Fís Foghlaim Forbairt

PDST

Professional Development Service for Teachers | An tSeirbhís um Fhorbairt Ghairmiúil do Mhúinteoirí

An Roinn Oideachais agus Scileanna
Department of Education and Skills

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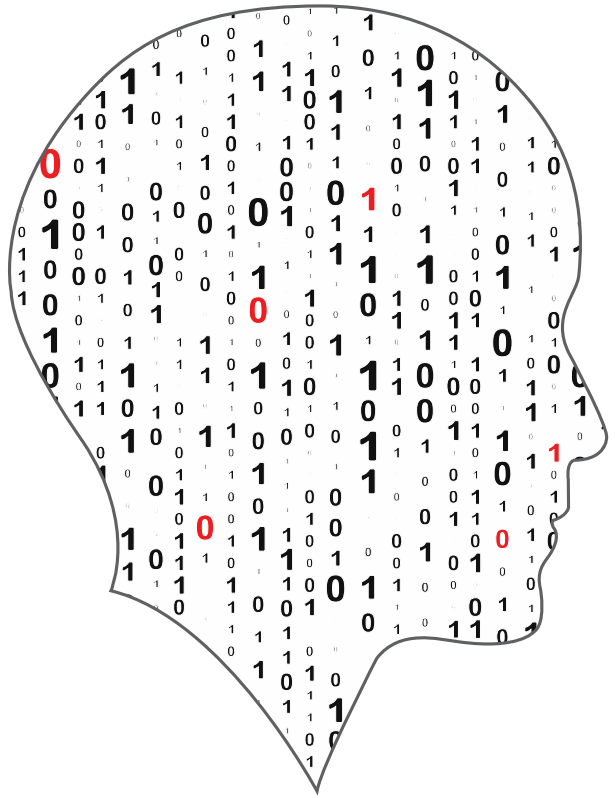

LEAVING CERTIFICATE COMPUTER SCIENCE

National Workshop 3

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Session 2

ALT2 – Project Design and Development Curriculum & Assessment Planning

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ALT2 – Project Design and Development

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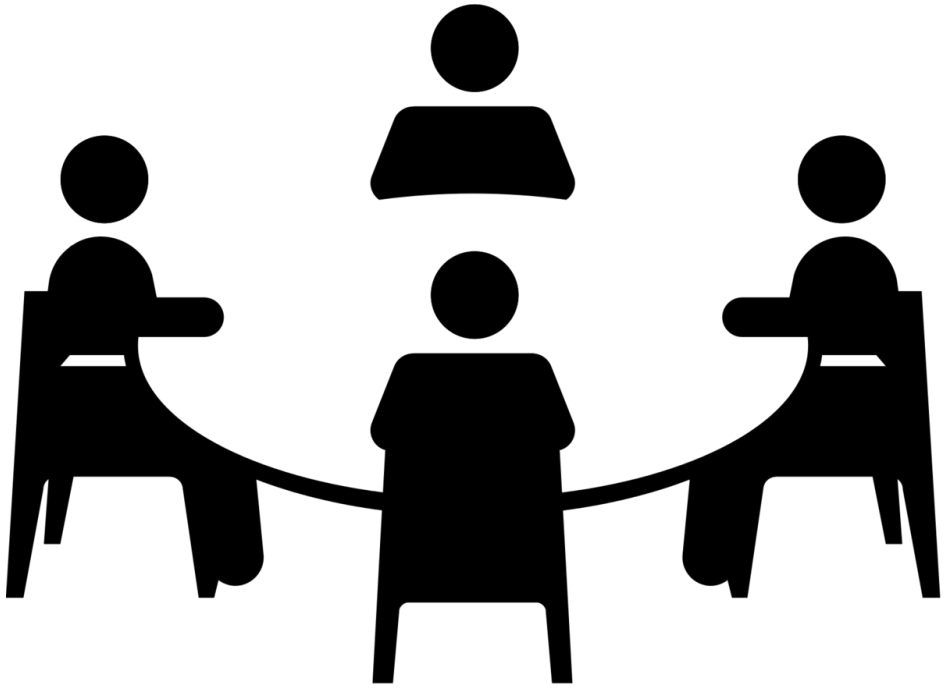
Main Group Activity



