

Collaborative Research and Development (“Seed”) Project 2022/23

**NT0822**

**Developing Students’ Creativity, Collaboration and  
Problem Solving Skills through Creating the Makerspace in the  
Secondary English Language Classroom**

Native-speaking English Teacher Section, Education Bureau





1. What is a Maker and what is Makerspace?
2. What is our Makerspace project?
3. What does Makerspace look like in our project schools?



1. **What is a Maker and what is Makerspace?**
2. What is our Makerspace project?
3. What does Makerspace look like in our project schools?



A Maker is Someone  
who Engages in **the Act of Making**  
**with purpose.**

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## Makerspace in education

“The world doesn’t need more graduates with good grades. What the world needs is voracious, self-directed learners with the creative capacity to see the problems of the world as puzzles, and the tenacity to work on them, even in the face of adversity.”

Gever TULLEY, founder of Brightworks School, a San Francisco

# Makerspace is...

**Human-centred**

**Inquiry-based**

**Innovation  
-friendly**

**Trans-  
disciplinary**

**Creative**

**Empathetic  
insights**

**Radical ideas**

**Tangible  
outcomes**

**Courageous**

**Collaborative**

**Meaningful  
changes**

**Solution-  
oriented**



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# Project Focuses

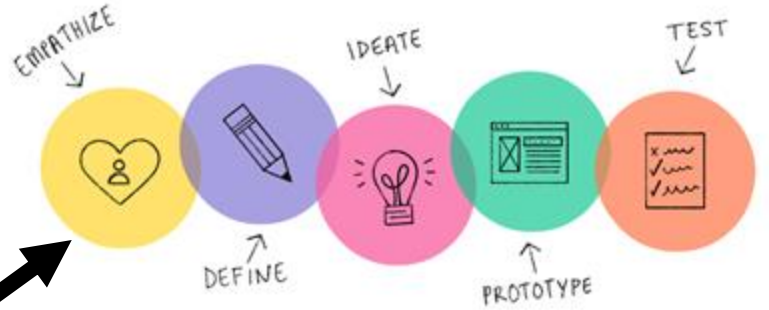
## Agency



- Choice
- Intention
- Action



## Design Thinking



## Collaboration



## 4 Thinking Routines



# Project Objectives

## Developing teachers' capacity to:

explore the integration of maker skills in English Language KLA;

cultivate the makerspace spirit / maker mindset;

create English language learning activities supporting design thinking;

identify effective suitable learning and teaching strategies that complement makerspace & empower students;

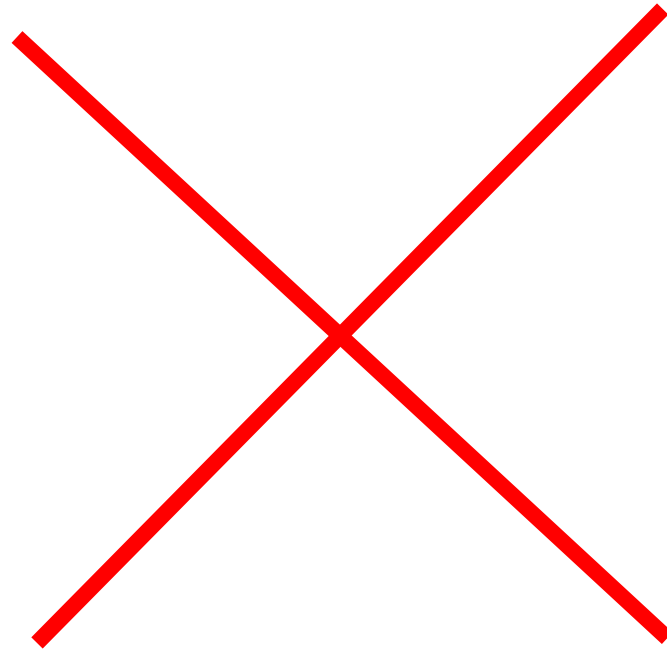
identify how to assess students in the makerspace context.



