
Rethinking Our Thinking Routine:

Utilising Makerspace and the Design Thinking
Process to Foster Creativity in Language Arts

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STFA Seaward Woo College

What is Makerspace?

explore ideas

use tools and materials

develop creative projects

a mindset, more than a physical space

Why Makerspace is right for our school:

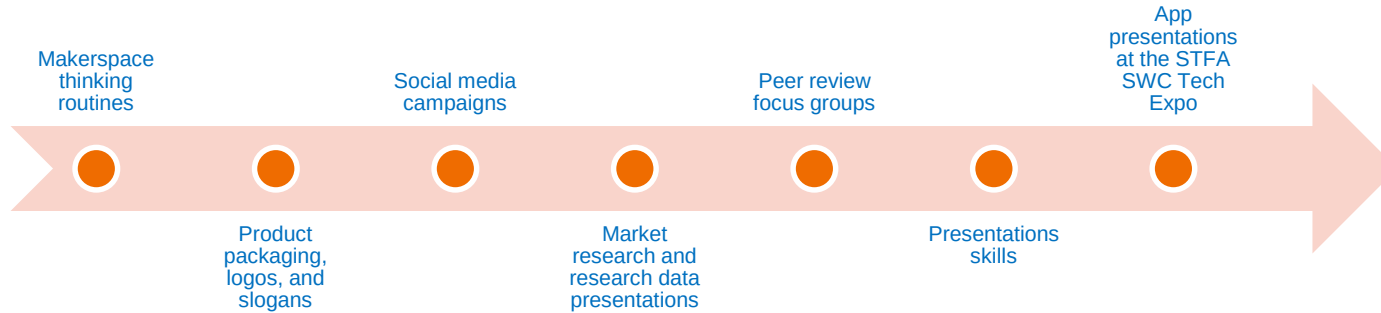
- to teach students skills they can use cross-curricularly
- to prepare students for a shift in skills sought for careers and post-secondary education
- to facilitate multiple learning styles and intelligences
- to inspire creativity, open-ended exploration, and engaging play in the LA classroom
- to prepare for the end-of-year STFA Seaward Woo College Tech Expo

Getting started:

- outlining our goals
 - the learning objectives
 - consulting experts
-
- STFA SWC teachers
 - Richard Cowler and Stephen Cooley, NET Section, EDB
 - Albert Tsang and Gwen Chan, HK Poly U
 - Anita Ma, LST Yu Kan Hing Secondary School

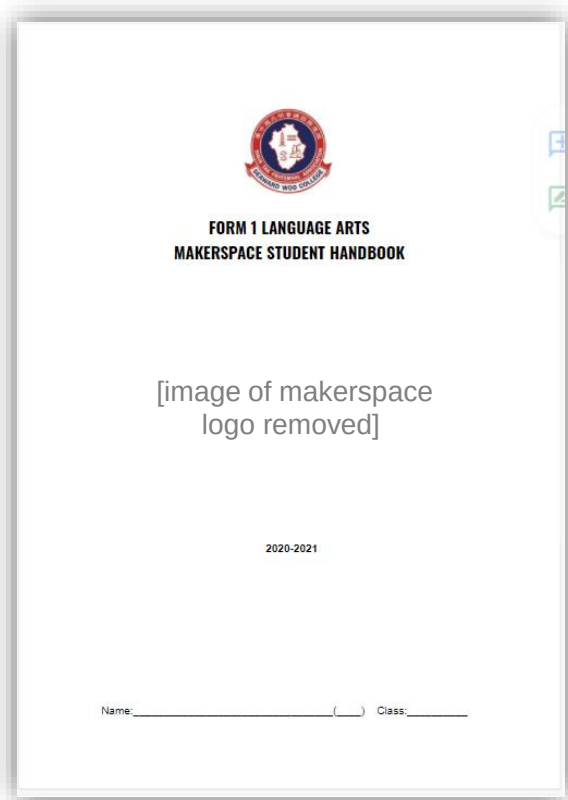


STFA SWC MAKERSPACE MOUNTAIN



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Makerspace Handbook



The 4 Thinking Routines of Makerspace

Parts, Purposes, Complexities

Parts, People, Interactions

Think, Feel, Care

What if...