Groups will begin to develop a new ALT2

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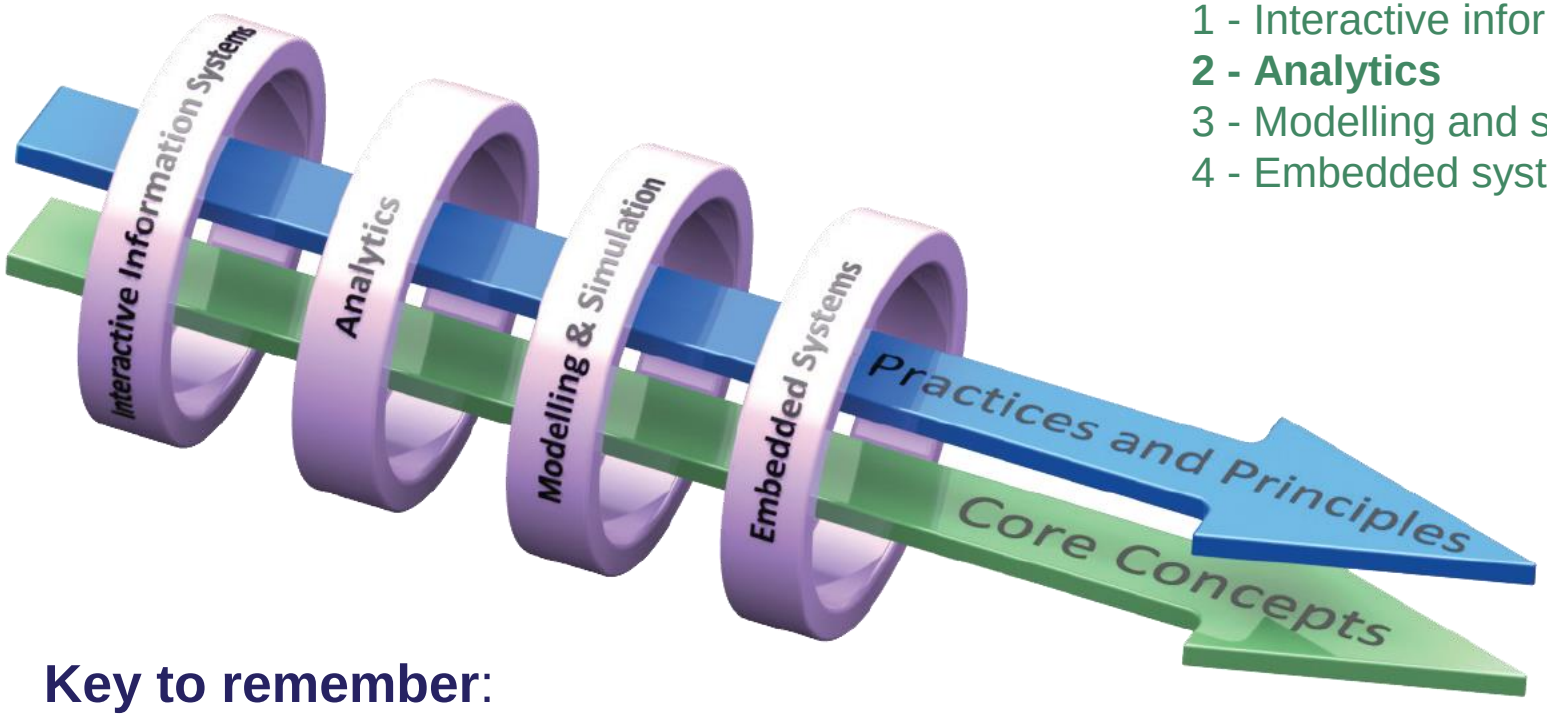
LCCS Interwoven

The four applied learning tasks explore the four following contexts:

1 - Interactive information systems
2 - Analytics
3 - Modelling and simulation
4 - Embedded systems.



Key to remember:

Explore and teach the LOs through the lens of ALTs.