# Maker tools in the English language classroom

Language

4 Thinking Routines

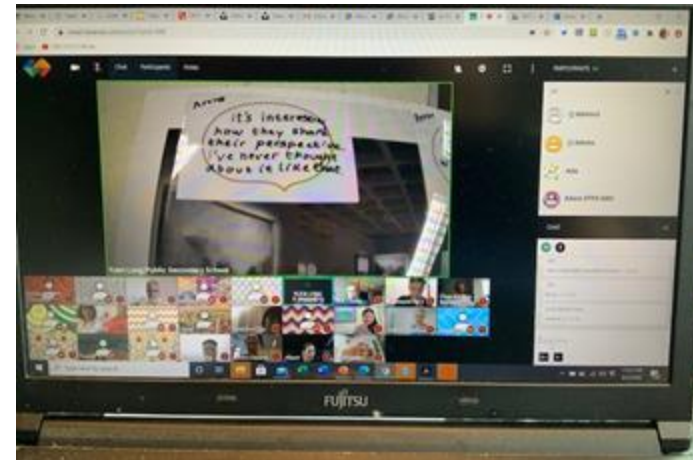


# Handbooks from Project Schools

Developed as a student and teacher reference and as a reminder of participation in the project



# Professional Development





# Makerspace in Action (1)

**STFA Seaward Woo College**



Adam Wittenberg

### Before:

- Language Arts & Oral Lesson
- Class reader, phonics & oral practice

### Setting up:

- Adam's interest in marketing materials
- Cross-curricular collaboration with I.T.

**Focus Question:** How can we design marketing materials to appeal to a target audience?

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## How do logos work and how do they influence us?

### Objectives:

- Thinking routine: Parts, Purposes & Complexities
- Multimodality
- Curiosity and creativity

# Other aspects



# Logos, Slogans, and Product Packaging

Our start-up companies:



Kelly's  
Kindergarten



Sam's  
Sportswear

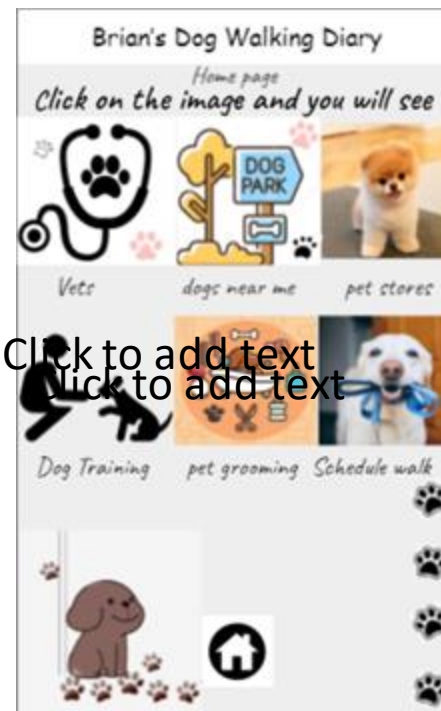
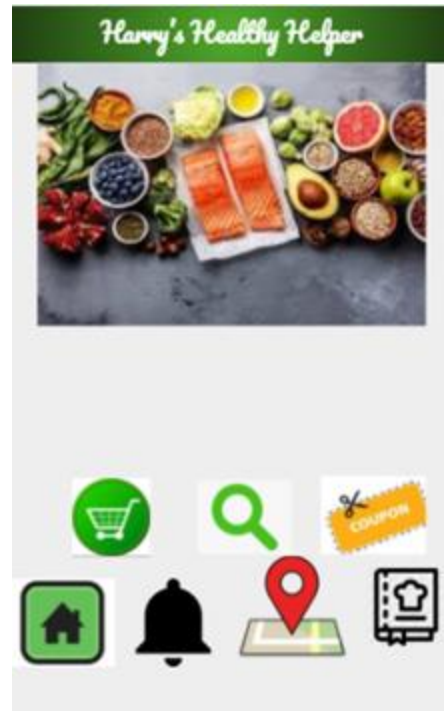


