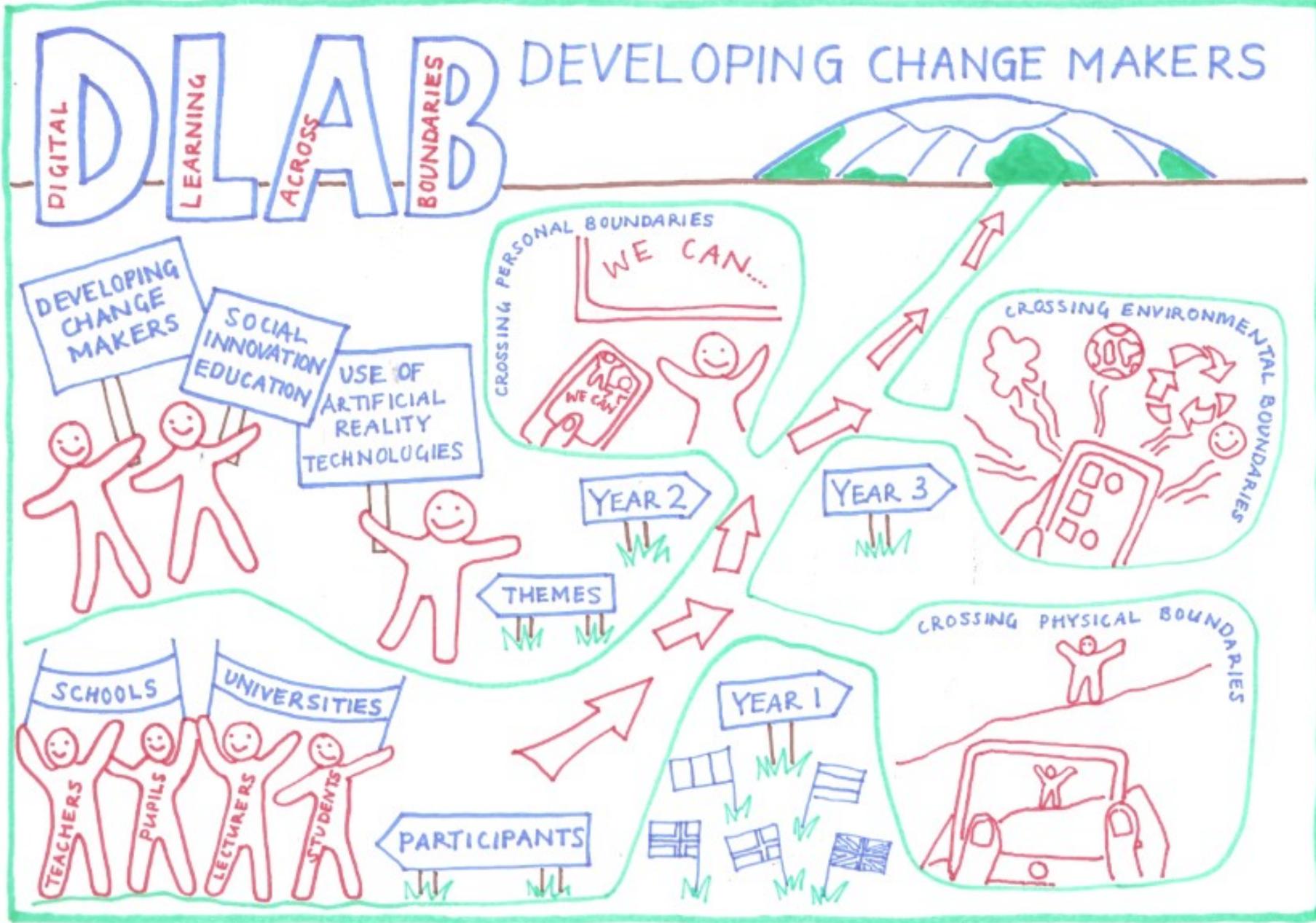


# Digital Learning Across Boundaries: Developing Changemakers

Dr Helen Caldwell and Dr Emma Whewell  
University of Northampton  
England

# DL LAB DEVELOPING CHANGE MAKERS



# Project overview

DLAB2 is inspired by the changemaker movement, which seeks to build the skills and attributes for individuals to find innovative solutions to society's challenges.

