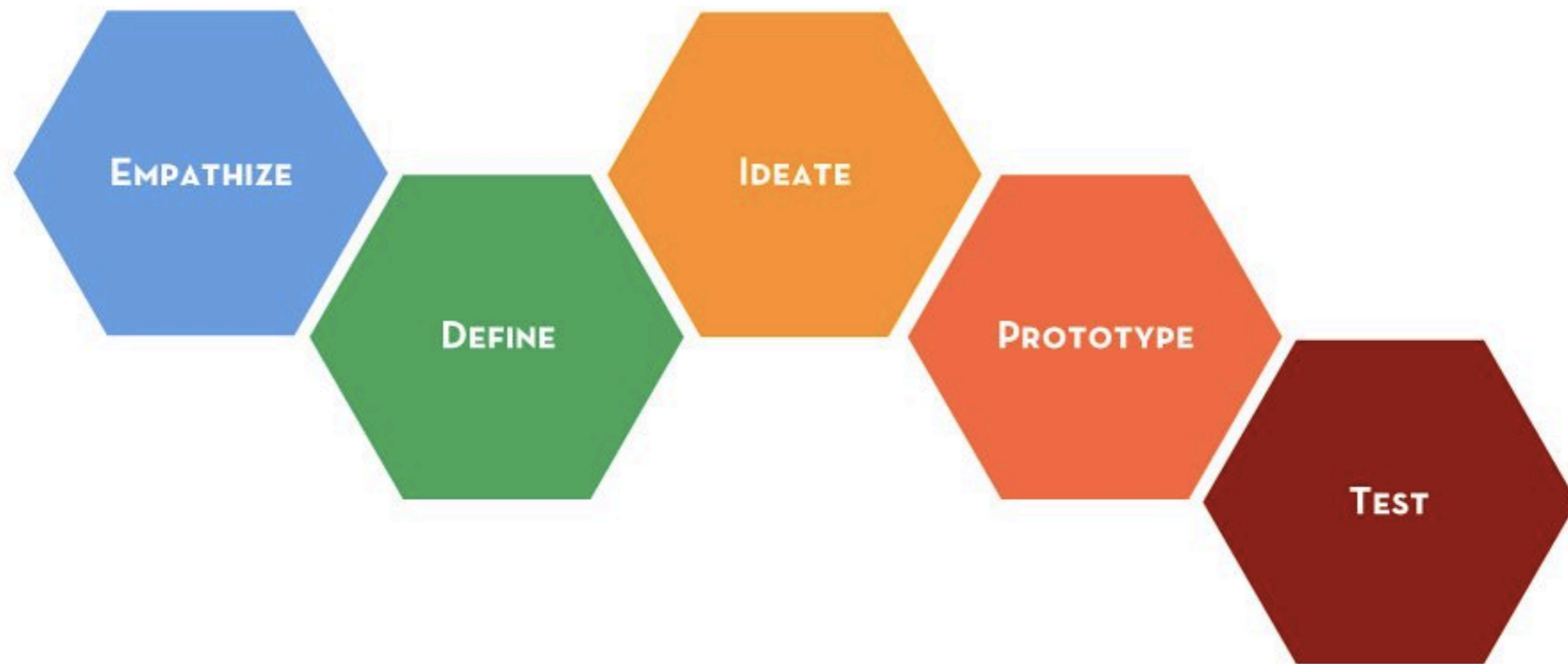
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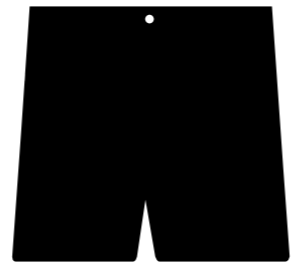


Process or Product?



The creative process is “the sequence of thoughts and actions which leads to novel and useful products” (Groenendijk, Janssen, Rijlaarsdam, & Van den Bergh, H., 2013, p. 37).





Process or Product?

How might we
redesign our
teaching so that we
(and our students)
become more
process-oriented?

Working Backward Activity*

A thinking exercise of working backwards from the end-product to better understand the process.

*Adapted from ATLAS: Learning from Student Work Protocol, www.schoolreforminitiative.org.

Working Backward

1. Turn and Talk: Describe the student's product.

“What do you see?”

No judgements / no interpretations - describe observable facts.

2. Interpret the student's product

“What were the student's thought processes as they worked on this?”

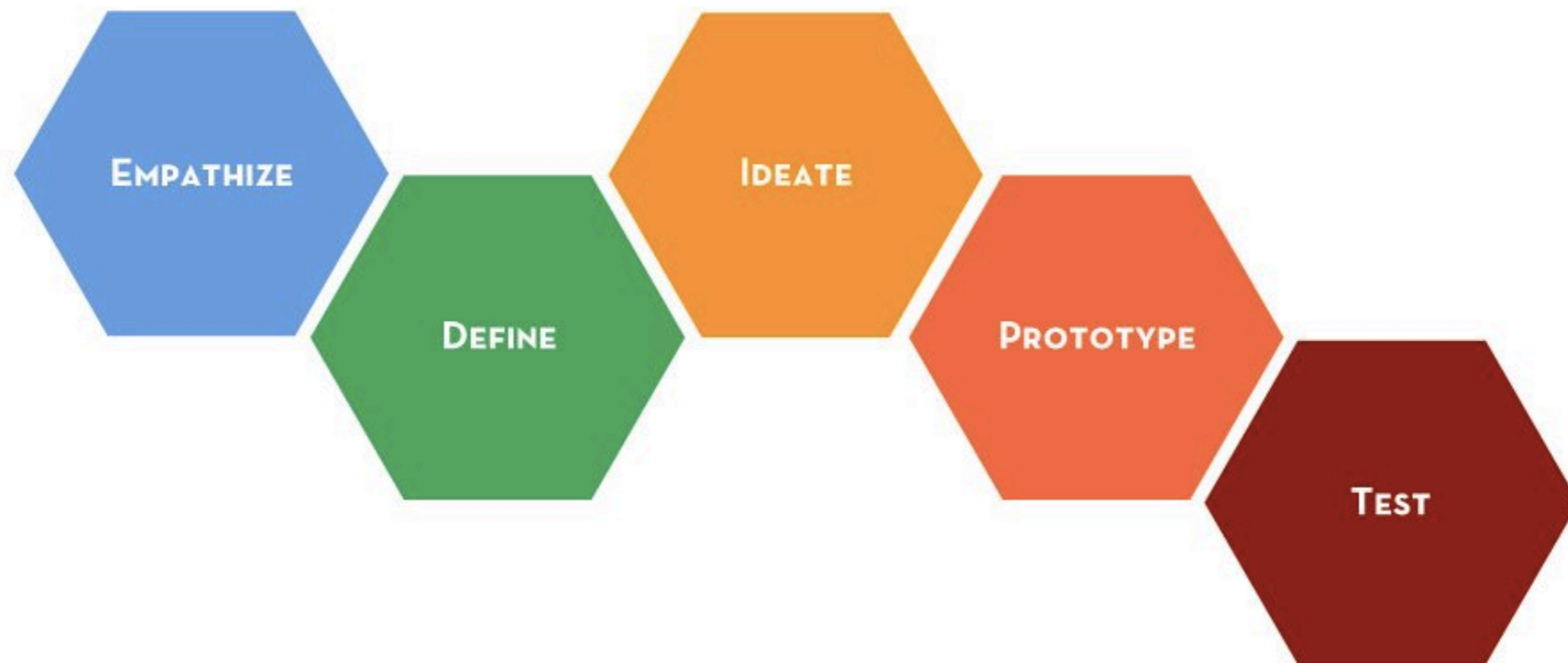
Force yourself to interpret from the student's perspective, NOT the teacher's perspective.

