

# eccoope

YOUTH COOPERATIVE  
eNTREPRENEURSHIP

## Intro to PROTOTYPING

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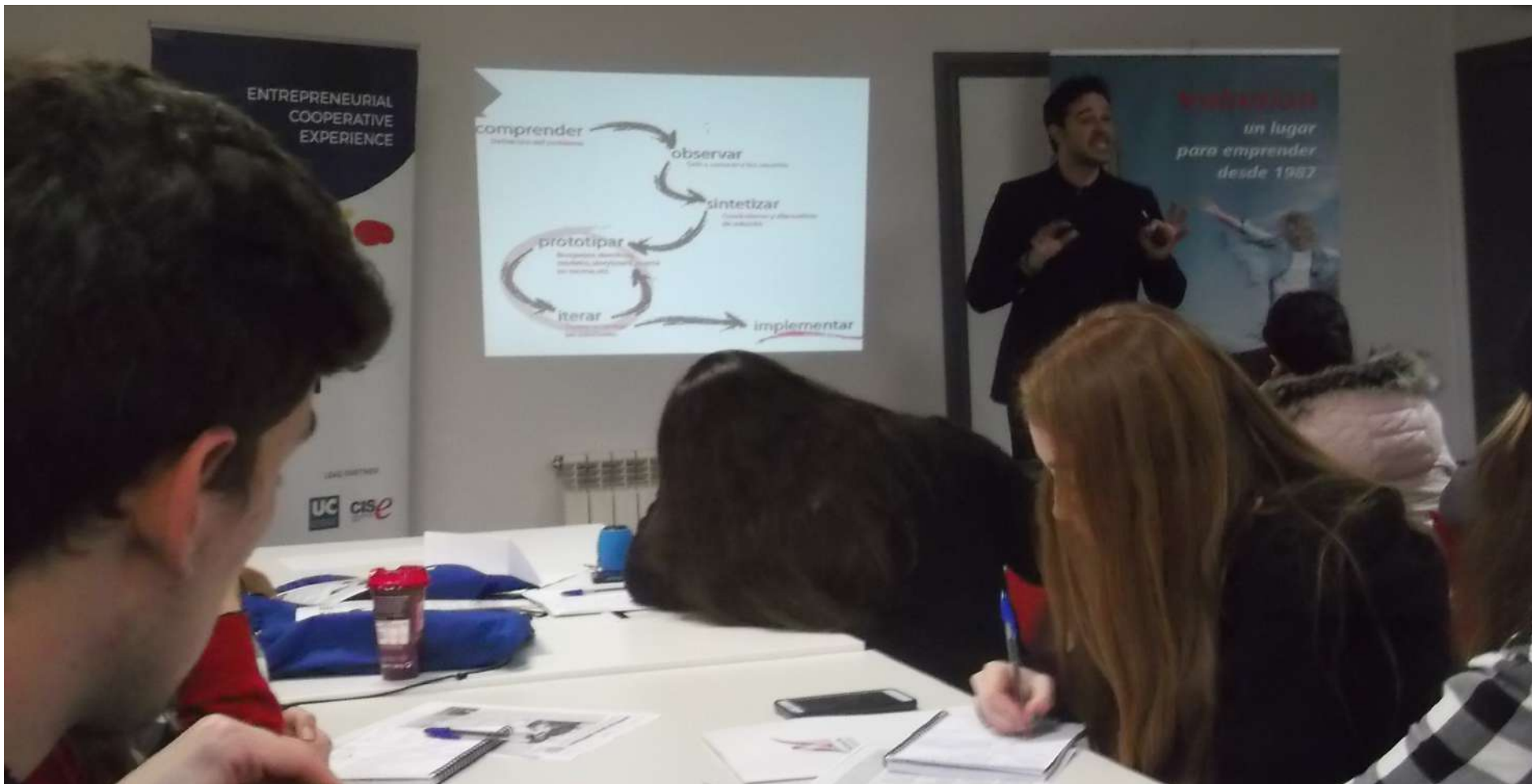
Ecoope's Secondary Education Training Pilot Programme | Valnalón, Jan 2018

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## ●●● Listening to the theory: a must do!

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# Design Thinking

Design thinking is an approach that helps you solve or answer questions, problems and challenges. The approach is based on developing a deeper understanding of human needs that become a catalyst for innovation. Design thinking is much more than a process, it is a mindset that solves open-ended problems.

## Identify problems

Look around you! Which problems, needs or opportunities do you see? These are potential starting points for change, innovation and entrepreneurial thinking!



### Define

It is paramount to understand the problem or challenge at hand. It is also important to be sensitive to the underlying need that is connected to the problem.



### Research

There is already a plethora of knowledge out there. Be sure to use these sources (e.g. internet, books) to expand your investigation and support it!



### Observe

You can learn a lot if you simply look at or examine your subject a bit more closely.



### Empathy

It can be very helpful if you can place yourself in the other person's shoes. This is a great way to better understand the problem.



### Inquire

Often you will learn interesting things when you can generate thought provoking questions and find the right people to interview. Ask 'why' often so that you can gather more interesting details.

## Understand

## Discover



### Brainstorming

This is a technique, but also a way of thinking. Generate a large quantity of ideas. At this stage there is no such thing as a 'bad' idea.



### Feedback & Decide

Only during the second step should the best and innovative ideas be selected. Get feedback from others and follow a voting procedure or simply just listen to your 'gut feeling'.



### Prototyping

Initially produce something that will make your idea seem more tangible. Prototypes are very simple and quickly made representations. They help transport your idea more easily to your audience by making it much clearer, so that you can get feedback.



### Feedback

What do others say about your prototype? Find out what worked and what didn't.