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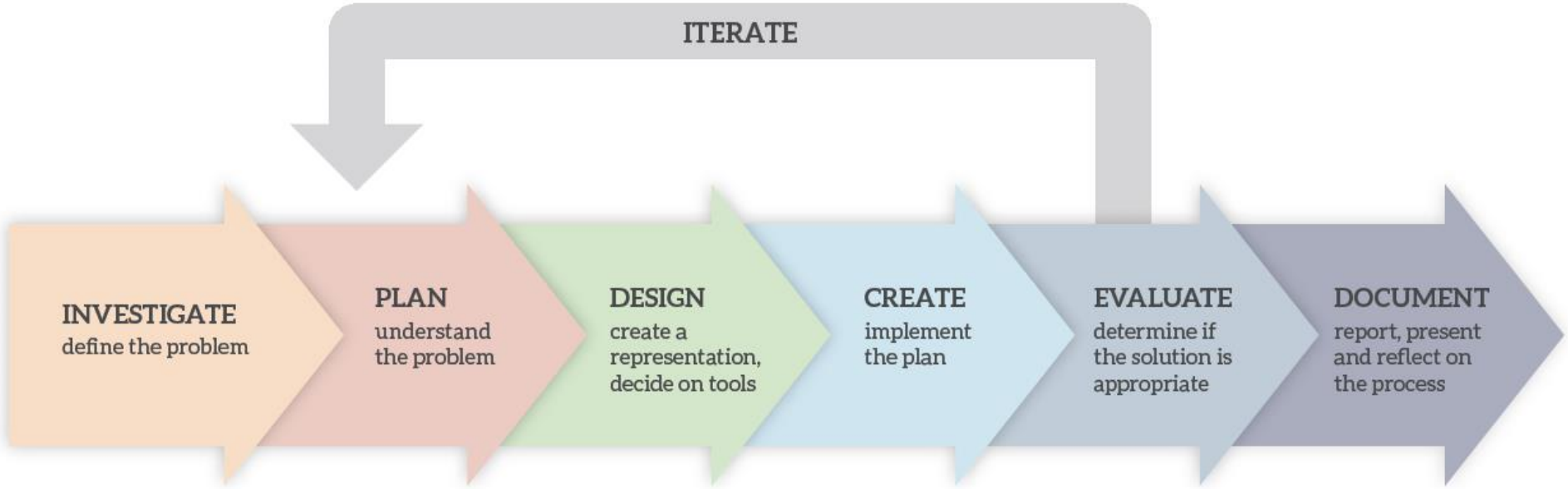
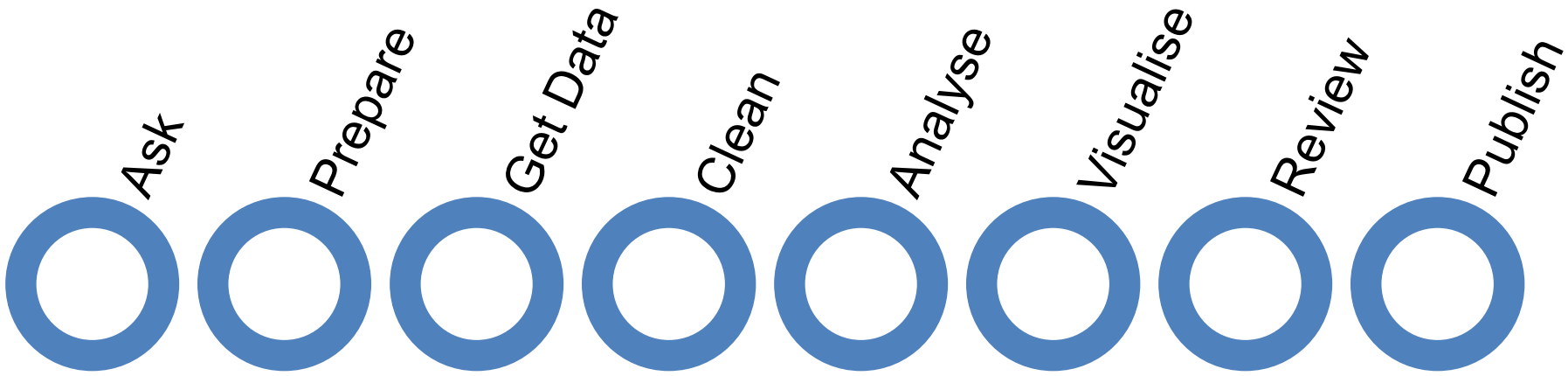