Working Backward

Using this Design Cycle as a lens, describe the process that this student underwent.

i.e. The student had to empathize by...

i.e. The student had to define the ...



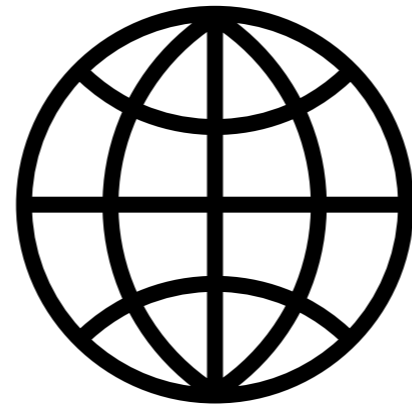


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Integrated Design

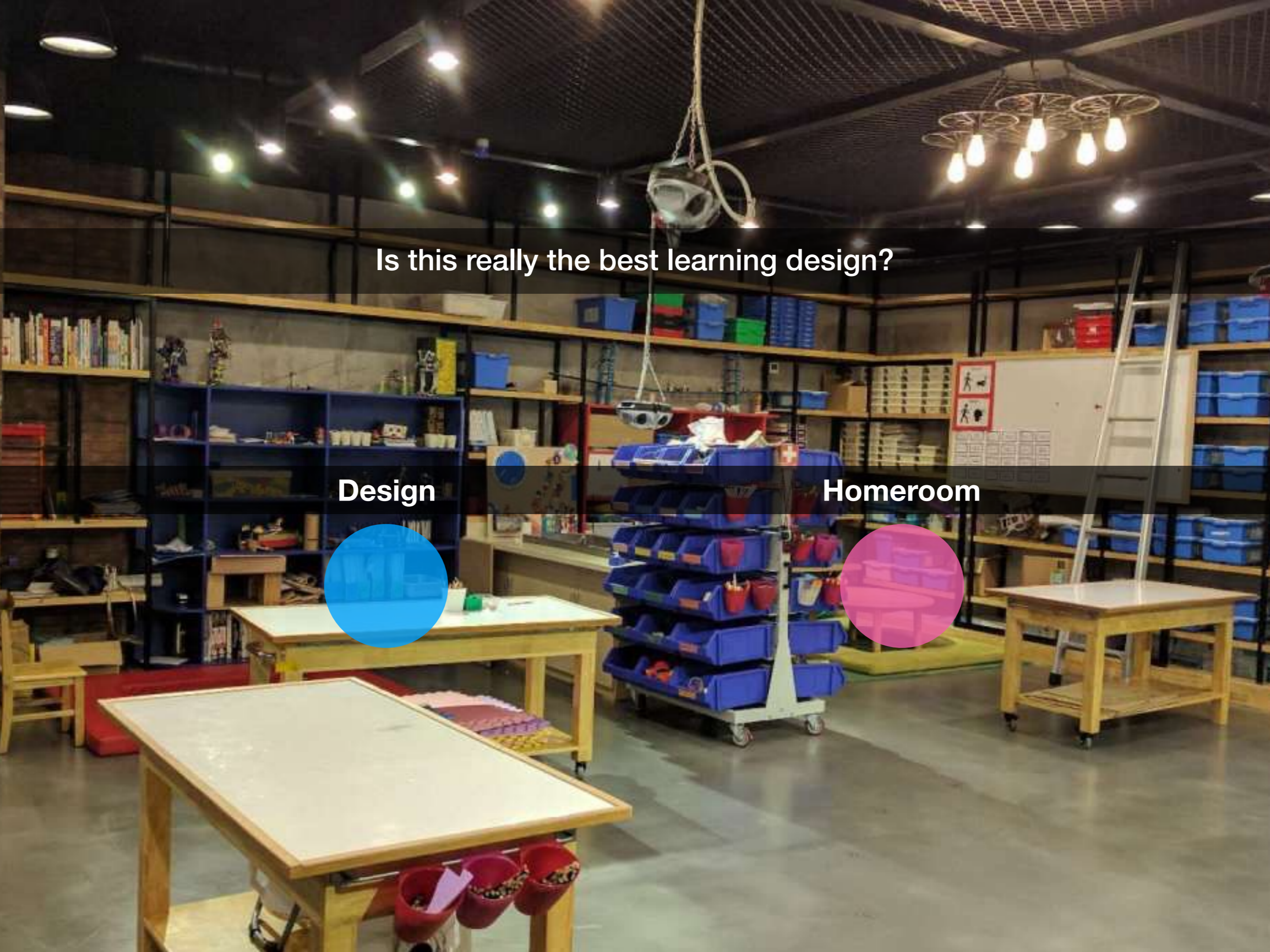


Is this really the best learning design?