Logos, Slogans, and Product Packaging

Our start-up companies:



Kelly's
Kindergarten



Sam's
Sportswear



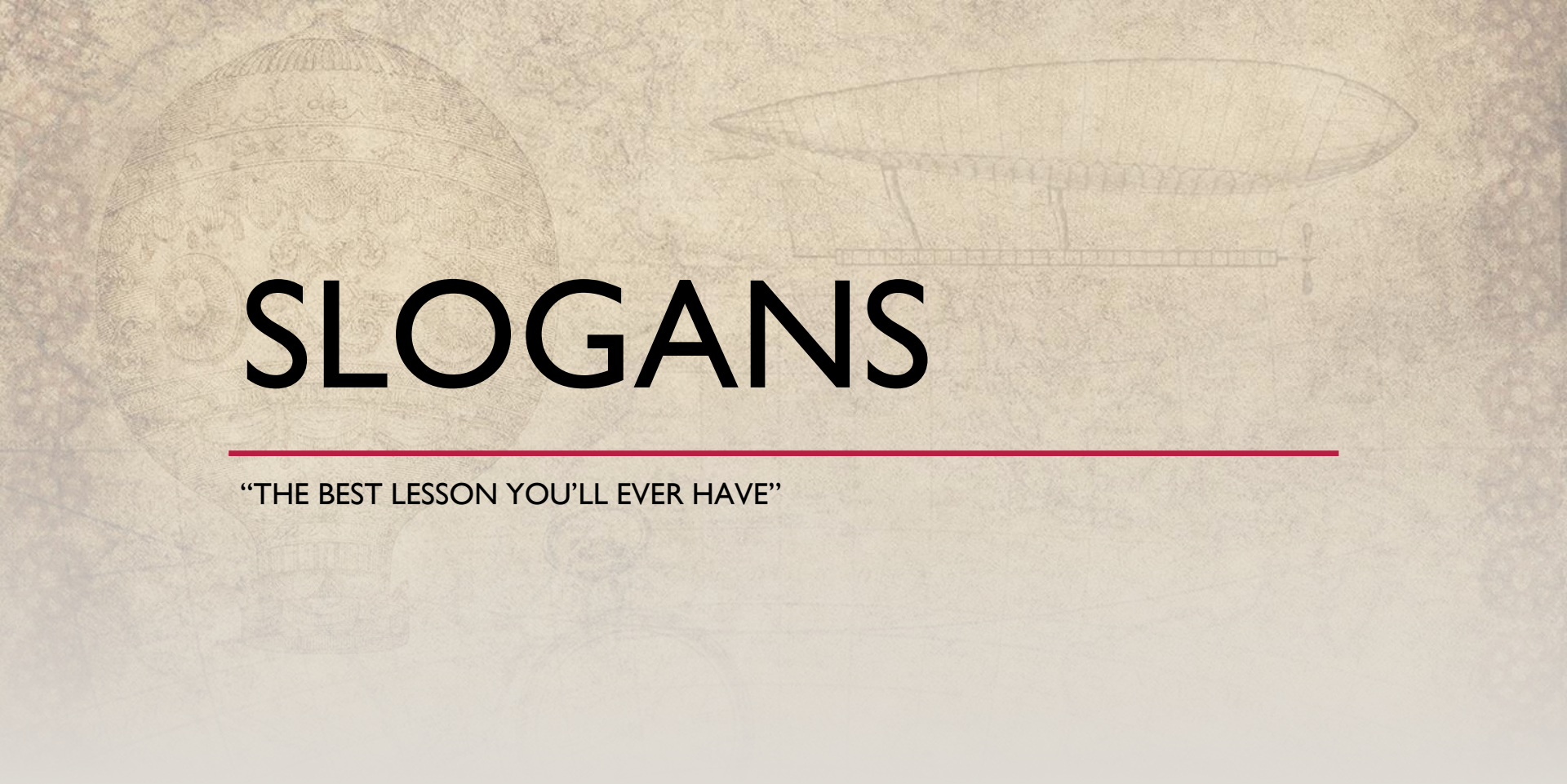
YoYo's
Ice Cream



Harry's
Health Food

A Sample Lesson: LOGOS

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The background of the slide features faint, sepia-toned sketches of a hot air balloon on the left and a blimp on the right. The hot air balloon has a detailed basket and a large, patterned envelope. The blimp is elongated with a series of vertical ribs and a small tail section. The entire background has a textured, parchment-like appearance.

SLOGANS

“THE BEST LESSON YOU’LL EVER HAVE”

The bottom of the slide shows a horizontal section of a wooden floor, composed of many parallel wooden planks with a natural grain and some knots, suggesting a rustic or classroom setting.

Parts	Purposes	Complexities
Words <u>Think different</u> adjective noun verb imperative (base verb)* short phrase * complete meaningful phrase*	Why did they choose these words? They tell us what to do. They tell us to think in a different way. They make me feel <u>interested in being smart or different</u> . Do not follow rules of grammar (adj, not adv) Think is like what a computer does	How would the slogan be different if one