The Design Process



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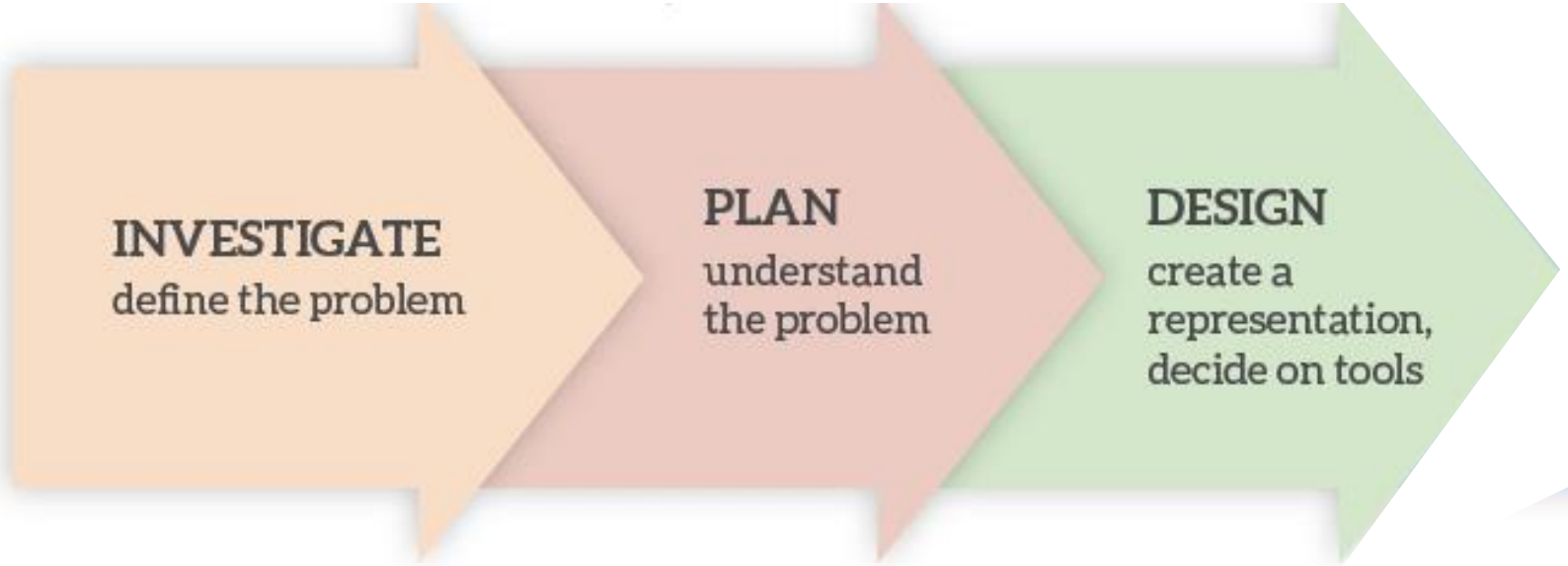

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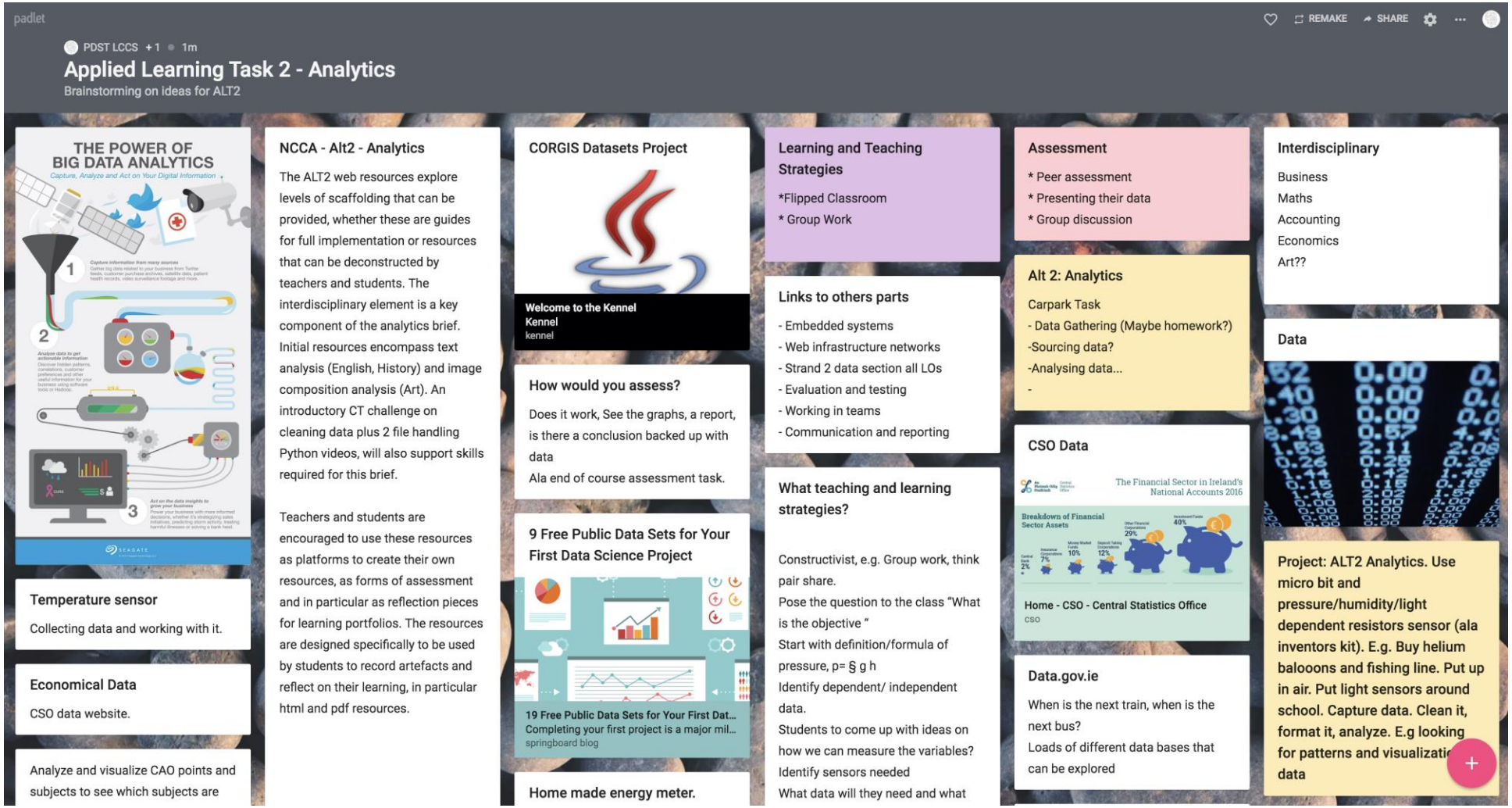
Warmup Activity - ALT 2 Brainstorm Follow Up