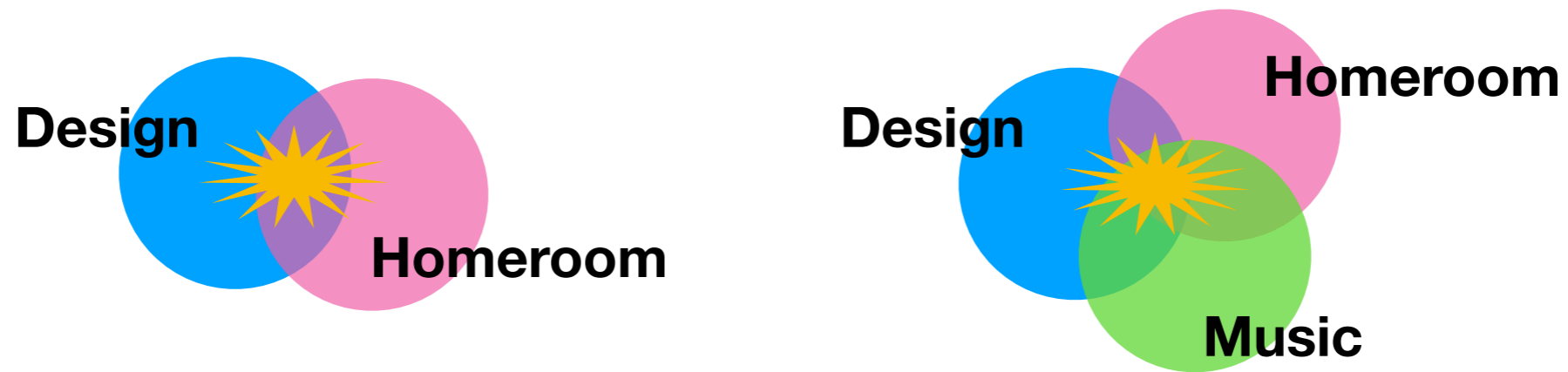
Design



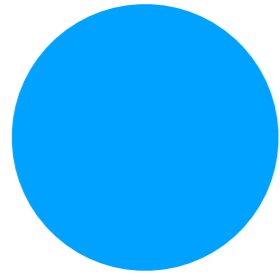
Homeroom



How might we maximize cross-curricular connections for extraordinary learning?



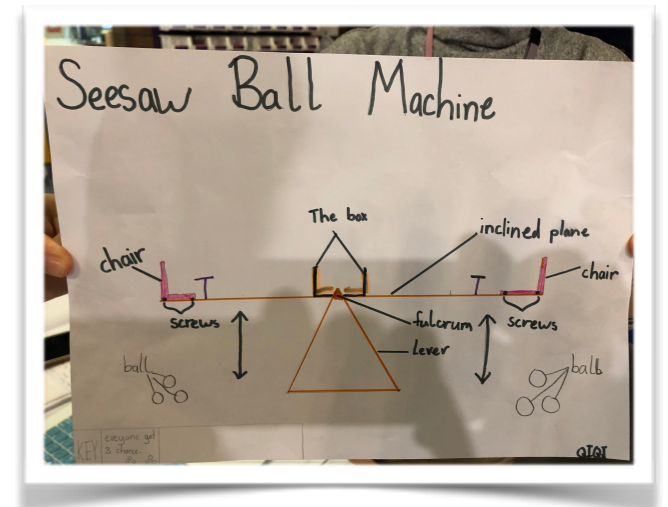
Design



Before



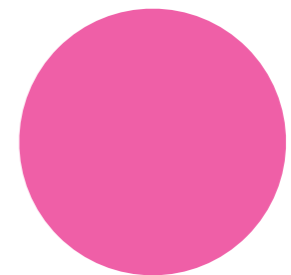
After



During



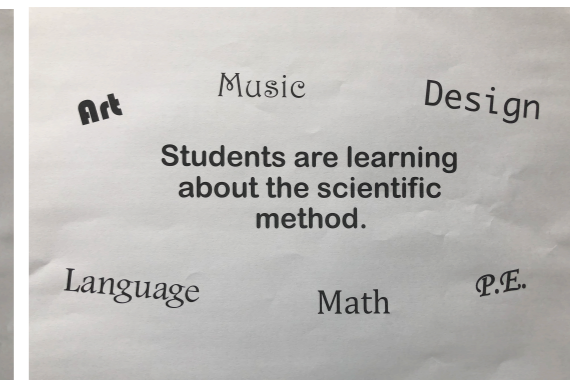
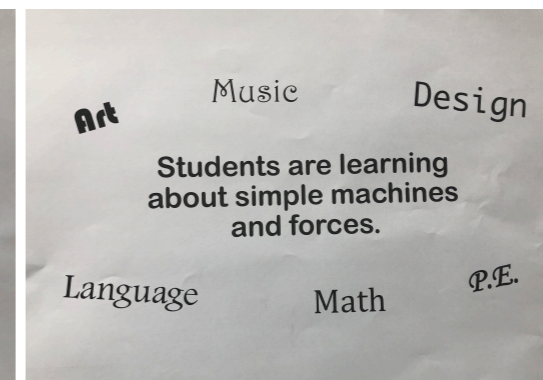
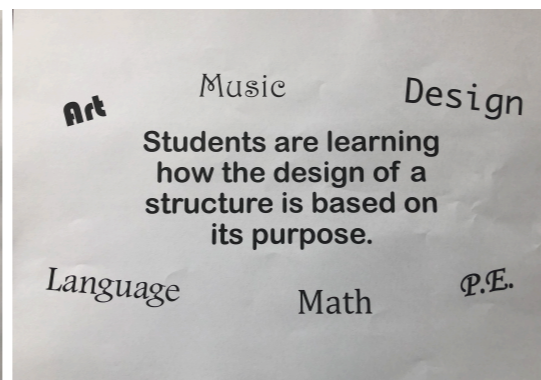
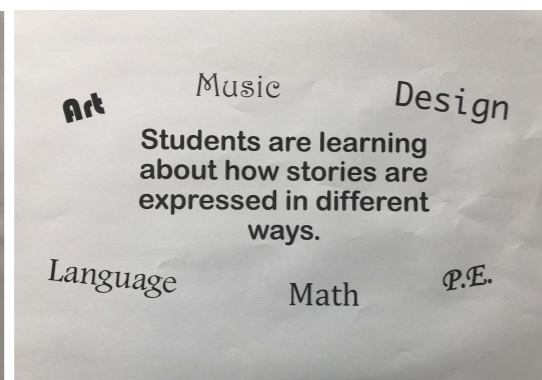
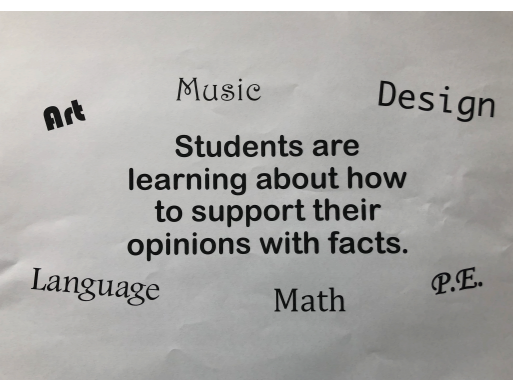
Homeroom



Ideate! Brainstorm!