YoYo's  
Ice Cream



Harry's  
Healthy Food

# The App Design Using Google Slides

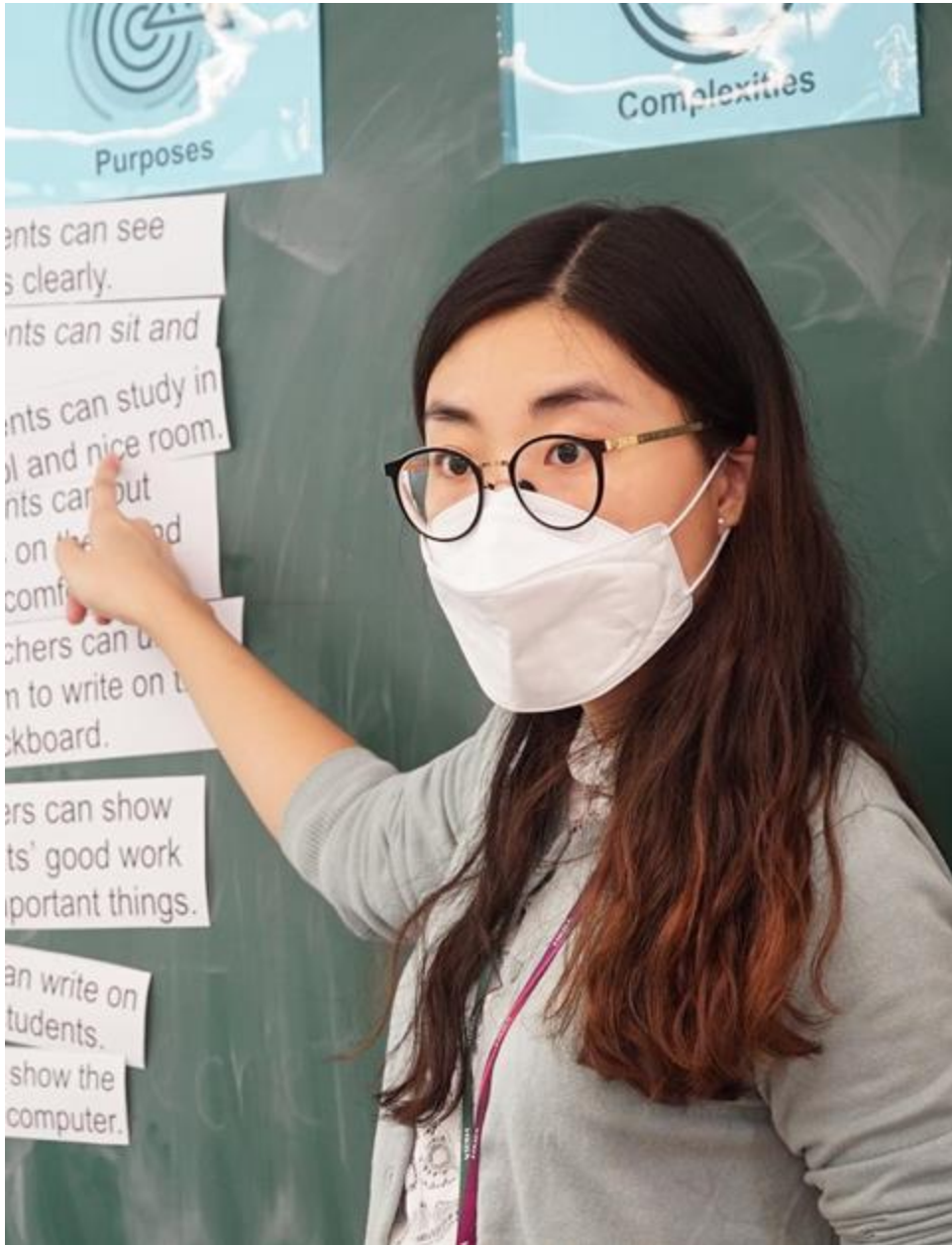


Click to add text  
Click to add text



- Text, image, colour and layout
- Collaborative

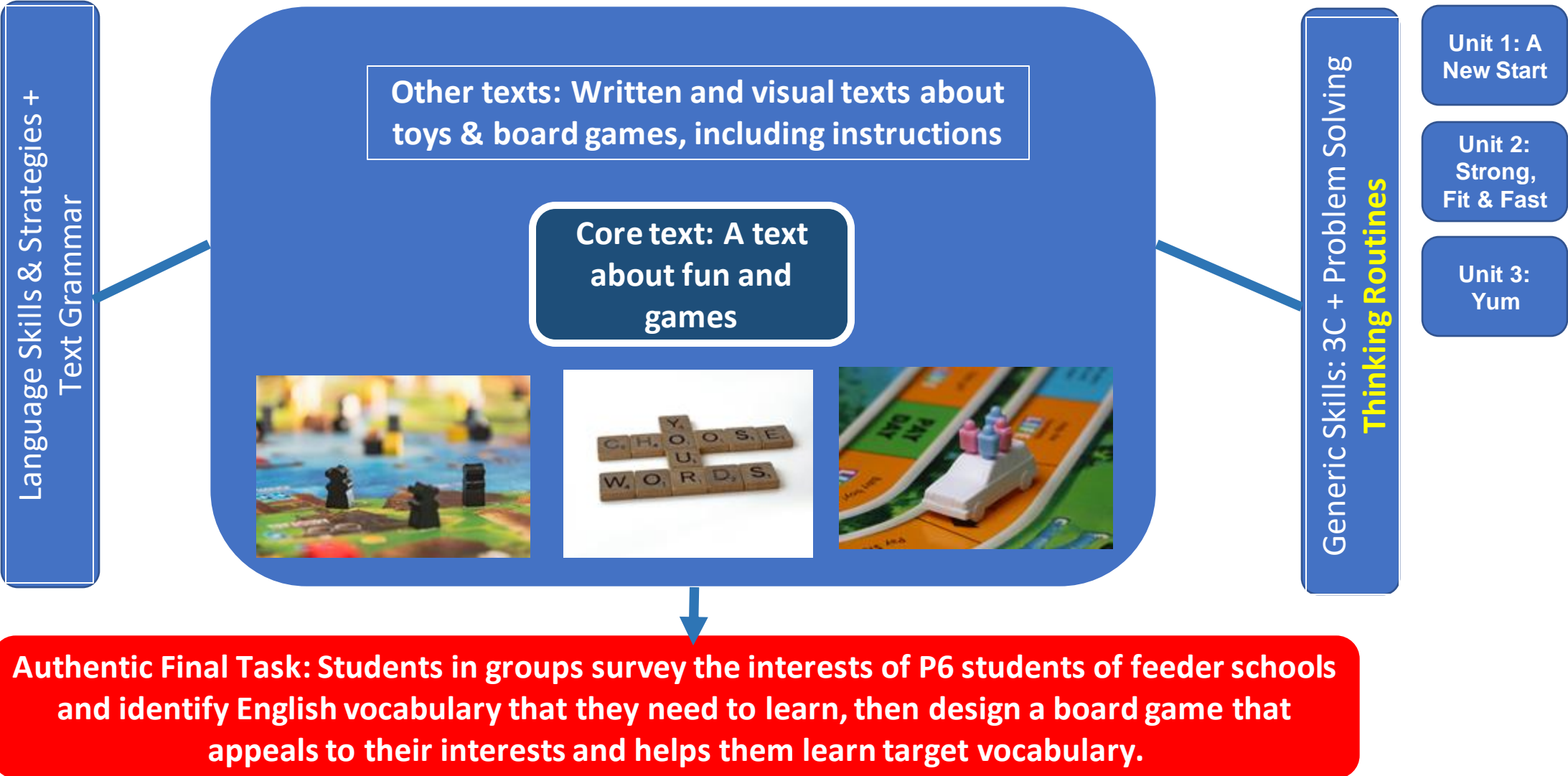
- Hyperlink function mimicked the way an app works



# Makerspace in Action (2)

## LST Yu Kan Hing Secondary School

# Project Unit: Games







# Progressing from S1 to S2 at LST Yu Kan Hing



# Progressing from S1 to S2 at LST Yu Kan Hing

## Examples on p.28, JS2A

Based on the information in [Text 2](#), complete the poster below by writing ONE word to fill in each blank.

### Waste in my neighbourhood by Kar Lee, 2C



I found a rubbish bin near a fast food shop filled with lots of (1) plastic containers and aluminium cans.



