

SDG4 STEAM Tasters



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Lesson 3: Building Empathy

Subjects: Science, Technology, Engineering, Arts, Mathematics, Humanities, Design

Lesson Title and Summary: Building Empathy

Empathy in design is vital as it allows designers to understand and connect with the needs, emotions, and experiences of the end-users. By putting themselves in the users' shoes, designers can create more inclusive, intuitive, and user-centric products or experiences. Empathy fosters a deeper understanding of diverse perspectives, resulting in designs that not only function effectively but also resonate on a human level, ultimately enhancing user satisfaction and engagement.

Vocabulary: Design, Empathy, Needs, Perspective, User

In this lesson, the learner will:

- Read about a user and extract key information
- Begin to understand the importance of understanding a user's needs and limitations
- Design a product based on specific needs of a user
- Work as part of a team
- Be able to rationalise design choices
- Reflect on design and consider alternatives

Materials

- Worksheet: Stanford Design User Profiles
- Video: The Power of Empathy [2:53 mins]
- Poster paper and pens
- Making materials
 - plasticine
 - pop sticks
 - card
 - other recyclables (card, plastic, paper)

8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



17 PARTNERSHIPS FOR THE GOALS



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ACTIVITY INSTRUCTIONS

his activity requires 80 minutes. Please divide into two lessons if your timetable requires it.

Activity 1: The Power of Empathy (10 mins)

1. Using Video: The Power of Empathy (see Media Box) ask learners to make notes using the following prompts. Discuss as a whole class.
 - Empathy is different to Sympathy because...
 - Empathy is...
 - Empathy is important because...
2. Ask learners to share their ideas on why empathy might be important when we are designing for others.

Activity 2: Analysing user profiles (10 mins)

1. Ask learners to form teams of 2-3 people.
2. Using Worksheet: Stanford Design User Profiles and poster paper, make notes on the main ideas of each profile using the following prompts.
 - What does the user do?
 - What does the user like?
 - What limitations does the user have?
3. Review each user as a whole class.

Activity 3: Developing a paper design (15 mins)

1. Each team needs to select one user from the worksheet to design a chair for.
2. Using notes, identify two needs (design principles) they see in the description of their user
3. Work on a paper design of a chair for the user- integrating the needs identified. Also consider what they do in their daily lives and what their likes are.
4. Monitor and support where necessary. Before moving onto building stage, each team's paper design needs to clearly demonstrate the features of their chair and the team is able to link that to the needs/likes/limitations of the user they have selected.

Activity 4: Developing a 3D prototype (20 mins)

1. Each team is going to use their paper design to build a 3D prototype of a chair using the making materials provided. The prototype needs to show the features of the chair and how it has included the user's needs and likes into the design.

Activity 5: Presenting prototypes (15 mins)

1. Each team has 1-2 minutes to present their prototype to the class and explain how it connects to the needs of their selected user. Allow one minute for other teams to give one piece of positive feedback and one idea for improvement.

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REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- 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

EXTENSION / REDUCTION ACTIVITIES:

Reduction: For a shorter lesson, complete Activity 1-3 and move Activity 4-5 into the next lesson.

Extension: For a longer lesson, extend timing on Activity 3-5. Activity 5 can be extended by asking teams to walk around and look at each design and add positive and constructive feedback to a piece of paper next to each design.

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

Video: The Power of Empathy [2:53 mins] https://youtu.be/747u3_Ms2tU?si=cDRXsZfj4LpSs8QA

Video: Brené Brown on Empathy vs Sympathy [2:53 mins]
<https://youtu.be/KZBTViDPIQ?si=6bABCDHMFrmvpjzs>

Video: Design Thinking Step 1 Emphasize https://youtu.be/LSXop-NTfR0?si=KmMHd3_kKQBc7Ppe

Video: Students practice prototyping at the Stanford d.School https://youtu.be/BGwakNDh8E4?si=_wyqssDio-H4kKMa

Website: The 5 Chair Challenge <https://dschool.stanford.edu/resources/the-5-chair-challenge>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Additional reflection:

- What was it like to build your chairs using the design principles you identified?
- Did you change anything along the way?
- Did anyone get stuck at any point? What happened and how did you get unstuck?
- Which material did you like best/least to work with? Why?

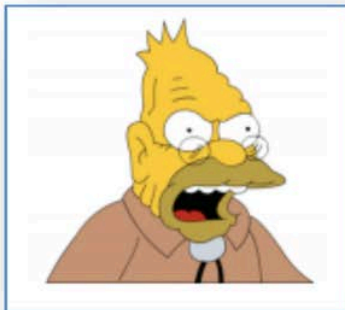


The 5 chairs Design Thinking exercise

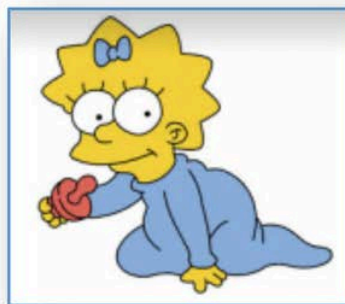
This exercise engages students with 5 users each with different needs. This forms the basis of the lesson.

Use these users to develop the design principles for the users chairs.

d. 5 Chairs users profiles – Stanford d.School



Grandpa 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.



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.



What do you notice about their needs?

Underline the important points of each of the user - the clues are in the descriptions.



L3: STANFORD DESIGN USER PROFILES

The 5 chairs Design Thinking exercise



Continue the exercise with the final two users.

Underline the important points of each of the user - the clues are in the descriptions.



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.

Empathy in Design

Empathy is the ability to put your self in someone else's shoes. It is important to use empathy within design otherwise our designs will not be useful. In a world with limited resources sustainable design must make sure that designs are not wasting valuable resources because they don't work and there was no engagement with the user.