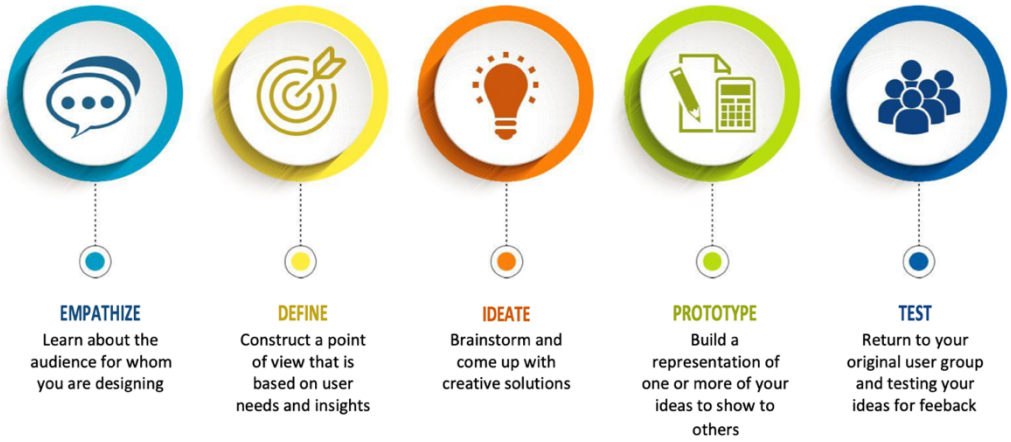
Design Thinking and Application of Learning



Design thinking is an approach towards **SOLVING** real world design problems by **UNDERSTANDING** users' needs and **DEVELOPING** key insights to solve those needs.

Step 1: Empathy (👀 See)

Empathy involves the critical process of **IDENTIFYING** a good design problem. It can be through **INTERVIEWING** and asking questions and **BRAINSTORMING** to come out with multiple issues and problem areas.

Step 2: Define (🙋🏻 Focus)

Using the information gathered in the Empathy phase, we can **ANALYSE** the observations and use them to define the core problems that has been identified. These definitions are called **PROBLEM STATEMENTS**.

Step 3: Ideate (Think)

Ideation is the creative process of **GENERATING**, **DEVELOPING**, and **COMMUNICATING** new ideas, where an idea can be visual, concrete, or abstract. Ideation comprises all stages of a thought cycle, from innovation, to development, to actualization.

Step 4: Prototyping (Make)

Prototyping process involves **DEVELOPMENT** of an early representation of the final **SOLUTION**.

Step 5: Testing (Try it out!)

Testing is the final stage of design thinking. This is where the prototype solution is tested in real life and in real time by the **ACTUAL USERS**.

🚦 Theme: Innovating with Kindness
(Caring for People and the Planet)

👀 See – Spot the problems

Think about the people and the surrounding affected by the issue.

✏️

_____

✏️

_____

✏️

_____

Questions to consider:

- *What are the problems you know of that cause an impact on the abovementioned theme?*
- *Why is this problem important in real life and should be addressed?*
- *What do people often do wrong, or not realise, about this issue?*

Example:

People often throw rubbish inconsiderately because they don't see the long-term impact on our planet, city and communities.

🙋🏻 Focus – Choose one problem to solve and describe it

Clearly state the problem you are trying to solve.

<u>The selected problem (one only) to focus is:</u>

✏️

_____

_____

_____

Questions to consider:

- *What is the main message your solution should convey?*
- *What should main stakeholder understand after seeing and interact with your prototype?*

Example:

"How could we design a prototype to promote waste sorting correctly and understand why recycling matters?"

Think – Come up with ideas!

Brainstorm different ways to address the problem, utilising the components you have.

✏️

_____

✏️

_____

✏️

_____

Questions to consider:

- *What type of prototype it will be? Informational? Interactive?*
- *What actions will users do?*

Example:

A system to detect actions and determine if the recycling is correct or incorrect. (e.g. throwing action is not acceptable, while placing and sorting actions are acceptable)

Draw or sketch out your ideas here!

🛠️ Make – Build your prototype!

- The prototype design is: _____

- Components will: _____

🔄 Test – Try it out!

Playtest and gather feedback to improve the game.

✅ It worked! / ❌ Needs fixing

✏️

_____

How can the prototype be improved?

✏️

_____

📣 Share – Tell the story

What are some ways your project had addressed on the problem?

Problem we addressed:

_____

How our solution helps:

_____

Why it matters for the future:

_____

✨ Reflection – What I've learnt!

One thing I learned is…

_____

_____

Presentation and Review

Although you may have a creative and innovative solution and your prototype has been tested and refined multiple times, you will still need to present your ideas to your audience. As such, your presentation techniques are especially important.

Techniques to take note of:

- **Start with a clear purpose**

  Clearly define the purpose of your prototype at the beginning of your presentation. Explain what problem it solves or what need it fulfils. This sets the context for your audience.

- **Tell a story**

  Structure your presentation as a story to make it more engaging. Start with the problem or opportunity, introduce the prototype as the solution, and take your audience through its features and benefits.

- **Highlight key features**

  Identify and emphasize the key features of your prototype. Explain how each feature addresses a specific aspect of the problem or contributes to the overall solution.

- **Demonstrate functionality**

  This could involve showcasing its different functions, interactions, or any unique aspects that set it apart. A live demonstration can leave a lasting impression.

- **Practice handling the prototype**

  Practice handling the physical prototype beforehand to ensure smooth transitions. Familiarity with the prototype will boost your confidence and make the presentation more polished.

- **Provide a call-to-action**

  Conclude your presentation with a clear call to action. This could involve inviting further discussion, seeking feedback, or proposing next steps in the development process.

Remember to be enthusiastic and passionate about your prototype, as your excitement can be contagious and help captivate your audience.