One person at the table scribe:

Write ideas for authentic learning connection across Math, Science, Art, Language, Design, P.E. Music

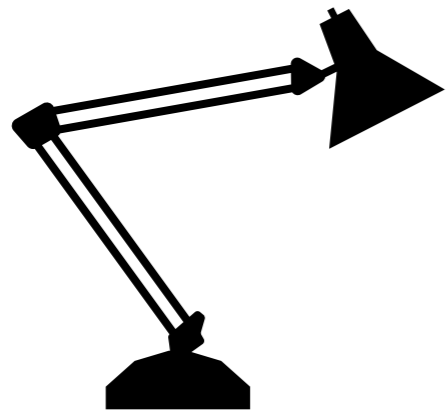




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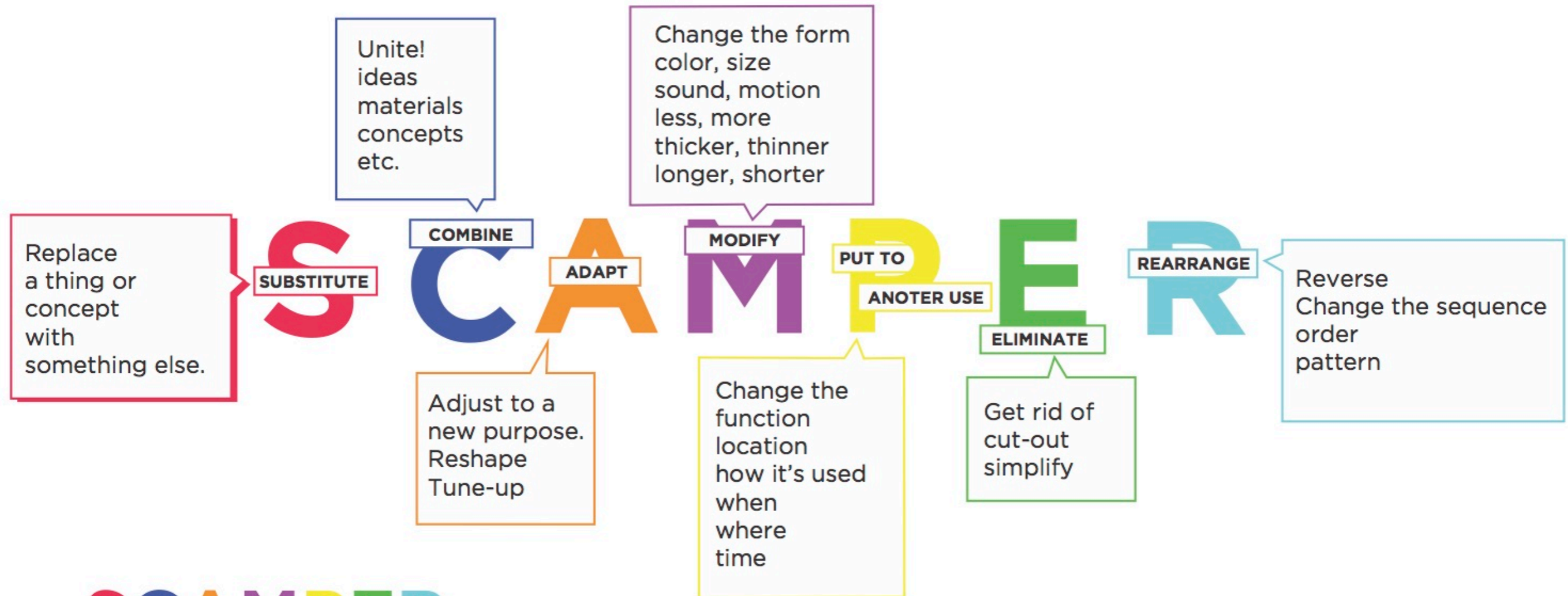
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SO YOU HAVE AN
IDEA, NOW WHAT?

“I want to create a phone case for my friend” -unnamed student (3d product design)



SCAMPER

Bob Eberle (1971); SCAMPER:
Games for Imagination Development

S What materials could be **substituted** to make this product more eco-friendly?

C What's another product you could **combine** with this in order to make it new?

A How could you **adapt** this product or use it in another context?

M How could you **modify** the shape, look or feel to make this product better?

P What's a way you might **put** this product **to another use**, somewhere else or for another purpose?

E What would happen if you eliminated this product altogether? Or eliminated a part?

R How could you reorganize this product?



CC : https://commons.wikimedia.org/wiki/File:Toilet_paper_orientation_over.jpg

Grade 8 : Scamper

Use S.C.A.M.P.E.R. to generate ideas from an existing product you've analyzed.

Emily (YeeShan)



Add comment

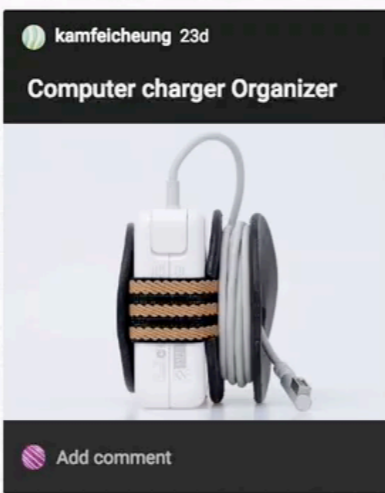
Substitute

I will change the basic shape of it. For example I will change it into a triangle. Because it's easier to hold.

Also I would like to change the top part. So i can hang it on the wall or a place that is easy to see.

I will also change the color of it.

Fay-Fay



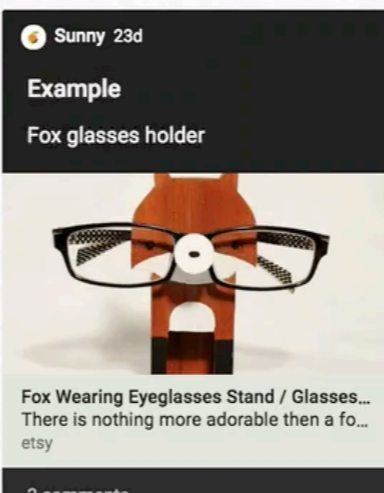
Add comment

Substitute

I would like to replace the belt with a little holder at the bottom so it holds the charger and the charger won't fall off from the organizer.

I would also like to replace the color black to color gray.