part was removed or changed? With no <u>full stop</u> it would not be as <u>strong</u> . With <u>colours</u> it would be <u>less simple</u> . How do the parts work together? The full stop and the imperative work together to tell you what to do.
Punctuation Capitals (A B C) lower case (a b c) exclamation marks (!) Apostrophe (') full stop(.)	Why did they use punctuation/this punctuation? 'End of conversation'	
Design Elements colours* black & white font (traditional*, modern, all	Why did they use these design elements? Simple, style like Steve Job's Apple design	

[image of 'Think different' slogan removed]

Term 2 Student work

Kelly's English Fun

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Harry's Healthy Helper

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Brian's Dog Walking Diary

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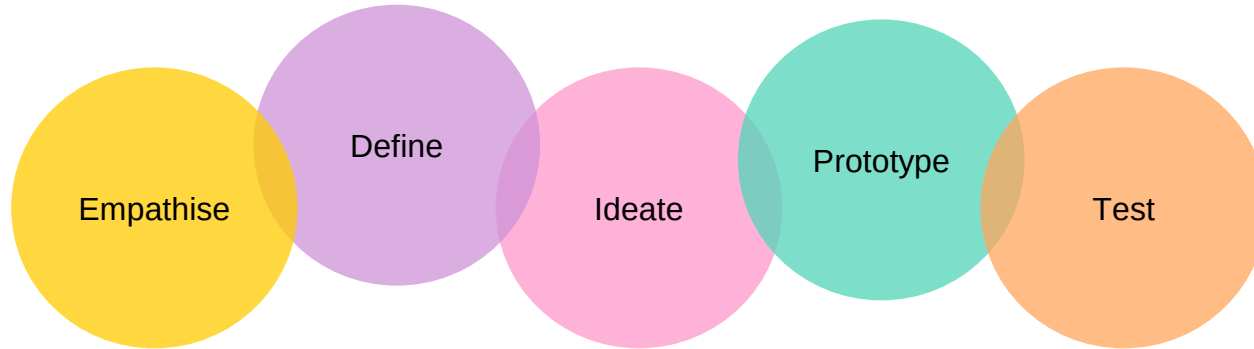
YoYo's Ice Cre-Gram

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Saaaaalad! Aaaaapp

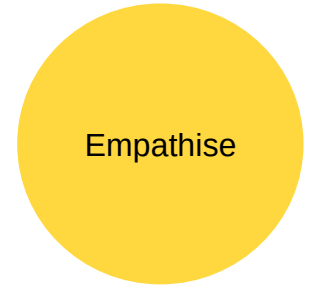
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The Design Thinking Process



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Step 1: Empathise



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Who are our customers?

