

Redesigning from a more-than-human- centred perspective

Summary

In this teaching activity, students will make a tangible ecosystem web (from popsicle sticks and yarn). This contextual ecosystem web supports understanding the specific ecosystem involved around the design at the start of a project and promotes consideration of the more-than-human world. In a later stage, it allows students to assess how their design impacts this ecosystem and helps them to define concrete design requirements to improve more-than-human inclusivity. They will document positive and negative impacts elicited by design on more-than-human actors, noting the design elements causing these impacts and their intensity. This will spark a collaborative brainstorm on redesign suggestions to mitigate negative impacts.

Learning outcomes

After this activity you should be able to:

- Identify the impact of a design in an ecosystem.
- Construct a dynamic web of the ecosystem affected by the design, identifying relationships and opportunities for redesign from a more-than-human perspective.
- Reflect on and discuss the insights gained from the activity and propose ways to apply this method in future projects.
- Reflect on their role and responsibilities as designers within the more-than-human world.

Outline/Content

- Introduction and defining actors
- Embodied web and redesigning
- Reflection

Key readings

De Roo, B., & Ganzevles, G. A. (2023). The umwelt-sketch as more-than-human design methodology. Designing Interactive Systems Conference.

<https://doi.org/10.1145/3563703.3596628>

More-than-human- centred design

expands the scope beyond human users to consider the interactions and well-being of all entities involved, including animals, plants, ecosystems, and technological systems

1

Go to an ecosystem that represents the product's lifecycle phase (production/use/after use)

2

Look individually for actors in the ecosystem.

Make sure you represent both abiotic (e.g., sun) and biotic factors. The latter should consist of different trophic structure layers: primary producers (plants), consumers (e.g., animals, bacteria), detritivores (e.g., worms), and decomposers (fungi)

3

Create a list of all actors in the ecosystem that are impacted during all lifecycle phases.

5

Consider making some actors ambassadors if there are too many

4

Divide the actors over the popsicle sticks

Part 1 Today

Exploring the context

Defining **actors** on-site



6

**Prepare materials
(write actor names on
masking tape and put on the
popsicle sticks)**

7

**Make relations
between actors with
yarn strings and
discuss relations**
Think about habitat,
nutrients, fertilization and
food etc.