Sunny (Seo-Hyun)



Example

Fox glasses holder

3 comments

Scamper

S (substitute)

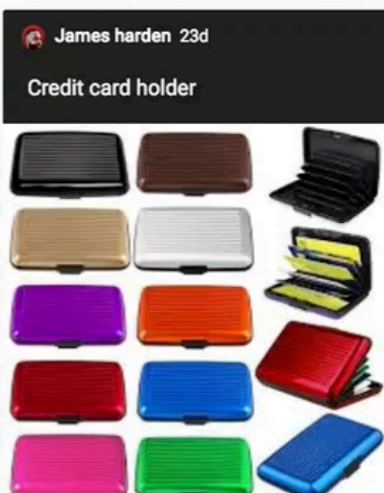
Eric (Eunhyuk)



Adapt:

While I make this cell phone case, I can make it by referring to folder phone or book.

Pedro



8 comments

Leon



1 comment

Example

earphone cable clip

Substitute

I will change the material to plastic, so it won't be easy to get damaged.

Purpose: To assist students with developing alternative ideas.

Application: This can be used either before they have a fixed idea or after. To generate new ideas or to re-envision an idea they're stuck on.

Launch: Don't worry if students only use a few that apply. Pre-create questions that fit the genre of work they're creating.

Credit to: Harvard Project Zero: Purpose, Application, Launch



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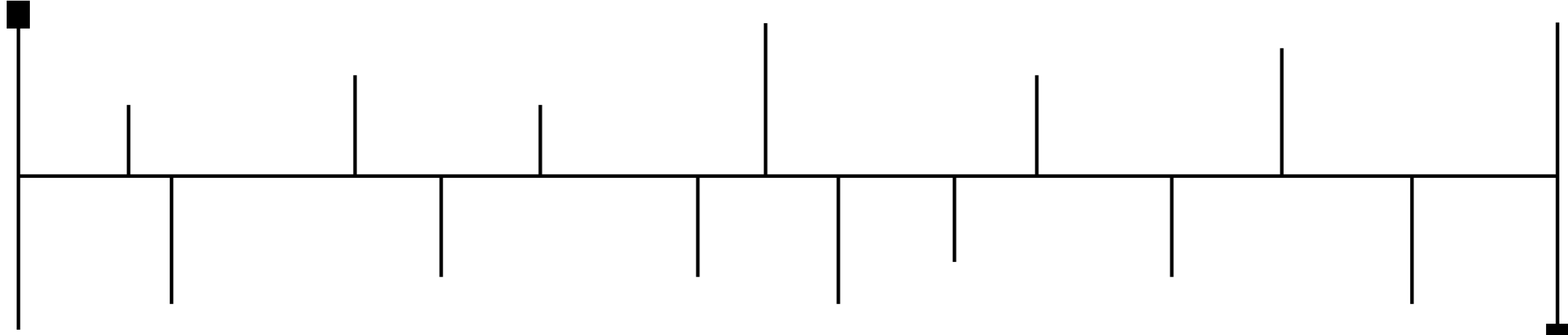
Tell that story, visually.



close up | shallow focus

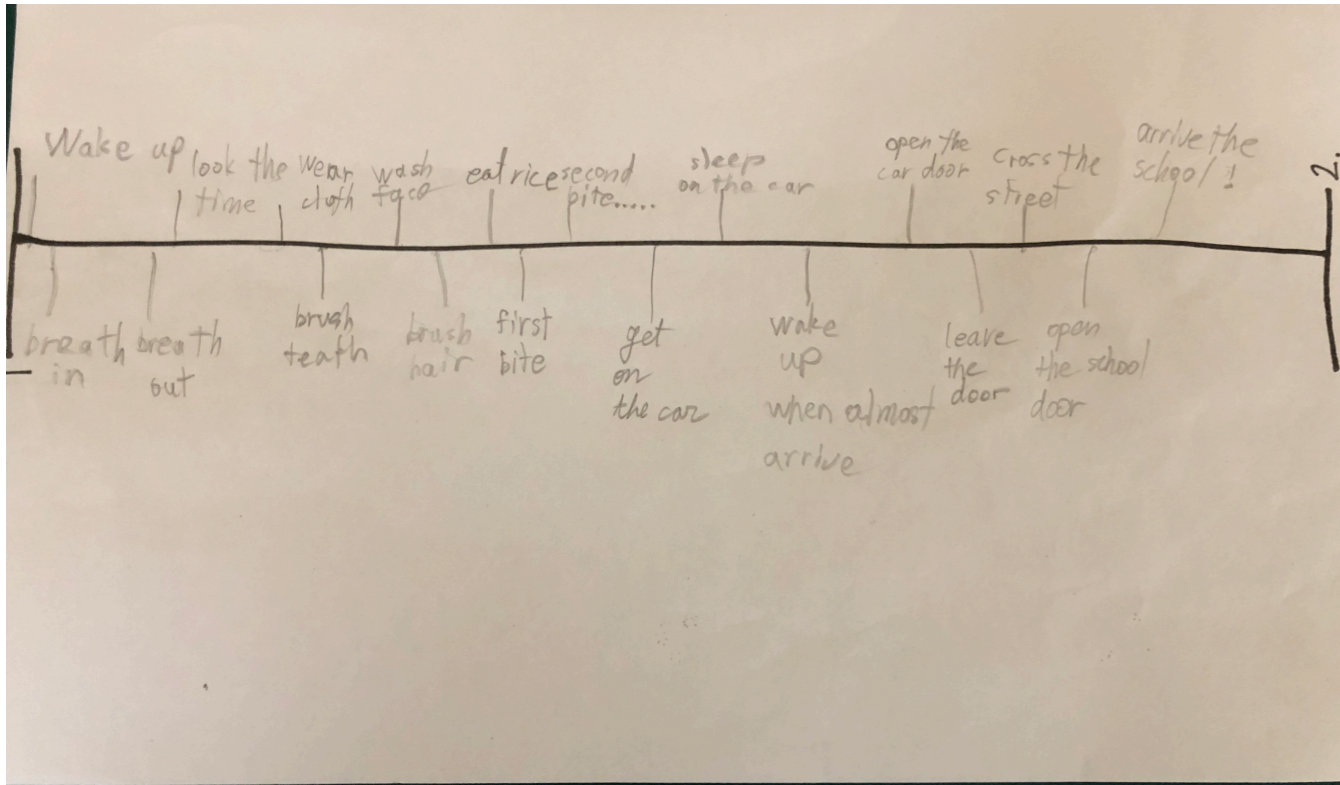
SHOT. LONG

You walked into the room



This presentation that you
have no idea about yet started.