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padlet

1. In your assigned groups start brainstorming again as to possible project ideas for for ALT2.

2. Aim for as many ideas as you can.

3. Fill in your ideas on the Padlet board supplied – can be text / images / videos etc.

padlet

https:// pdstlccs.padlet.org/cpd/6s9qwbnzl8rm

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LiveSlides web content

To view

Download the add-in.

liveslides.com/download

Start the presentation.

Additional Resources

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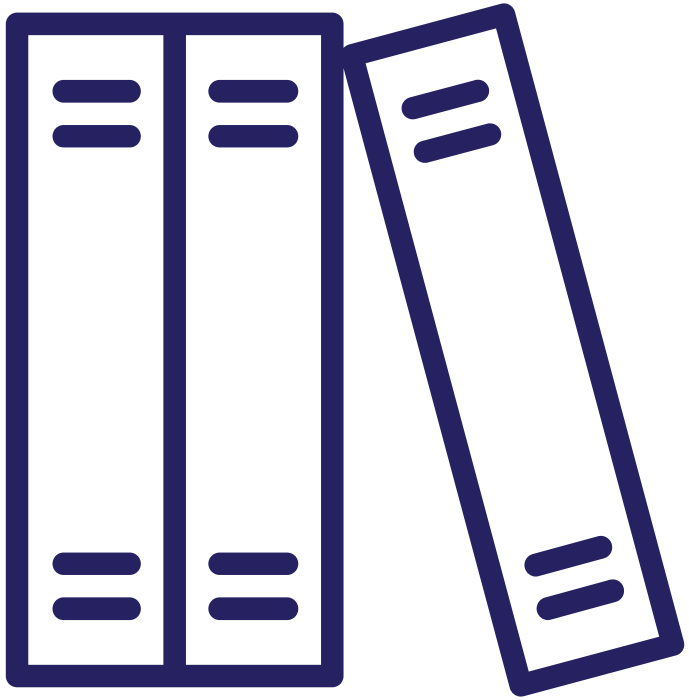
Data Sets



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LiveSlides web content

To view

Download the add-in.

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Start the presentation.

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Pick one of the suggestions for ALT2

Dissect the idea

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Is there a broad theme or a specific topic?

What is the data you will use?

What teaching & learning strategies could you use? Is it suitable for students taking Ordinary Level Maths

What does your project do?

Does your project idea cover all the LOs for this ALT?

What other LOs can be taught through the lens of this project?

What tools or materials are needed?

What are the roles in the group?

What links can be made to other subject areas?

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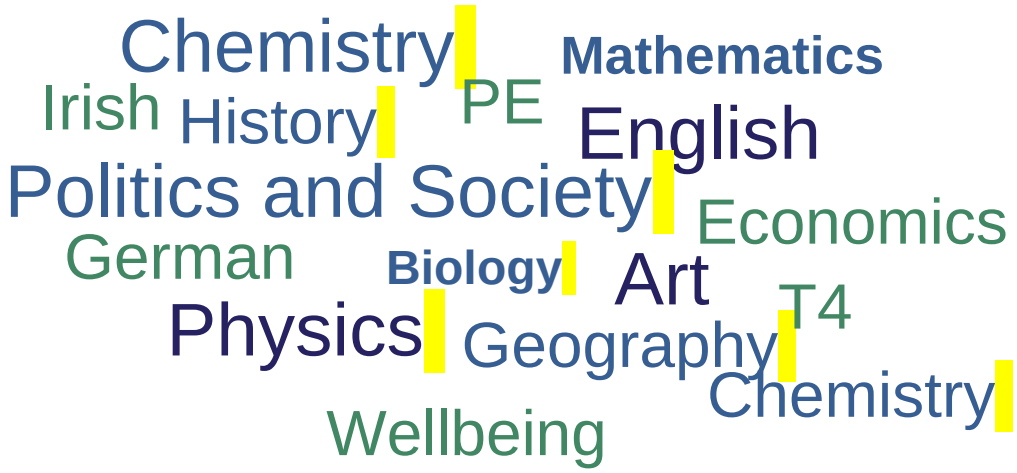
Inter-disciplinary nature of data (LC)



