



Your Challenge: guide your students through the DT process

The students' challenge: make your home town greener!

Preparation: making groups, getting to know each other & getting into the topic

Materials step 1, 2, 3: DT Challenge (Lineke); A3 paper and pencils, colour markers, sticky notes; Learning skills game (Lineke)

Moment: 27 November 9.00 – 10.00

Step 1: Build your team, by really getting to know each other. Follow the instructions of the moderators in the first DT Challenge. (Attachment)

Moment: 27 November 10.00 – 10.30

Step 2: Have the students share what they know about the subject: what is meant by greener and why is that necessary? Write down keywords, ideas, interests. Also have them establish what information they are missing / what they would like to know / learn. Make a mindmap, wordweb or poster of this.

Moment: 27 November 10.30 – 11.30

Step 3: Use the learning skills game to establish everyone's qualities. Then decide on the roles every member will focus on. Don't tell them in advance what roles are needed!!!

These roles are needed: chairman/woman; writer; analyst; creator; communicator; planner; presenter; observer. Divide roles according to everyone's qualities.

NB: you have to be able to play more than one role, because you are in this process as a team. So, you will participate in every step of the process. But in your role you will have more responsibility in some of the steps.

Chairman/woman: leads the process during the week

Writer: writes the important pieces, like the HMW question and the final research plan

Analyst: has a leading role in the define space and between ideating and prototyping

Creator: has a leading role in the ideating and prototyping space

Communicator: has a leading role in the empathizing and prototyping space

Planner: in charge of time-management during the whole process

Presenter: has a leading role in the testing space

Observer: has a leading role during the empathizing and testing space



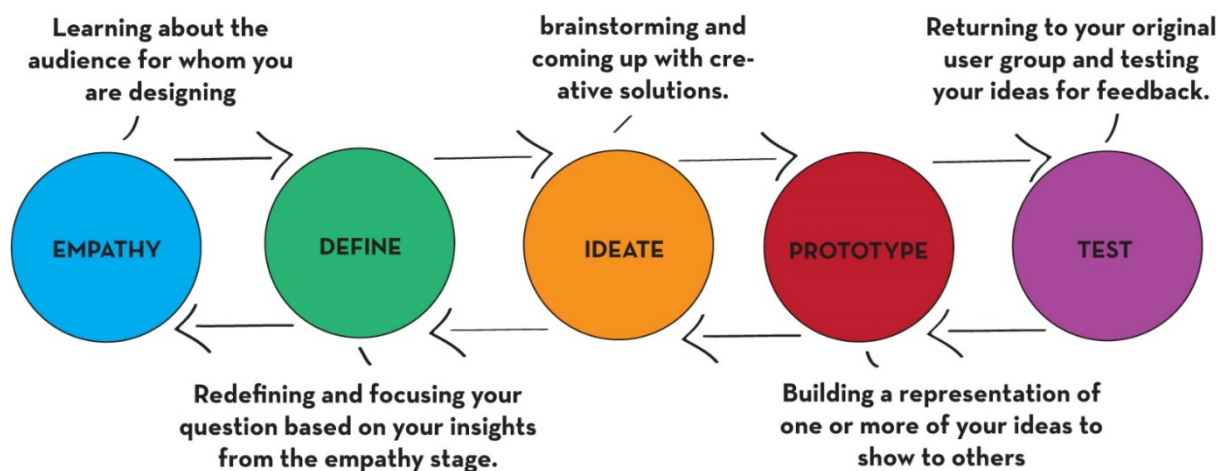
Materials step 4, 5, 6: paper & pens to make notes and write interview questions and answers

Moment: 27 November 13.30 – 14.00

Step 4: introduction by an expert: what is meant by greener and why is that necessary? Greener could mean more trees and plants; it can mean less waste; it can mean using less chemicals to make stuff; it can mean reusing / recycling things...

Moment: 27 November 14.00 – 14.30

Step 5: the students make a choice for one of the topics. This determines which excursion they are going to do.



Empathizing

Moment: 29 November (excursion included)

Step 6: Define your audience! Who are your users and what are their needs?

1. Research: find information about possible users and about the subject. Which users can you identify? There may be several groups of users.

Then prepare the excursion:

2. Observe: go to a place where possible users are. What are you going to observe for? Observe what they do, what the environment looks like, ...
3. Immerse: go to a place where possible users are. Do what the users do. What do you experience?
4. Engage: go to a place where possible users are. Interview them, but prepare your interview first! What would you like to know?