Two key themes are **developing changemakers** and **social innovation education**.

A third theme is the use of innovative digital learning environments including virtual and artificial reality technologies to blend physical and digital learning environments and provide powerful opportunities for international collaboration.

In this way, the project brings together two aspects of the maker movement: **digital making** and **change making**.

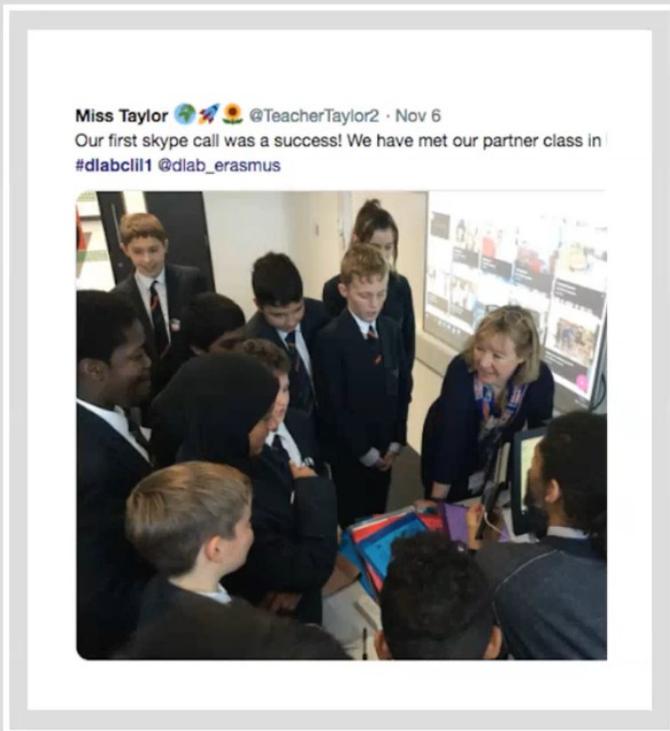
# Activities

Over three years we adopt three types of 'learning across boundaries' challenges.

1. Crossing physical boundaries (what my body can do): learning through physical experiences (skills).
2. Crossing personal boundaries (my aspirations and confidence): learning through performance, public speaking, or gaining new skills (attitudes).
3. Crossing environmental boundaries (what we can do about the environment / developing a green curriculum based on the SDG's for sustainable environments)



# Online collaboration



## METHODOLOGY IN YEAR I

An Autumn learning and planning event.

Three international days with pre and post phases. (3rd was cancelled)

A spring dissemination and planning event, including TED-style talks. (online)

+16 EL GC VM MF TM LE KS BB H ER  
Elise Glad Lien gonzález gonzález... vispalia otero... Mikkel Frandsen Thomas David... LATORRE RUIZ... Küpfer Stéphanie Bjørn Espen Po... hp EIRIN NEMIÑA...



# Padlets

padlet

Frederik De Laere + 10 · 4d

## DLAB LTT planning documents for project days

Made with a creative frenzy

**Group 1**

**CURSO** 7d

**How can we empower children to be enterprising global citizens who are adaptable to change and agents for positive change?**

Through social innovation activities that support the development of students and pupils as agents of positive real world change as well as build their digital skills.

Green energies and SDGs can be used as a framework tool to support students develop their research, critical thinking, problem solving, teamwork, and communication skills.

**Group 2**

**Anonymous** 6d



Add comment

**Anonymous** 6d



**Group 3**

**Anonymous** 6d

**Day 1 - vertical gardening system**



**examples planning documents**

**Frederik De Laere** 10d

**blank template**



DOCX

DLAB planning document blank template

Add comment

**Frederik De Laere** 10d

# eTwinning

Erasmus+ DLAB 2-DEVELOPING CHANGEMAK... English Logout

eTwinning TwinSpace Support [User Icon] [Notifications Icon] [Messages Icon]