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Additional Resources

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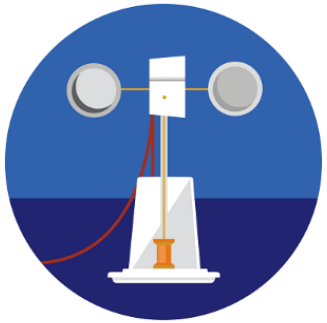
Useful Tutorials

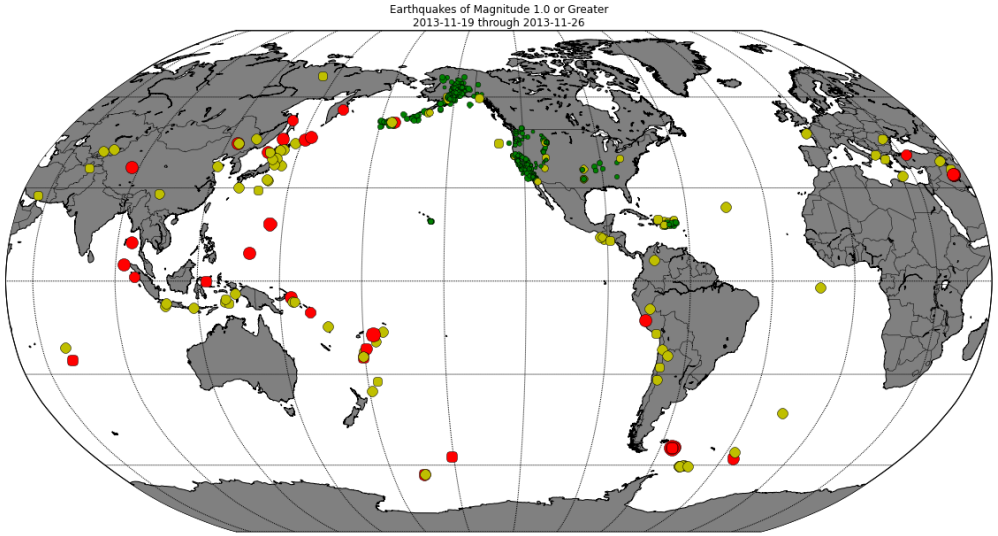
Comparing Speeds

Microsoft

Hacking STEM



Anemometer



http://introtopython.org/visualization_earthquakes.html

https://realpython.com/tutorials/data-science/

Pythonic Data Cleaning With NumPy and Pandas

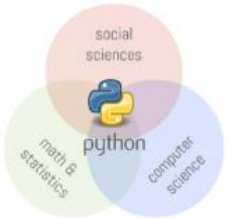
Mar 26, 2018 data-science intermediate

The Ultimate Guide To Speech Recognition With Python

Mar 21, 2018 advanced data-science machine-learning

Python Plotting With Matplotlib (Guide)

Feb 28, 2018 basics data-science



Python for Social Scientists

data-science python

Using Pandas to Read Large Excel Files in Python

data-science

Analyzing Obesity in England With Python

basics data-science

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COMPSCI.IE
All of these resources can be found on Compsci.