Timeline



Purpose: to think through details of what happens in short amounts of time and how to visualize those moments and see how others do as well.

Application: I use this specifically for students before they develop storyboards for a film or animation. To pull visuals out of a script for shot diversity. I've also used it as an exit ticket to check understanding and see how students recap a lesson.

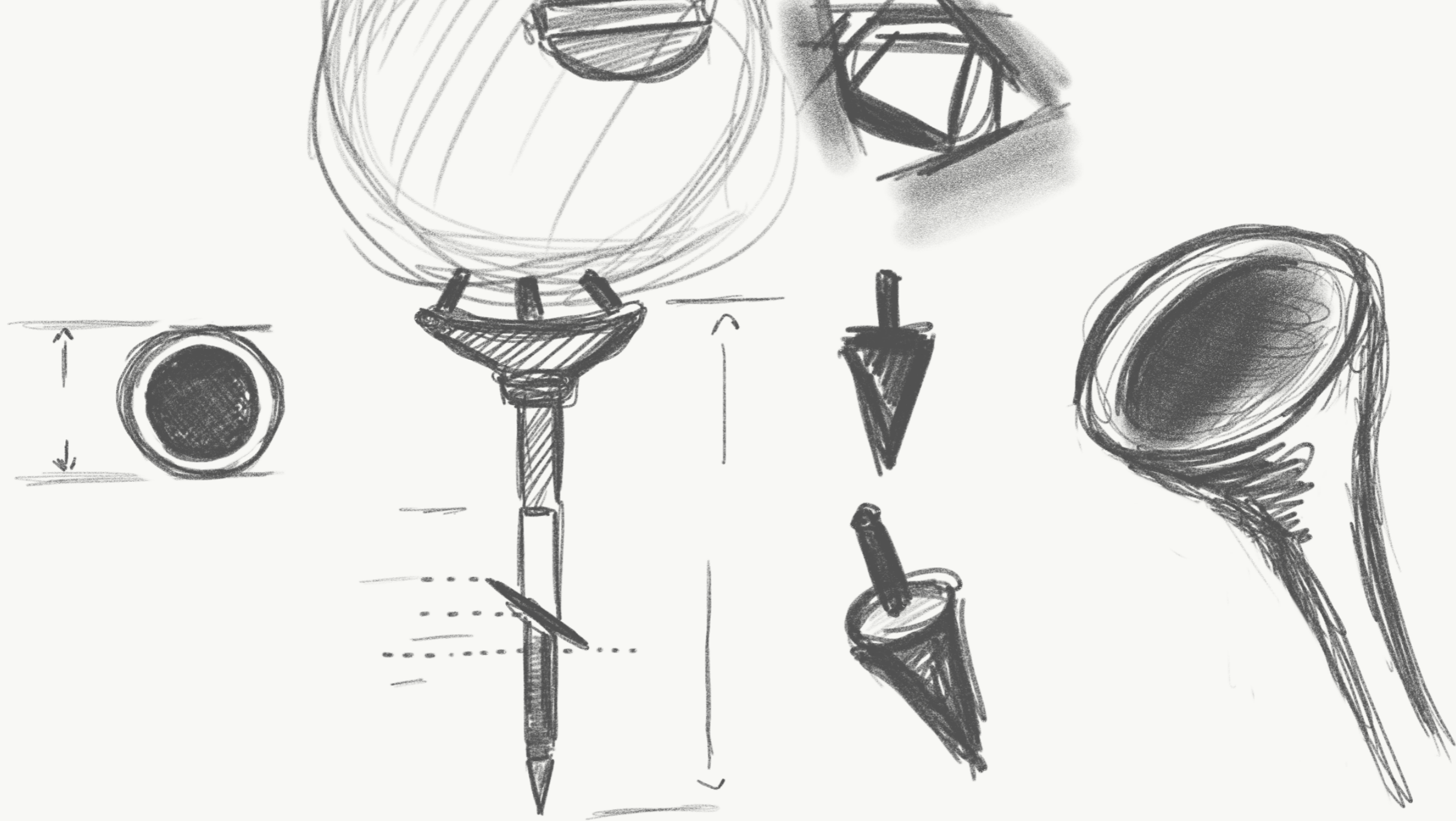
Launch: From my experience in film they need to have written a script/scene to work from first.



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INTERPRETABLE.

The abstract concept:

Design is...

Get in groups of 3 - no more than 5.

Mixed Grade level teacher

(Primary/Middle/High/Upper)

Raise your hand if you need a group.

1 sheet of scrap paper

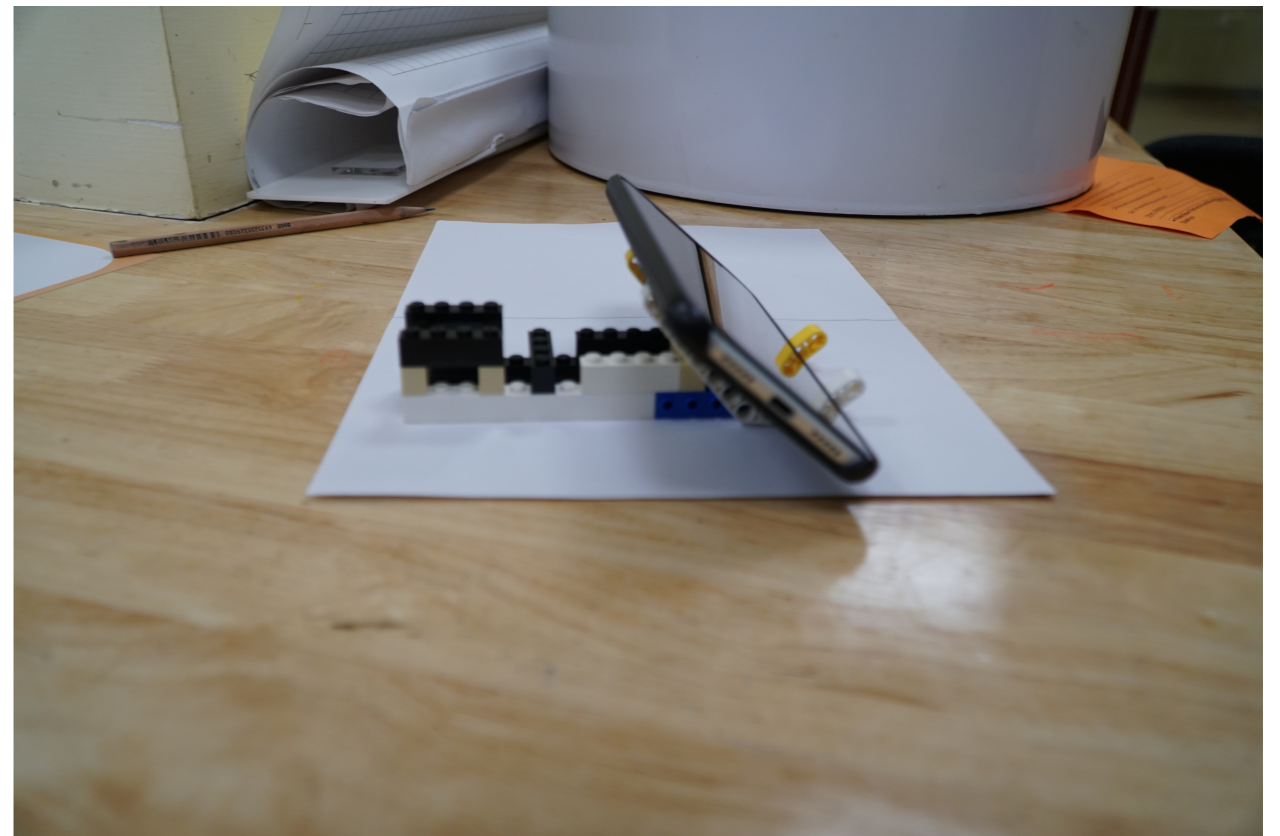
Draw a line down the middle of the page.