What challenges do they face?

What do they want or need?

Kelly's Kindergarten App Ideas

FaceTime App

English playing app

dictionary

Daily routine app

English Learn App

Add memo

Reading News

Reading App

Calendar app

Cooking class app

minecraft(education version)can learn science

English vocabulary learning app

phonics packet

memes

watch english vides

English newspapers

music learn

check grades app

Reminder App

phy te

English activities app

zoom

Finger painting art app

Teacher's homework notes

Do some english exercise

English diary app

video game

English song

note board

note APP

Listening app

Learn about art

story book

homework planner

quiz app

GAME App

Mathematics app

Teach how to use computer app

Tutor videos

English news HOMEWORK

Survey Questions

Which apps do you use most?

Why you like this app

Do you like the apps?

Are they fun?

Are they practical?

What do you need the most?

It app can help you to learn English ?

what did your child like most to do

What do you usually search for?

It can help you know how to cook some new things?

Do you like read story book ?

Can it help u?

What app is you need and helpful?

Will u share this app to ur family and friends?

What app did it help you

Does video games helps you?

Would you recommend this app to friends?

When would you use this app

What opinion u will give?

What game do you like to play

u will play the English game with your friends?

what time you will use the app?

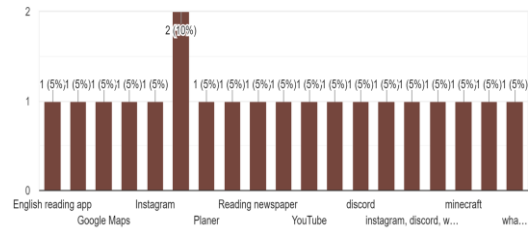
This app can help u what?

which kind of app u think is helpful

What app is you will like and it can learn english?

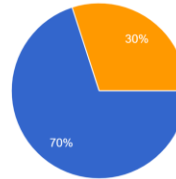
Which apps do you use the most?

20 responses



Do you like to play video games?

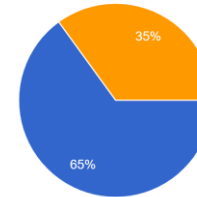
20 responses



Do you like to message classmates and teachers?

20 responses

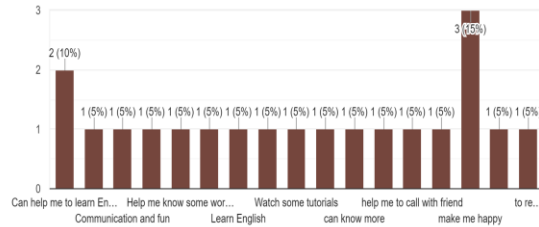
● Yes
● No
● Sometimes



● Yes
● No
● Maybe

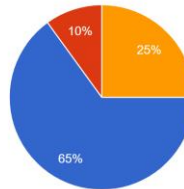
How do apps help you?

20 responses



Do games help you learn?

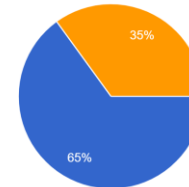
20 responses



● Yes
● No
● Maybe

Do you share apps with family and friends?

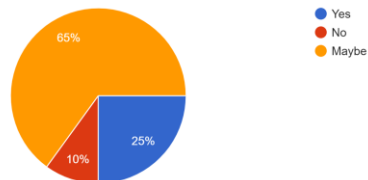
20 responses



● Yes
● No
● Sometimes

Would you use apps to exercise?

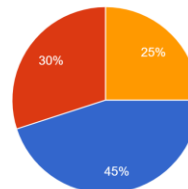
20 responses



● Yes
● No
● Maybe

Do you like to read English stories and newspapers?

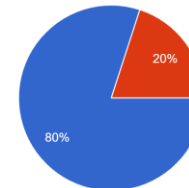
20 responses



● Yes
● No
● Maybe

Do you use your phone as a planner?