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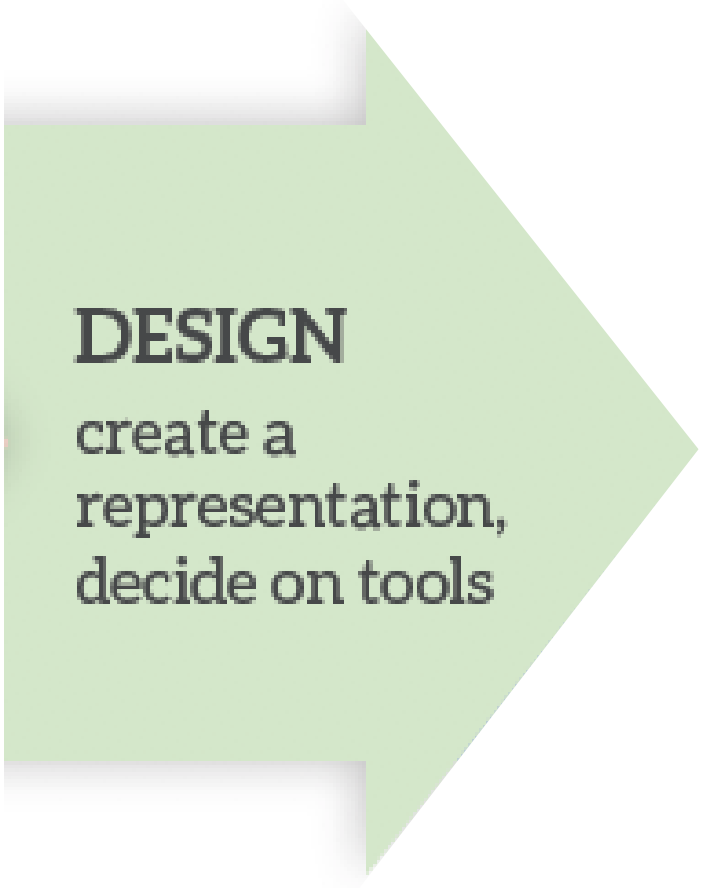

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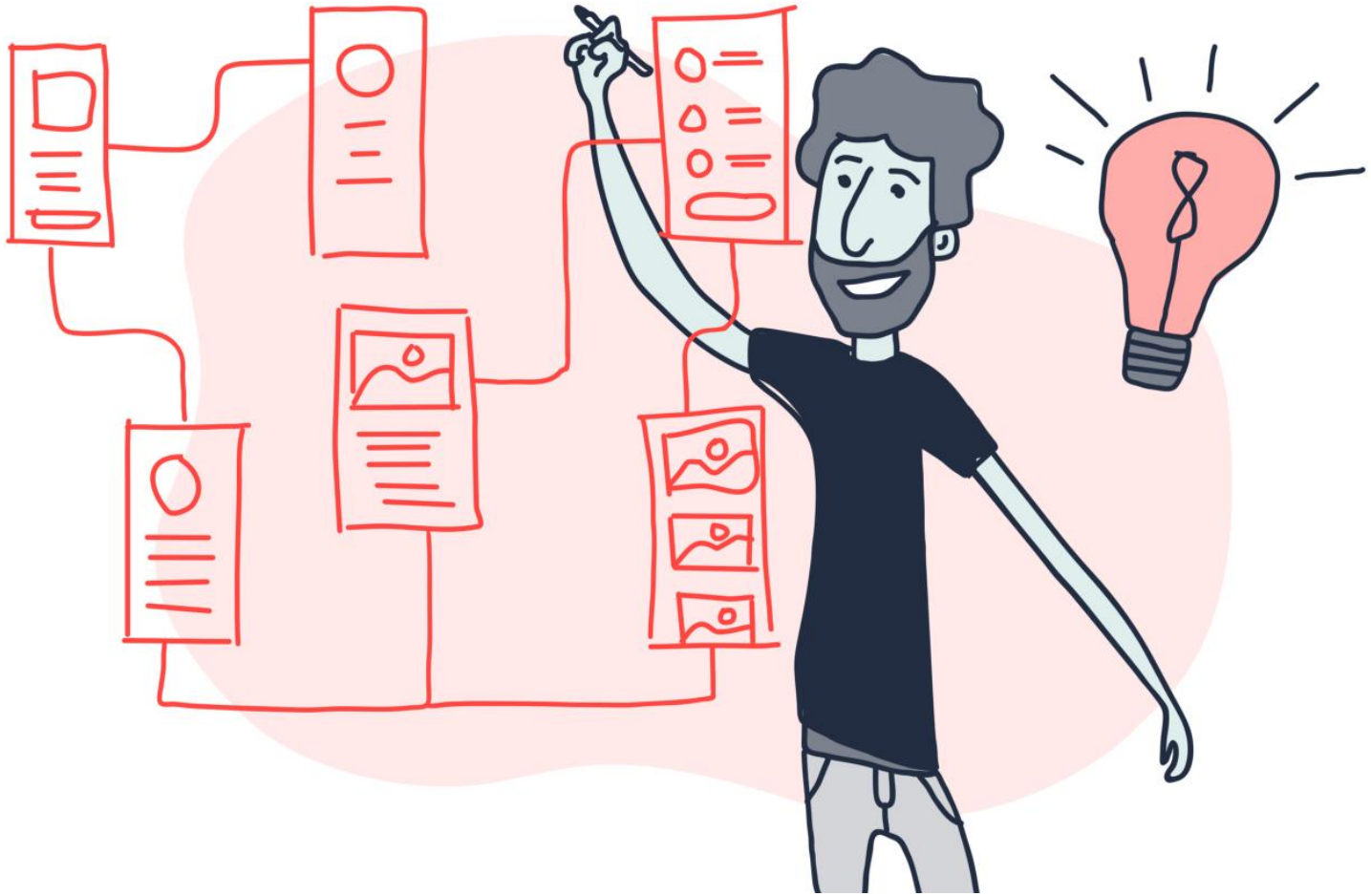