HOME | PAGES | MATERIALS | FORUM | ONLINE MEETINGS | MEMBERS

## Images

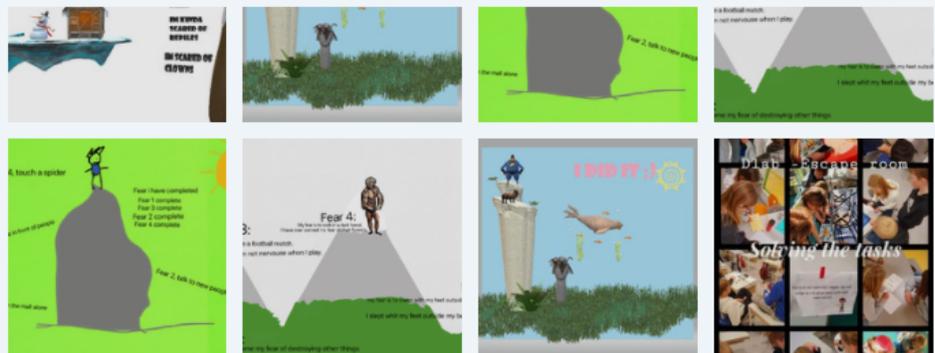
Images Videos Files

Albums ?

- Day 1, Belgium (25)
- Day 1, Norway (13)
- Day 1. Spain (16)
- Day 1 Denmark (19)
- (42)
- (14)

## Images

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# Twitter - Tweetbeam



**tweet beam** ⓘ

Tag your tweets with **#dlaberasmus**

Free version: for evaluation only

### Get TweetBeam

Use TweetBeam as a social media visualization at your event or office:

- » Engage your attendees
- » Turn your event into an interactive experience
- » Generate brand exposure
- » Tweets are loaded real-time
- » Complete moderation

**Buy now »**

**Share**  
Share this show with your friends:

**Tweet**

**Lorena Casal**   
**@l\_casal**  
Some ideas, LTT day 1 #dlaberasmus  
**@tecnoeduc\_usc**  
[pic.twitter.com/dx4sDKokg!](https://pic.twitter.com/dx4sDKokg!)

**Questions about Tweet...**

# MS Teams meetings on project days

#6 03 dec 2021 | Workshop  LA ÎNDRĂGĂȘIRE  
CĂMINUL ÎNȘIRĂTORIE  
ȘI ÎN ÎNDRĂGĂȘIRE  
Competențe digitale | Digital Skills for  
pentru educație și cultură | Education & Culture



# Team Denmark-UK working remotely

Welcome to the Technology Tent!

Your tent!

P... • jean edwards

Your tent!

Add anything you have made or any ideas and responses to the art tent by clicking below to go to your tent!

Technology tools and tips to use!

**A Complete Introduction to Audacity**

Padlet • henriette hansen

Dis b2 Technology

Other Ideas for how to use AR/VR Tools

P... • jean edwards

Exploring augmented and virtual reality in education

Have you tried something? We hope you will share the tools you have tried.

Kahoot

Quiz with the partners from Belgium, Spain and Norway during one of our meeting sessions.

Scavenger AR trial hunt app review

PDF

Scavenger Review

The app Scavenger enables users to create and follow AR scavenger hunts which can be customised based on your chosen theme. This document provides a review on the app and how it could be used to support physical education and activity.

Back to the Festival!

P... • jean edwards

DLAB Festival Summer 2021

Make your own digital exhibition!

www.dlab.org.uk

Get your own	What does it look like?	How can it be shared to an audience?	What support is available?
Padlet	Padlet is a free online tool that allows you to create a digital exhibition. You can use it to share images, videos, text and links. It is easy to use and can be shared to an audience.	Padlet can be shared to an audience via a public link. You can also share it to a private link if you want to keep it secure.	Padlet has a support page and a community forum. You can also get help from the DLAB team.
ArtSteps	ArtSteps is a free online tool that allows you to create a digital exhibition. You can use it to share images, videos, text and links. It is easy to use and can be shared to an audience.	ArtSteps can be shared to an audience via a public link. You can also share it to a private link if you want to keep it secure.	ArtSteps has a support page and a community forum. You can also get help from the DLAB team.
Google Slides	Google Slides is a free online tool that allows you to create a digital exhibition. You can use it to share images, videos, text and links. It is easy to use and can be shared to an audience.	Google Slides can be shared to an audience via a public link. You can also share it to a private link if you want to keep it secure.	Google Slides has a support page and a community forum. You can also get help from the DLAB team.
BookCreator	BookCreator is a free online tool that allows you to create a digital exhibition. You can use it to share images, videos, text and links. It is easy to use and can be shared to an audience.	BookCreator can be shared to an audience via a public link. You can also share it to a private link if you want to keep it secure.	BookCreator has a support page and a community forum. You can also get help from the DLAB team.
Google Jamboard	Google Jamboard is a free online tool that allows you to create a digital exhibition. You can use it to share images, videos, text and links. It is easy to use and can be shared to an audience.	Google Jamboard can be shared to an audience via a public link. You can also share it to a private link if you want to keep it secure.	Google Jamboard has a support page and a community forum. You can also get help from the DLAB team.