8

**Consider case
impact during the
entire product
lifespan through
intuitive impact
expression**

10

**Attach the
worksheets on the
right location in the
web**

9

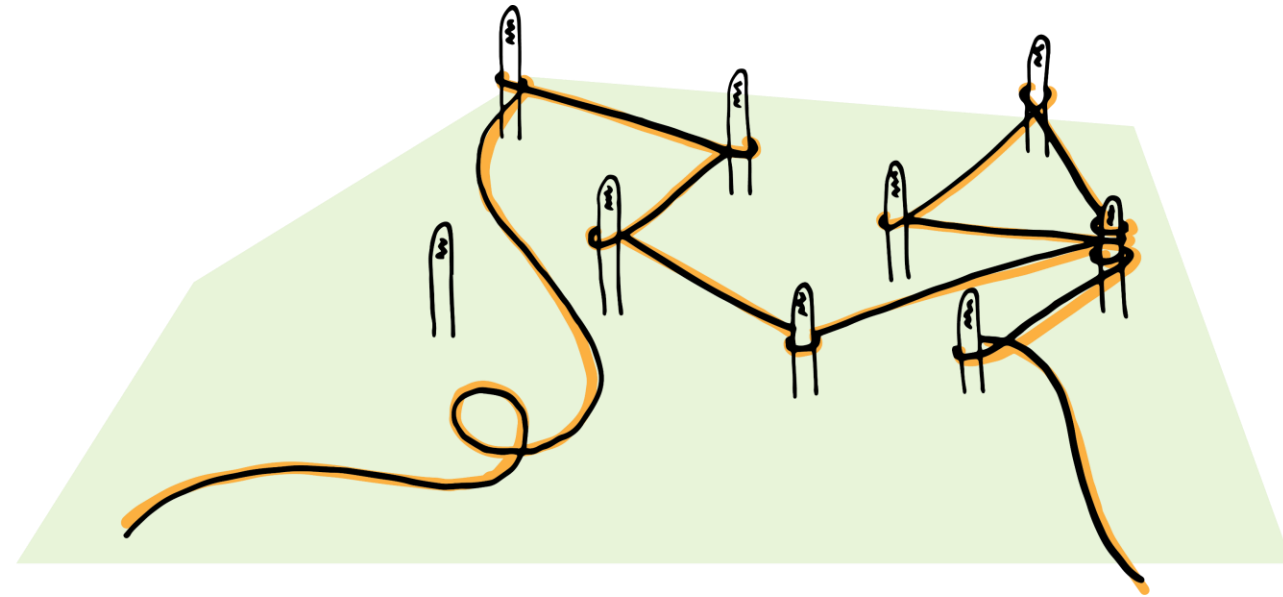
**Define impact
through worksheets**

11

**Part 2
Today**

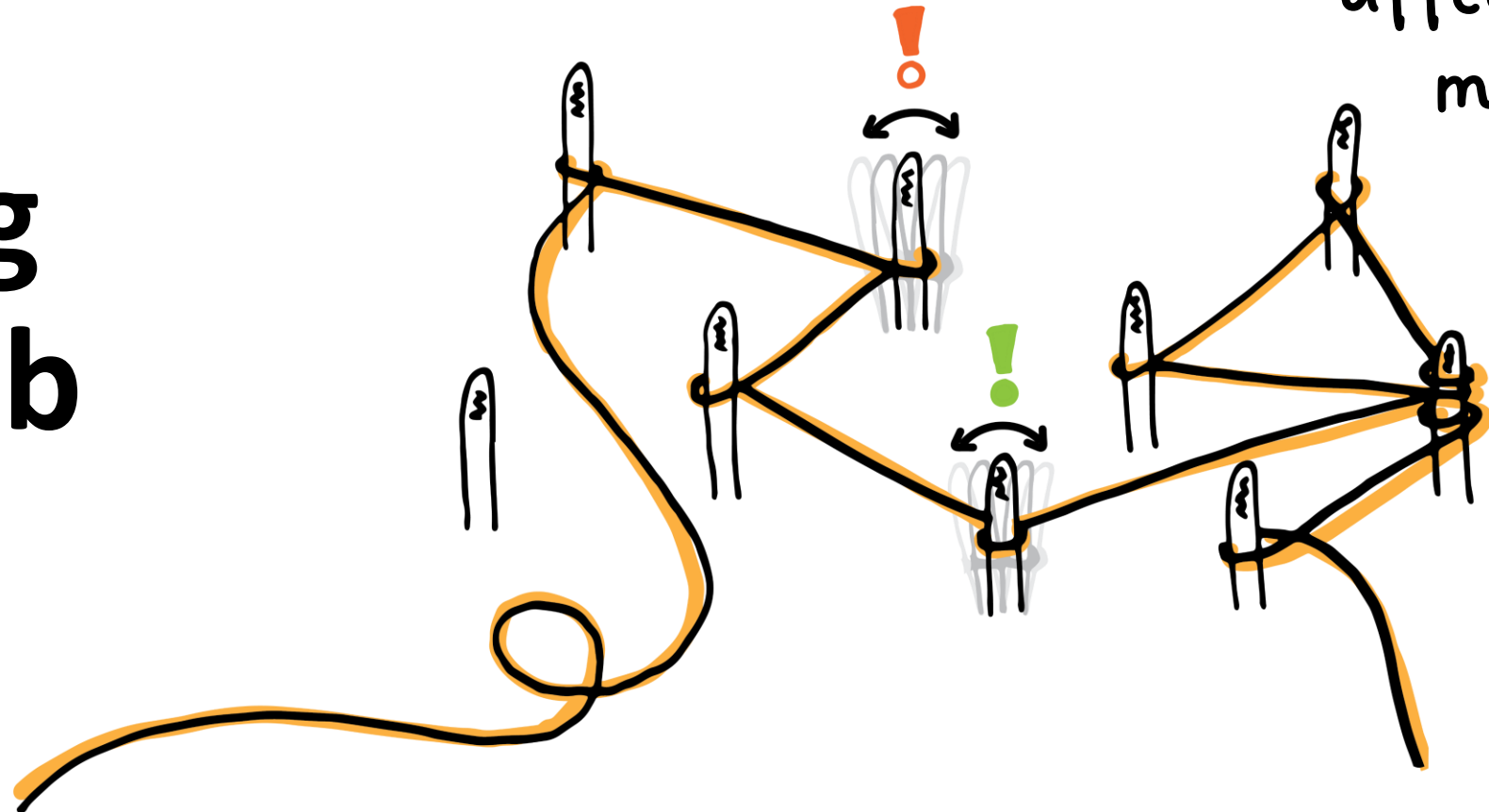
Making the web

Defining **actors**
relationships



Making the web

Distributing
impact caused by
the design



Who is
affected
most?

12

Consider which actors are the most negatively impacted. Make a prioritization.

13

Ideate for redesign suggestions for each impact-worksheet

14

Use the worksheets as a to-do list to inform the next steps in your design process, further investigating and implementing the redesign suggestions.