I also found (2) e-waste, such as keyboards and monitors, behind a computer centre.



When I was walking home, I saw a pile of (3) scrap wood next to a construction site.



At my own estate, there were bags full of (4) solid waste of all kinds, including cans, paper and plastic.

A photo/  
picture

### A caption

- To explain and give details about the photo/ picture

# Progressing from S1 to S2 at LST Yu Kan Hing

## Team 1



I found some  
Cardboard  
Close to the  
snack bar.



I found some  
Unusable table  
tennis table  
Close to the  
recycling area.



I found A place  
dedicated to  
recycling paper  
Close to the  
recycling area.



I found so many  
wrapping paper In  
the recycling bin.

# Progressing from S1 to S2 at LST Yu Kan Hing

IMAGINE IF...

FINDING OPPORTUNITY



Choose an object or system. Ask questions such as:

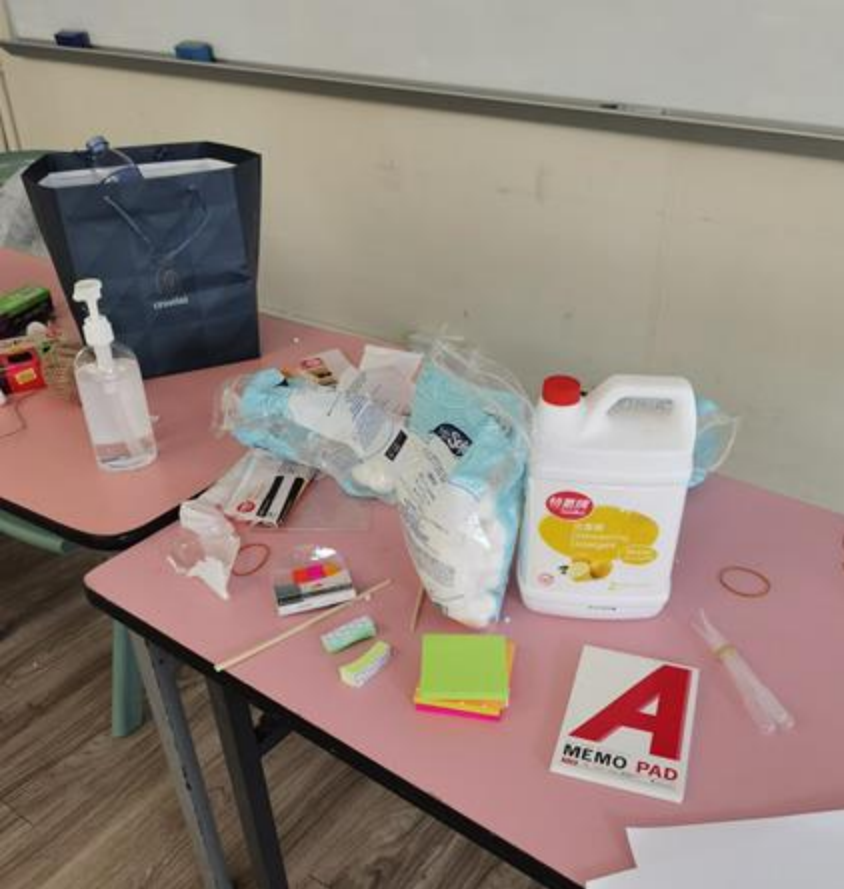
How could you make it **more effective?** (*work better*)

How could you make it **more efficient?** (*easier to use;  
faster to use*)

How could you make it **more ethical?** (*better for the  
community; easier to share; safer; more fair*)

How could you make it **more beautiful?**

How could you make it \_\_\_\_\_?



# Makerspace in Action

## Marymount Secondary School







- clear direction
- environmental theme
- making elements infused
- thinking routines  
embedded into the design  
thinking process
- plentiful opportunities to  
use English

# References

Lee, D. (2018). *Design Thinking in the Classroom: Easy-to-use Teaching Tools to Foster Creativity, Encourage Innovation and Unleash Potential in Every Student*. Ulysses Press.

Harvard Graduate School of Education. (2016). *Project Zero's Thinking Routines Toolbox*.

<http://www.pz.harvard.edu/thinking-routines>