google docs

Digital art exhibition tools

Here are some useful tools and tips for making your own digital exhibition using Padlet, ArtSteps, GoogleSlides, BookCreator or GoogleJamboard.

Tweetbeam

We used this online tool to show what was going on live in the different countries as we worked together. You can see the tweets saved as Wakelets on the DLAB website [here](#)

Greenscreen

We used this for making videos with pupils presenting themselves using animal strength cards (Belgium). You can see these in the Art Tent.

app Roller coaster VR

We used this app to overcome fears (Belgium). You can see more about this in the 'conquering fears' tent.

Wakelet

wakelet.com

Wakelet - Save, organize and share content

We used Wakelet to capture the tweets we had made on international days!



# Pupils' reflections on padlet

Opmerking toevoegen

**Belgium Pupil 2**

I enjoyed doing our fears in a creative form. We also had to work with vr glasses which was also really fun. When we had to call Spain/Norway it was difficult because sometimes we did not understand them and then we could not answer. Otherwise it was really fun.I also liked this dlab day more than the other day.

Opmerking toevoegen

**Spain st**

It was great to know you,and thanks a lot for the opportunity given to us.

Opmerking toevoegen

**Spain st**

It was great!!!

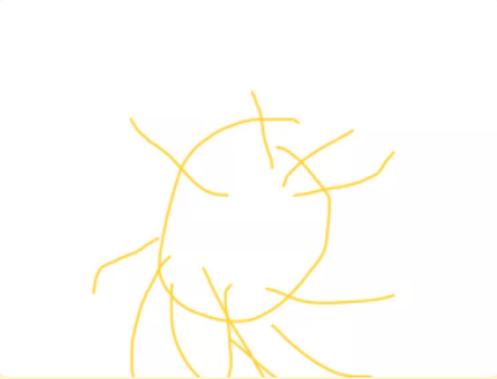
Opmerking toevoegen

**Belgium Pupil 2**

I really enjoyed getting creative about our fears. It was also really fun to work with the VR goggles. Calling the class in Spain was a little difficult though.

Opmerking toevoegen

**Sun**



the temperature at the very center of the Sun is about **27 million degrees Fahrenheit(F)**. The temperature cools down through the radiative and **convective** layers that make up the Sun's core.

Opmerking toevoegen

Opmerking toevoegen

**Belguim pupil D2**

It was really fun today. the VR that we did and making the art of fears was a fantastic moment.I had a good time

Opmerking toevoegen

**Spain student**

We spent a very fantastic moment being in touch with you,talking in our respective languages,and also sharing our particularities.It was a proof of how to break boundaries at any moment. Thank you!!!

Opmerking toevoegen

**Spain st**

I had a very fun moment with you ,because it´s a very interesting moment to meet foreign students,and interact with them.

Opmerking toevoegen

was a very nice day for us.

Opmerking toevoegen

**Belgian pupil day 2**

I was a little bit nervous for the video But I really liked today.

Opmerking toevoegen

**Spain student**

It was great,although I was a little nervous at the beginning..but once time went by,I felt very comfortable with the expierence,that helped me to cross boundaries. Thanks a lot for the great effort at drawings....

Opmerking toevoegen

**Spain student**

I really hd a very fun time talking to you..Hope to repeat it as soon as possible

Opmerking toevoegen

# Festival

[https://uon1.padlet.org/jean\\_edwards/DLABFestival21](https://uon1.padlet.org/jean_edwards/DLABFestival21)

<https://mypad.northampton.ac.uk/dlaberasmus>



# Art tent

Welcome to the Art Tent!