15

clean up the activity by gathering all materials used. Make sure no materials are left behind in the ecosystem.

Part 3 Today

Making the web

Distributing **impact** caused by the design

THIS DESIGN ASPECT

Plastic components

IMPACTS THIS ACTOR

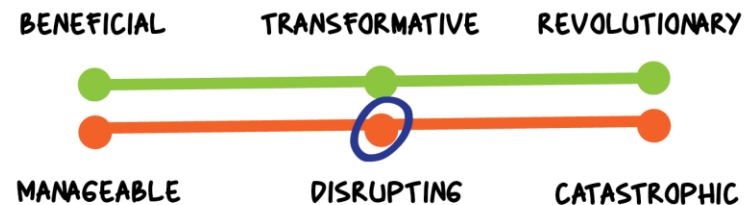
Soil

ATTACH REDESIGN WORKSHEET HERE

AS FOLLOWS

The microplastics and harmful chemicals damage the soil

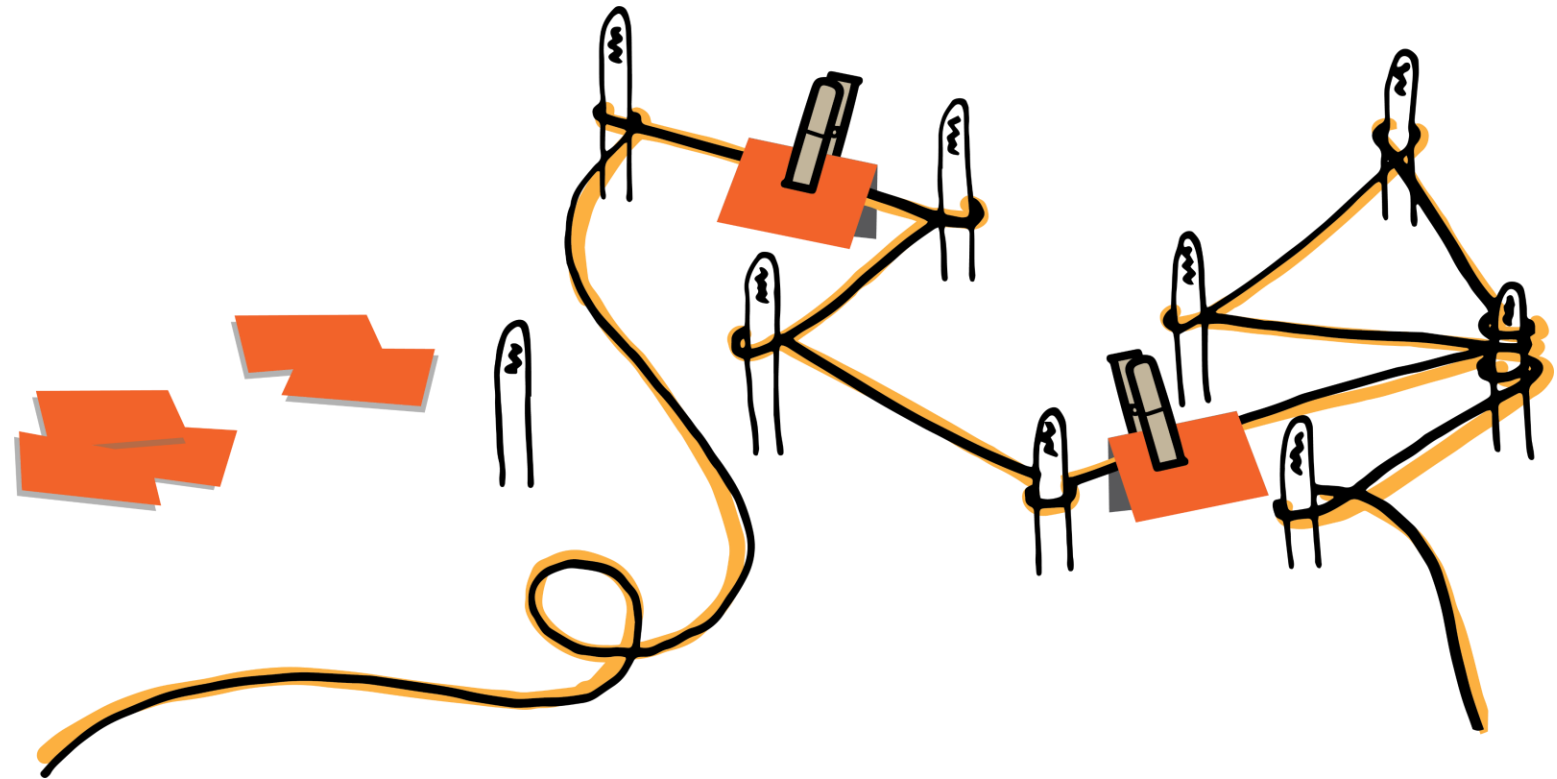
WITH THIS INTENSITY



Who should
get priority?

