

SDG 14 Future of the Ocean

MM6: Problem to Pitch Marine Plastic Waste



MM6: Problem to Pitch Marine Plastic Waste

Implementation

Lesson 2: Empathy 1

Subjects: Design, Technology, Maths, Environment, Science, Sustainability

Lesson Title and Summary: Empathy 1

Stanford Design School's five chairs exercise encourages students to learn how to develop design principles for a user profile. This lesson is a practice lesson that enables learners to consider the 5 users' needs (this sets the design principles), develop ideas on paper and create 3D prototypes of their designs.

This activity encourages students to practice thinking about a user, iterate their designs, and practice using different materials. This is the foundation for doing a stakeholder mapping and user profile for their own project ideas. This lesson can be undertaken over a number of classes using the additional resources in the Media Box.

Vocabulary: Assumptions, (Biases, Judgement) Design Principles, Empathy, Identify, Users

In this lesson, the learner will:

- understand empathy in design
- develop critical thinking through the practical tasks of asking students to analyse their user's profile to find their needs
- build, test and iterate design ideas grounded in a user's needs
- practice group work and develop the ability to work through design challenges collaboratively

Materials

- Worksheet: User profiles
- Pens, pencils
- Paper
- Scissors
- Corrugated Cardboard
- Pipe Cleaners
- Modelling Clay
- Tape
- Match sticks or toothpicks



MM6: Problem to Pitch Marine Plastic Waste

L2: Empathy 1



Activity Instructions

ACTIVITY 1 - Developing design principles from user profiles - (15 mins)

- 1 Organise students into groups of 2 or 4.
2. Introduce the lesson and the importance of empathy in design.
3. Hand out the user profile worksheet, one per group.
4. Explain the task to the students and ask the groups to read through the user profiles from the user profile worksheet.
5. Students will highlight the users' needs and wants (design principles) for all the user profiles.
6. These will form the users' chairs based on the needs of the user.

Activity 2 – Developing paper designs – (15 mins)

1. Have students select a 2 users they wish to work on and identify two needs (design principles) they see in the description of their user.
2. Students will develop design ideas on paper for two of the users that integrates the users needs (design principles).

Empathy Questions Checklist - use the empathy map to expand on the users:

- Did you identify the design principles required for your user?
- Did you make any assumptions about your user?
- Did you discover any biases / judgments about your user that you might have?

Activity 3 – Develop a 3D prototype – (25 mins)

1. Students will select one of their 2 paper designs and build a 3D prototype using the materials provided.
2. Students will build two design principles (needs) into their prototype.
3. Students will add one more design principle - this is to try to reflect your own style as a designer, if your goal is to create something delightful/cool for your user.
4. Include further discussion – see media box.

REFLECTIVE EXERCISE: 3-2-1

- Three things they feel they have learnt from the tasks
- Two things they found most interesting and would like to explore more
- One – their opinion they have about the tasks

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

MM6: Problem to Pitch Marine Plastic Waste

L2: Empathy 1



EXTENSION / REDUCTION ACTIVITIES

Reduction: For a shorter class, select one of the videos as an introduction and a user randomly - make paper designs only for that user. Follow up with 3D designs in second class.

Extension: For a longer class, you can start with one of the videos to ensure learners understand the concept of empathy before developing their empathic design skills.

For an additional class, you can add additional users to the activity so learners can practice understanding users' needs and designing for them. Learners can also develop their understanding or empathic design by undertaking an empathy map with the users' profiles.

If students already have project ideas in mind, they could begin to develop their user profiles for their ideas based on the stakeholder mapping exercise from lesson 1 and develop their understanding of their users by using the Worksheet: Empathy Map – with activity 2.

MEDIA BOX: (materials, online video links, extra resources, case studies etc)

- The importance of Empathy <https://www.youtube.com/watch?v=UzPMMSKfKZQ>
- Empathy mapping <https://www.youtube.com/watch?v=QwF9a56WFWA>
- Empathy not Sympathy <https://www.youtube.com/watch?v=HznVuCVQd10>

Activity 3 discussion questions:

- What was it like to build your chairs using the design principles you identified?
- What was it like to create different iterations of your design?
- What did you change along the way? What did you learn from your prototypes?
- Did anyone get stuck at any point? What was that like? What did you do to get unstuck?
- Which material did you enjoy working with the most? Why?
- Which material did you like the least? Why?
- Which material best expresses the essence of the chair you drew?

Local Trip / Expertise / Additional Work and Assessments

Stakeholder Mapping worksheet supports students to focus on their local place, its issues and its audience. This can be linked into the issue of Marine Plastic Waste.

Learners can link into their local FLAG region to find out about local initiatives <https://bim.ie/fisheries/advisory-services/fisheries-local-action-groups-flags/>

Linked learning: Media Communication 1-4 micro-module to support the development of the 4Cs skills – Creativity, Communication, Critical Thinking and Collaboration.



Grandad is an old man who is achy and sometimes a bit grouchy. He has trouble getting around, so he walks with a cane. He also has difficulty getting into and out of his chair, though he sits in his chair most of the day.



Maggie is a 1 year old who loves to play and crawl around everywhere. Maggie likes to explore on her own and be independent while she sucks on her dummy. When it's time for her to sit still she gets whiny and squirmy.



Neil is an astronaut who travels to space. When he is in his space ship, he is in a weightless environment. This is cool most of the time, but it is a challenge when he needs to sit down and drink his Sprite. Neil also has a bulky space suit that often gets in the way.



Lisa is a marathon runner who runs every single day. She hates being stationary, and because she exercises so much she has really sore muscles. When she finally does sit down it's really important that her chair be very comfortable to help her relax and recover for her run the next day.



Ralph is at secondary school and spends 8 hours a day in class. Most of the time, Ralph has to sit in uncomfortable chairs, sitting up and facing the front of the room. When Ralph moves between classes, he carries a large backpack. When he gets to class he needs a place to put his stuff.