Your tent!



Padlet • jean edwards

Your tent!  
Add anything you have made or any ideas and responses to the art tent by clicking below to go to your tent!

Art made by our Belgian students

In the next few posts you can see some art made by our Belgian students expressing their feelings during the recent Pandemic.

Art in Belgium



How can I cure this sickness?

Art in Belgium



Seeking connection during the pandemic

Art in Belgium



expressing emotions during the pandemic

Art in Belgium



Digital making expressing feelings

Art in Belgium



Digital painting with iPad

Art in Belgium



expressing emotions during the pandemic

Creating avatars

Find out more about how our Belgian students worked on creating avatars to overcome stereotypes.

Belgium CPD



DOCX

DLAB CPD template - breaking stereotypes

Creating avatars to overcome stereotypes - there is useful information here if you want to have a go at this yourself.

Digital art in Belgium



Our students had to create their own avatar. Below you can see our class photo:

# Literature tent

## Welcome to the Literature Tent!



## Your tent!



P... • jean edwards

### Your tent!

Add anything you have made or any ideas and responses to the art tent by clicking below to go to your tent!

## DLAB CPD bringing literature to life

### DLAB CPD activity: Breaking Personal Boundaries

Starting point	Literature
What to do	In this activity, the students have to film themselves presenting from a book they love or extract a scene or read aloud from a short passage.
Big idea	The students have to choose a book to film using audio. The book does not have to be English, many books have already been translated.
Big idea	Check their have chosen a book they have to decide if they want to give a short summary, read a paragraph or which case they have to translate it if not in English or at least a scene. They then have to film themselves using the chosen book.
Big idea	How the film should be shared with opposite group. The group should review the film and answer questions like: Would you like to read the book you just heard about?

DOCX

### DLAB Literature

In this activity pupils presented and re-enacted scenes from their favourite stories. They filmed each other doing this and shared what they had done. You can find out more about this below, if you would like to have a go yourself.

## Back to the Festival!



P... • jean edwards

DLAB Festival Summer 2021

## Exploring literature from Denmark



Pa... • henriette hansen

Dlab - literature

Here are some examples of the video children made!

## CPD Danish Children



google docs

literature

## My poetic reflection on DLAB this year:

### Glowing lights

We found ourselves in times of trouble  
and from the rubble  
we created things of joy, things of beauty  
in our bubble  
and virtually exchanged  
our inner spaces filled with treasures.

We went for a hunt within  
and discovered the figures and measures  
of our hopes, broke free and gave expression  
to our passion, our talents, our feelings  
in the arts.

We pictured ourselves with animal strength cards  
and painted what we'd learned from one another  
on the canvas of our lives,  
overcoming stereotypes we behaved  
as sisters and brothers.

© Frederik Lucien De Laere

# Performance tent

Welcome to the Performance Tent!



Your tent!



P... • jean edwards

Your tent!

Add anything you have made or any ideas and responses to the art tent by clicking below to go to your tent!

Learn to Dance with an AR instructor



DOCX

Learn to Dance with AR

Learning to dance can be a personal challenge to overcome - click below for an activity to help with this and also please see into the videos...

Setting up your AR dance instructor

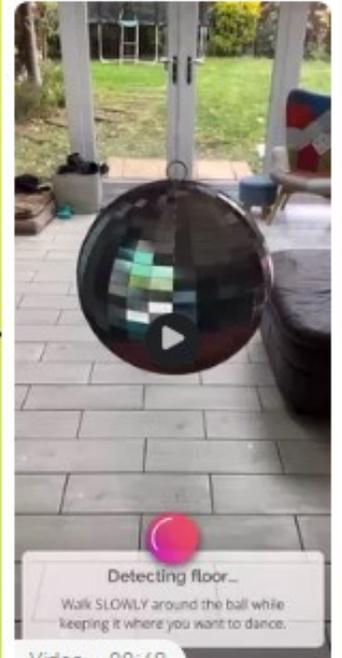


Place the instructor, then tap

Make sure the instructor is on the floor and you have enough space to dance, then tap the screen.