Create your design with the limitation that it must fit on half the page

With the same group
leave your design and
move to another groups.

On the other half of their paper.

- explain the connection to “design is” -



Purpose: Warms students up with abstract higher level thinking and is formative for their knowledge of whats needed for interpretation.

Application: I use this specifically for students before they start prototyping to develop an understanding of the importance of others being able to interpret their designs and how it works.

Launch: Think of an abstract concept that relates to the content/topic/criteria for the lesson.

Credit to: Havard Project Zero: Purpose, Application, Launch

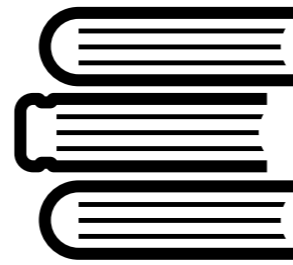


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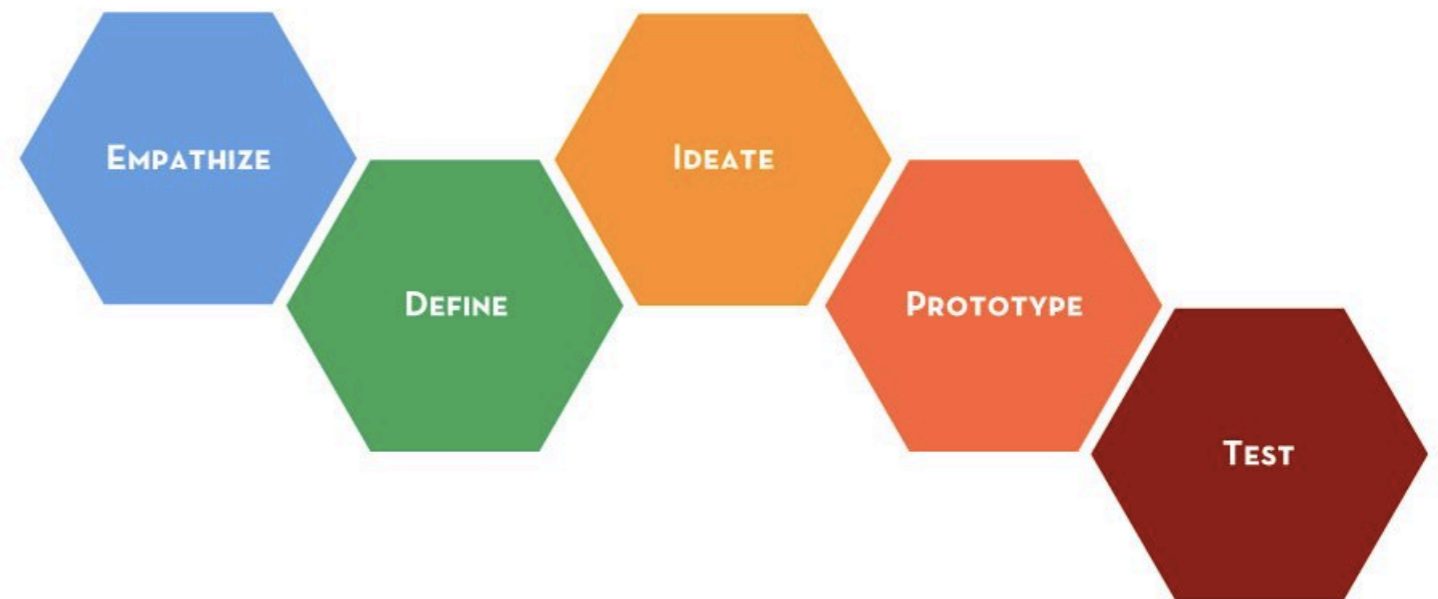
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Design.Lit



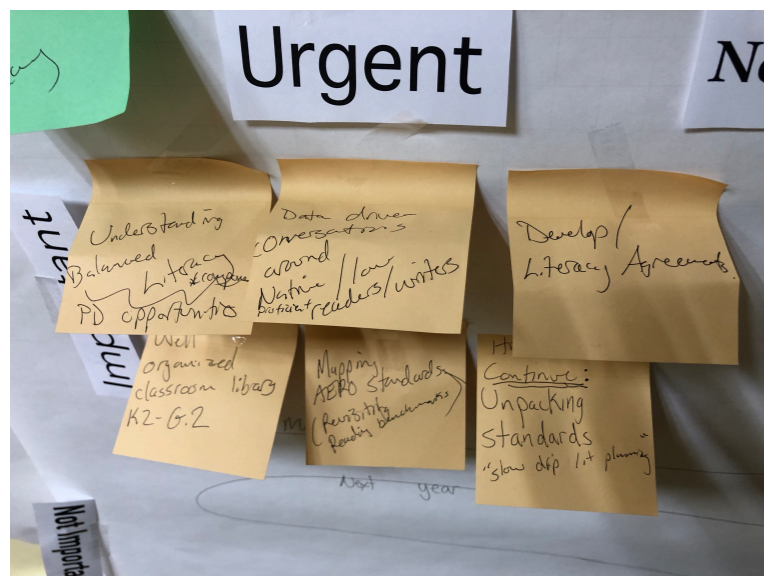
Embedding
design thinking
into everything
we do as a
school.