20 responses



● Yes
● No

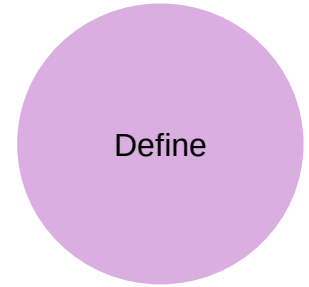
Step 2: Define

finding -> insight

most interesting finding

problem statement

“How might we...” question



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Step 1: Finding and Insight

Finding	Insight (reason) Why do you _____?
1. The apps our customers use most are reading and English apps.	Because they want to improve their English.
2. All of our customers like to play games.	Because games make them feel relaxed.
3. Most of our customers say games help them learn.	Because games are fun and interesting.

Step 2

What is the most important/interesting finding from the survey?

Our customers would like an app that helps them study and learn English in a fun way.

Problem Statement:

User (Who?)	Our students
Need (Do what?)	Learn English through games that they can share with friends
Insight (Why?)	Because studying can sometimes be boring

Example:

(____Who?) needs to (____do what?) that/because (____why?)?

Our customer needs an app to share ice cream pics and connect with friends.

Our Problem Statement:

“Our students need to learn English through games that they can play with friends.”

Step 3: HMW Question

Guiding questions: What is the need? How can we help our customers by fulfilling that need and also help our business?

Example: How might we help our business by developing an app that: shares ice cream pics and connects our customers to friends?

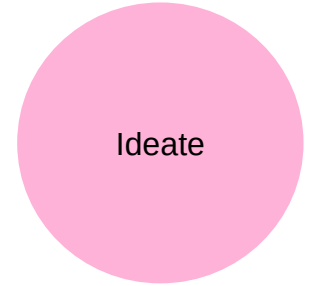
Our HMW Question:

“How might we help our business by making an English learning app with games and videos that students can play with friends and family?”

Step 3: Ideate

Divergent Thinking

Convergent Thinking



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English learning games app ideas