## Develop Ideas

## Experiment & Test



### Reflection

How well did the problem solving process work? What was easy? Difficult? How could you apply what you have learned to other aspects in life?



### Project Management

What is your end goal and how can you implement it? As a team or alone, plan and assign step-by-step tasks backwards always with your end goal in mind.



### Incorporating Feedback

Rate and review the feedback. If necessary, gain additional information. Then decide if you should choose to modify your prototype.

## Plan & Implement



## ●●● GENERATING IDEAS: In progress



## ●●● PRESENTING IDEAS: In progress

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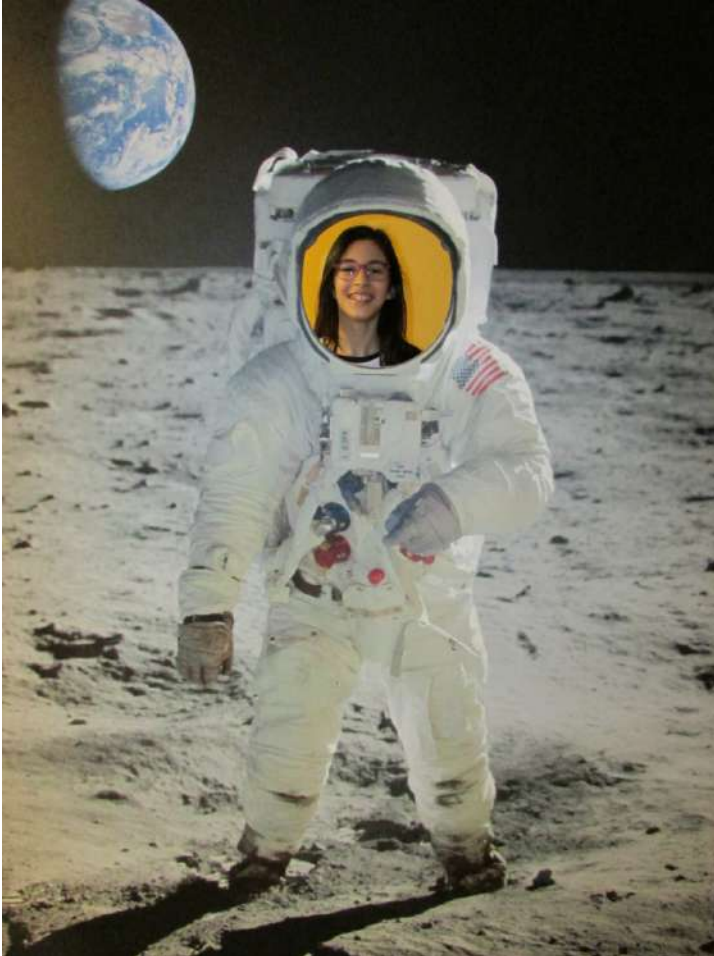
## ●●● But before being famous...

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## ●●● CONCEPTS

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## Design Thinking Focus

The focus of this creative process is on empathy and exploration, understanding of the challenge, generation of an idea and prototype as well as reflection.



## ●●● Identify the human needs!

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

## Storyboard





## ●●● Identify the human needs!

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## Needs



## ●●● CONCEPTS

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- @ Prototypes are “rough drafts” and quick representations of your idea.
- @ Making prototypes will allow you to quickly test your idea and learn more about it.
- @ Prototypes can take a variety of forms: such as something built, role play, videos, anything that will make your idea comprehensible to others.
- @ Sometimes you won't have all the materials that you would love to have – that's when creativity counts. Few resources!

## Prototype



## CONCEPTS

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## Iteration

Iterations are changes to your prototype based on the experiences made in order to improve it. It also means trying something in a different manner.

### Example

To make a representation of your solution by using scissors and cardboard only.



## ●●● PRACTICE



### My point of view - POV

User

\_\_\_\_\_

needs a way to

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

because he / she \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

## ●●● R(evolution)

REVEALED: The space suit



← → ↻ Seguro | <https://www.express.co.uk/news/science/845356/space-spacex-suit-elon-musk>

# REVEALED: The space suit humans on SpaceX rockets will wear to get to MARS

SPACEX boss Elon Musk has given the first glimpses of the space suit that astronauts aboard his company's ships will wear when they traverse the solar system.

By SEAN MARTIN  
PUBLISHED: 12:50, Thu, Aug 24, 2017 | UPDATED: 12:57, Thu, Aug 24, 2017

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## ●●● Evolution

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Find out more @: <https://www.space.com/25844-spacesuit-evolution-space-tech-photos.html>



Questions	Evaluate yourself
I could put myself into another person's shoes and understand their needs.	☆☆☆☆☆
I have been able to help fulfil/solve my partner's need/challenge with my own personal point of view.	☆☆☆☆☆
I was able to brainstorm many ideas.	☆☆☆☆☆
Through experimentation and testing my prototype, I was able to improve my idea and make it more tangible.	☆☆☆☆☆
I was able to present my idea clearly to others in class.	☆☆☆☆☆
I could present persuasively and maintain eye contact.	☆☆☆☆☆
During my presentation I could present my prototype very well in different ways and use many words to describe it.	☆☆☆☆☆
I could clearly state advantages and drawbacks of my prototype in my presentation.	☆☆☆☆☆
<p>Answer the following questions in 3-5 sentences:</p> <p>What did or didn't you enjoy during this entire process?</p> <p>Do you think you have learned something through this process that could help you in other situations?</p> <p>Why or why not?</p>	

A close-up photograph of several hands of different skin tones stacked together in a circular pattern, with fingers pointing towards the center. The hands are resting on each other, creating a sense of unity and teamwork. The background is blurred, focusing attention on the hands.

Thank you!