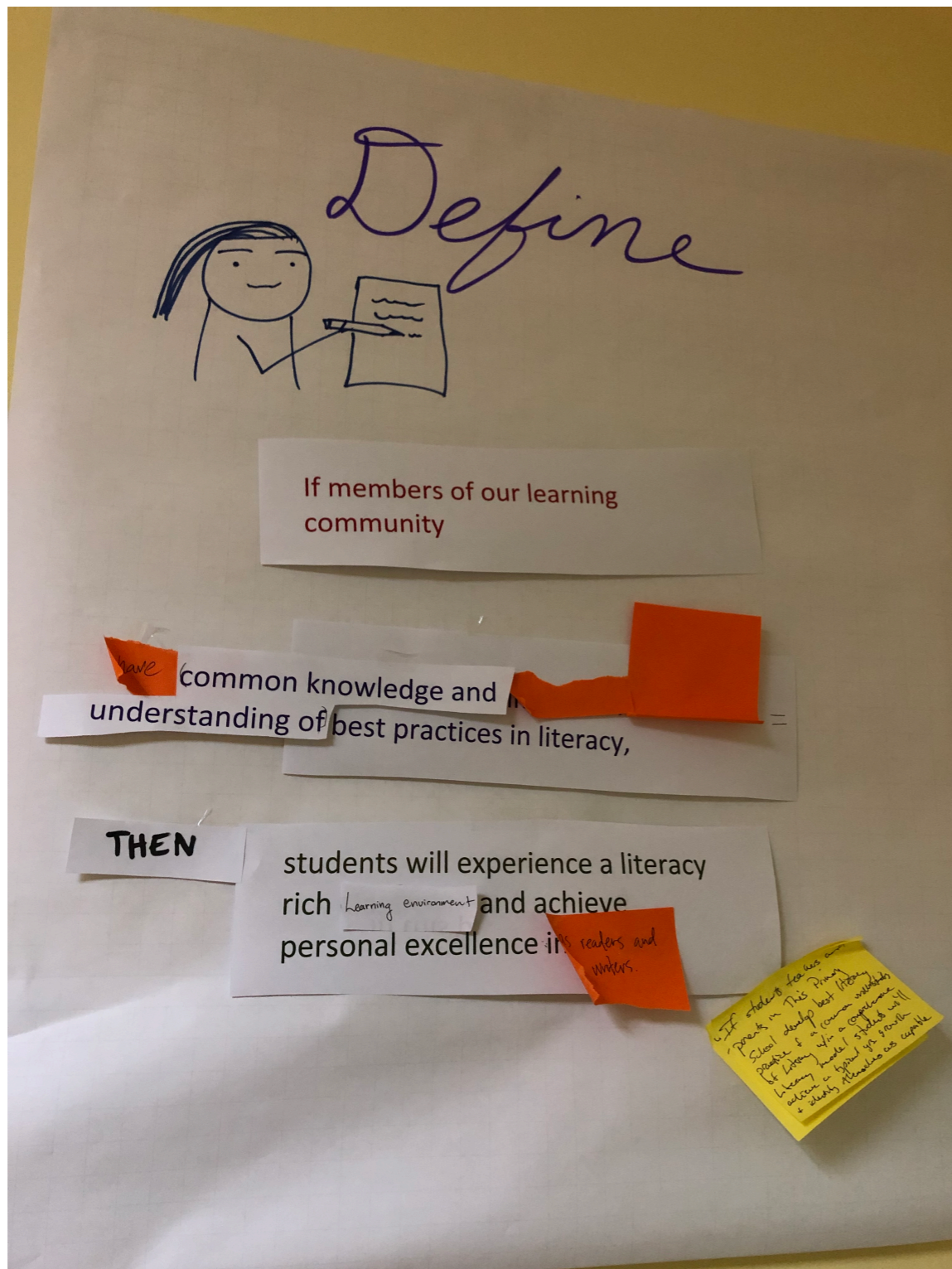


Design Cycle: Stanford d.school



How might we redesign our literacy program for grades K-2 ?





IF members of our learning community have common knowledge and understanding of best practices in literacy,

THEN students will experience a literacy rich learning environment and achieve personal excellence as readers and writers.

Knowing what you know about
your situation (Empathy)....

Craft an IF... THEN statement

Share with a person/group

Share with a person/group

Share with a person/group

Literacy Example

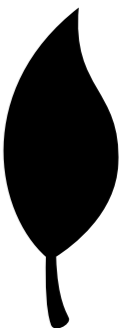
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Think Reverse

Start

Write simple words or short sentences for a story ideas you might want to tell. If you have trouble think about what you know already.

Choose a few of the words and sentences from Start and Reverse squares and write them here.

Reverse

Look at what you wrote in the square above. For every word/sentence think of what the Opposite might be.

**Partner Reverse:
You Evaluate**

Purpose: Create ideas / think different / collaborate

Application: Quick stream of conscious writing

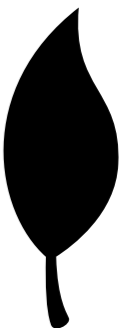
Launch: Great warm up activity. Let them choose language, digital/
analog.

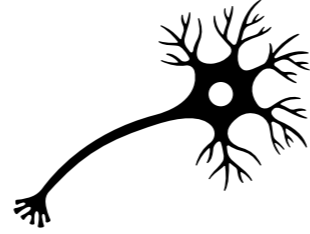
https://www.mindtools.com/pages/article/newCT_96.htm



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Connect:

Did you connect something you already do with one of the presentations? Share...

Extend:

Could you extend an idea? Change it, develop it further? Share...

Challenge:

Was there something that challenged you? Stretched your thinking or was there something that you want to challenge with an alternative opinion/angle? Share...

References

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- Hilbert, T. S., Renkl, A., Kessler, S., & Reiss, K. (2008). Learning to prove in geometry: Learning from heuristic examples and how it can be supported. *Learning and Instruction*, 18(1), 54–65. <https://doi.org/10.1016/J.LEARNINSTRUC.2006.10.008>

Resources

Timer: Classroom Screen

PAL: Harvard Project Zero

ATLAS: Learning from Student Work Protocol, www.schoolreforminitiative.org.

Design Cycle: Stanford d.School

Twitter:

@MYPDesigntech

@MrZachG

Websites:

www.notjustmotion.com

www.educationrickshaw.com

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