do the quiz can have free minecraft

make some checkpoint to earn some rewards

spelling races

english cartoons

Speak English games

Spelling English Game Apps

english riddles

play together with friends

English music videos

reading English app

ask teachers how to do the homework

do homework with teacher and friends

English newspapers

share scores with friends

do homework will have marks

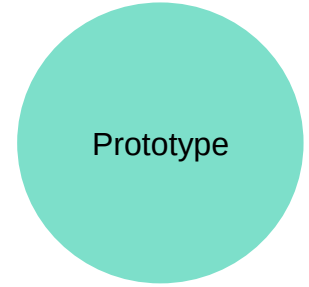
Teach them how to speak english

Have a quiz

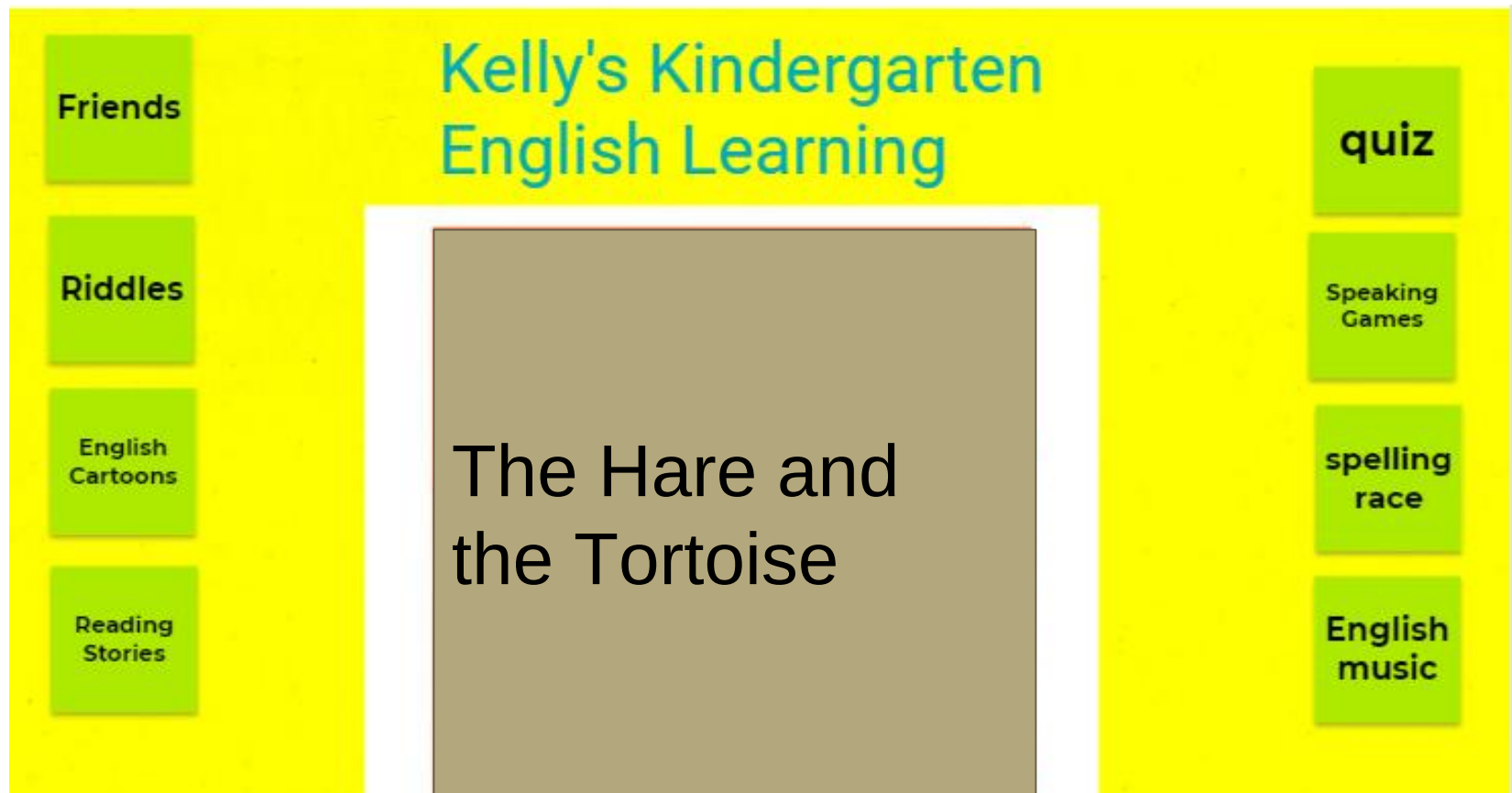
Have a meeting

Step 4: Prototype

making a blueprint



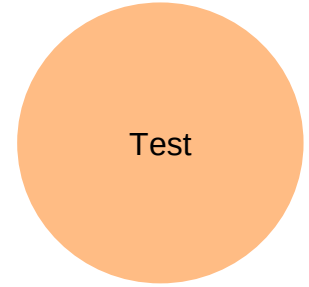
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a blueprint of an app designed by students in class 1D

Step 5: Test

make a working model
present to testers
collect feedback
tweak and improve
try again



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Feedback, Tweaks & Improvements, and Retests

APP EVALUATION: WHAT DO YOU THINK ABOUT THIS APP?

GROUP # / PAGE NAME: _____

Statements	1 = strongly disagree 	2 = slightly disagree	3 = slightly agree	4 = agree 
1. The app looks beautiful (page design, colours, fonts, icons, logo, etc)	1	2	3	4
2. The app is easy to use (efficient)	1	2	3	4
3. The app is useful to the target user (effective)	1	2	3	4
4. I like the app page	1	2	3	4

Let's use our thinking routine "Imagine if..."!

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How can we make this page more _____ :

[illegible]

Final Presentations

Students present and demonstrate their final product, including their use of the design thinking process along the way.

Presentations are graded based on adherence to the Design Thinking process, oral presentation skills, and functionality of their app models.