Excursion

10-11-years

RECYCLE YOUR T-SHIRT (BAG PACK)		Snaga
REUSE THE PACKAGING (PHONE HOLDERS)		(market place-Lidl), zavod 404
EKO CLEANING PRODUCTS (WASHING GEL)		Eko shop -

14-15 years

BIODEGRADABLE MATERIALS		Zavod 404
WHAT TO DO WITH EXCESS FOOD (AT HOME, AT SCHOOL, IN RESTAURANTS)		Restoran in BTC
SHOPS WITHOUT PACKAGING		BTC Shoping center
SPORT EVENTS WITHOUT PILES OF WASTE		Zavod 404



Materials step 7, 8, 9, 10: the notes they made; A3 paper and pencils, colour markers, lots of sticky notes; UNI worksheets (Lineke)

Step 7: discuss the information all members of the team have gathered. Try to find out which users you have identified. Is there only one group of users? Or are there more? If you have more than one user-group, split up and work out every group: who are they, what are their needs? Be as extensive as you can!

NB: if the team has identified more than one user-group, you have to discuss with them if it will be possible to work for all user-groups. Maybe they go too widely and they need to be more specific. It is possible to have this discussion after the defining space and even after the ideating space.

Defining

Moment: 29 November 30 – 60 minutes

Step 8: Formulate your users' needs.

How might we

Here are some examples:

- How might we stimulate the cleaning person in our school to use eko-cleaning products?
- How might we organize a school tournament with only recyclable waste?

NB: the User – Need – Insight worksheet may help you here!

Ideating

Moment: 29 November 45 minutes

Tip: before starting the ideating process, you may want to do this exercise to get creativity going:

Tell the students: Your challenge is to design the best amusement park for 16/17 year olds.

First round: Stand up and mention one idea per person. The next person starts his/her sentence using: yes, but...

Second round: do the same, but change the sentence into: yes, and...

Looking back: ask which group came up with the best amusement park. Then ask about the difference between the first and the second round.

[Using Yes, and.. will bring more interesting and extreme ideas than using yes, but.] **10 minutes**

Step 9: think of as many ideas as you can! Start this session by brainstorming on your own for 3 minutes. After that come together and share everyone's ideas in your team. Add to each other's ideas, combine ideas that are similar or that can go together well. Take at least 30 minutes to discuss all options.

NB: check the brainstorm rules



Don't Judge	Encourage wild ideas
Build on the ideas of others	Stay focused on the topic
One conversation at a time	Write and draw pictures
Go for quantity: more is good!	Give every team-member time to express their ideas

NB: feeling stuck?

Add Constraints: what if we had to do this in space? What if we had infinite funding? What if we had a very small budget? What if we had to use bricks? Etcetera	Use inspiring people/brands: what would Apple/Google/Microsoft/Bill Gates/Nelson Mandela/Hillary Clinton do in this case?
Make it time or place specific? What if we had to use it in the morning/at night/in 2050? What if we had to use it in space / the USA / Asia?	Make the user group smaller: what if we had to design this for teenagers / elderly people / environmentalists?

Moment: 30 November 9.00 – 10.00 30 minutes

Step 10: select promising ideas. Cluster any related ideas and as a team pick your two favourite ones. Collect the post-its of these favourites. If necessary vote to get the two best ideas.

Materials step 11, 12: A3 paper and pencils, colour markers, lots of sticky notes, fabric, cardboard (boxes), any waste material they can use to make a prototype.

Prototyping

Moment: 30 November 10.00 – 10.30

Step 11: create a prototype of your DT Challenge. You can do this by making a poster, a mindmap, do an activity, act a play, make a storyboard or script, make photos, make a clip or a podcast,

NB: You only have 30 minutes.

Testing

Moment: 30 November 11.00 – 12.30

Step 12: present your prototype and collect as much feedback as possible. Make a grid to do this.

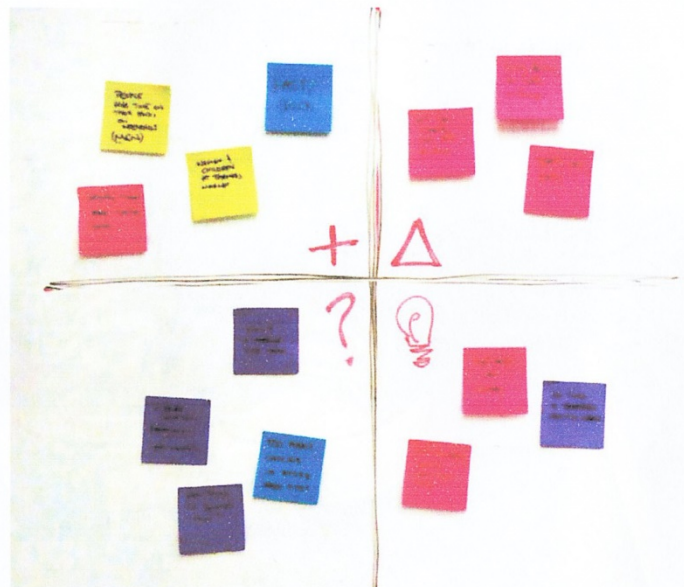
+ good point

Δ improvement point

? question



new idea



NB: criticism is free feedback!