Making the web

Distributing
impact caused by
the design



Making the web

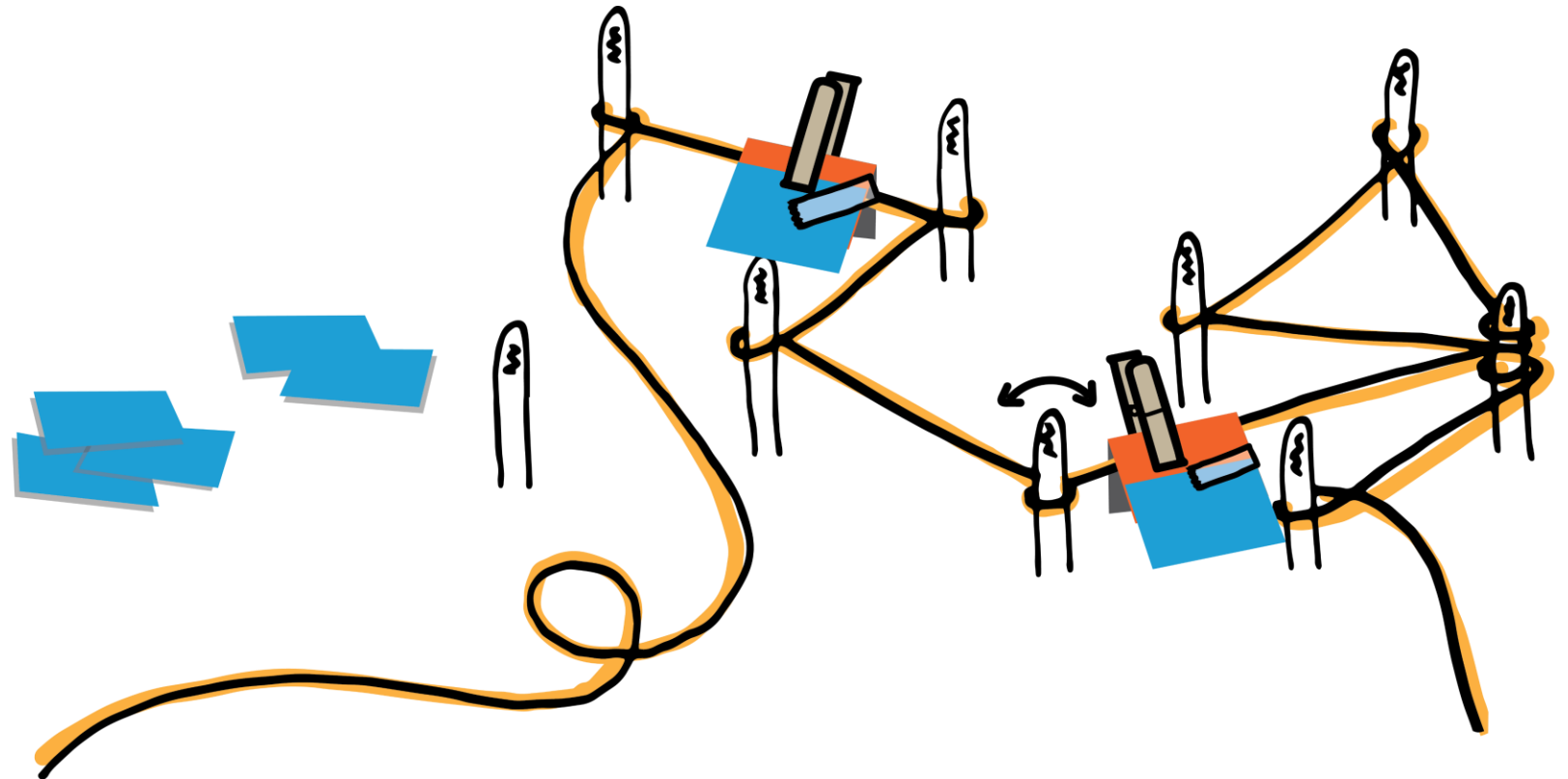
Ideating **redesign**
solutions

THIS CAN BE SHIFTED BY

*Use plastics made
from renewable plant
sources that are
designed to degrade
more quickly and
safely in natural
environments*

Making the web

Ideating **redesign**
solutions



Let's reflect!

Share the insights of the activity with the other groups and discuss differences in the mappings/actors included.

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