Video + 00:16

Basic salsa



Detecting floor...

Walk SLOWLY around the ball while keeping it where you want to dance.

Video + 00:48

# DLAB Talks tent

**Welcome to the DLAB Talks tent!**  
Hear more from our student participants!

**Your tent!**  
Padlet • jean edwards  
Your tent!  
Add anything you have made or any ideas and responses to the art tent by clicking below to go to your tent!

**Martin and Carlos**  
Video • 04:13  
DLABTalk\_Martin\_&Carlos

**DLAB talk on "Literature tent"**  
Video • 04:51  
WIN\_20210523\_21\_07\_26\_Pro

**DLAB talk pupils Middle School Bruges**  
Video • 00:27  
DLAB reflection pupils Middle School Bruges 2

**DLAB talk pupils Middle School Bruges**  
Video • 00:27  
DLAB reflection pupils Middle School Bruges 1

**Paula- DLAB Talk (Spain)**  
nubeusc-my.sharepoint....  
Sign in to your account

**DLAB Talk**  
Ida  
Student from Norway  
Video • 02:13  
DLAB talk Ida

**Mikkel - DLAB Talk**  
YouTube  
DLAB Talks - Mikkel Frandsen

**Thomas - DLAB Talk (Denmark)**  
<https://youtu.be/YvVifW7F1UA>

**Wout, Szymon, Michiel - DLAB Talk (Belgium)**  
Video • 11:42  
Bellen met Aneca en 1 andere - 20210507\_165416-Opname van vergadering

**Mikkel and Thomas DLAB VLOG**  
Student Teachers - Denmark  
<https://youtu.be/E28btAZh3XM>

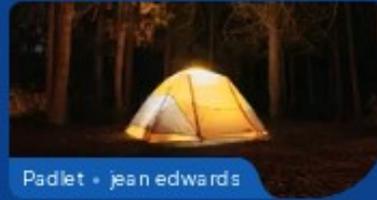
# Conquering fears tent

## Welcome to the Conquering Fears Tent!



In this tent you can find out more about overcoming fears!

## Your tent!



Padlet • jean edwards

Your tent!

Add anything you have made or any ideas and responses to the art tent by clicking below to go to your tent!

## Trust Blind Trail, Group 1, Spetalen Norway



PDF

Trust-Blind trail group 1 Spetalen school Norway

Do we really trust each other? Try this exercise!

## Escape Room, Group 3, Spetalen, Norway



PDF

Escape room Group 3 norway

This activity explores collaboration and working as a team to overcome challenges! Click below to find out how to have a go at this yourself.

## Fear Challenge, MS Brugge, Belgium



The challenge was to hold (or touch) the snake for 15 seconds. This was very exciting!

## Fear challenge: Belgium



Not just pupils are breaking personal boundaries, also lecturers cross the border...

## Scary Spiders



DOCX

scary spiders- conquer your fear

You can begin to overcome this fear using Augmented Reality. Find out more here!

## Reflecting & Learning on COVID TIMES



drive.google.com

Breaking Personal Boundaries (1).docx

Ideas submitted by the Spanish team on the theme of breaking personal boundaries.

# Contacts

Helen Caldwell

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Twitter:

@UONPEemma

@helencaldwel

Journal article:

**REALIA: research in education and learning innovation  
archives journal Vol 7 2021**

**Digital Learning Across Boundaries: Immersive technologies  
supporting changemaking in an international context**

*Emma Whewell, Helen Caldwell, Grant Malloch, Beth Garrett*

## ABSTRACT

The Digital Learning Across Boundaries: Developing Changemakers (DLAB) project uses immersive technologies in education to explore three challenges across three years: physical, personal and environmental. This paper focuses on the first of these, bringing together the themes of digital making and changemaking to cross physical boundaries by raising awareness about physical inactivity in 11 and 12 year old school pupils. Immersive technologies such as augmented and virtual reality enabled the development of empathy and intercultural understanding among participants, fostered an understanding of changemaking, and created environments for sharing prototype exergames. Research data is analysed to seek evidence of the development of changemaker attributes and impact within a sample group of 60 English school pupils.