https://blog.overflow.io/8-tips-for-creating-better-user-flows-e46eb0d2a2c6

Flow charts

Symbol	Name	Function
	Start/end	An oval represents a start or end point
	Arrows	A line is a connector that shows relationships between the representative shapes
	Input/Output	A parallelogram represents input or output
	Process	A rectangle represents a process
	Decision	A diamond indicates a decision

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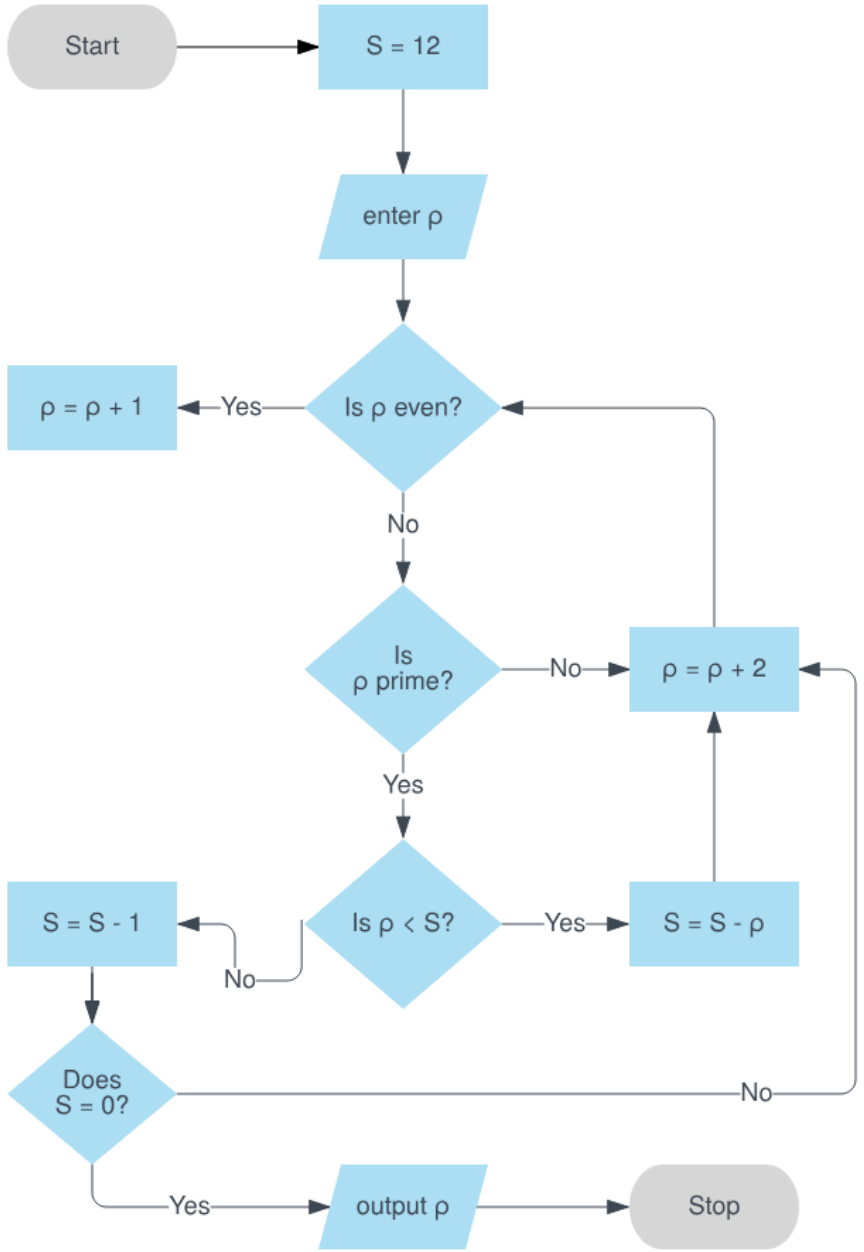

Image sourced from Lucid Software

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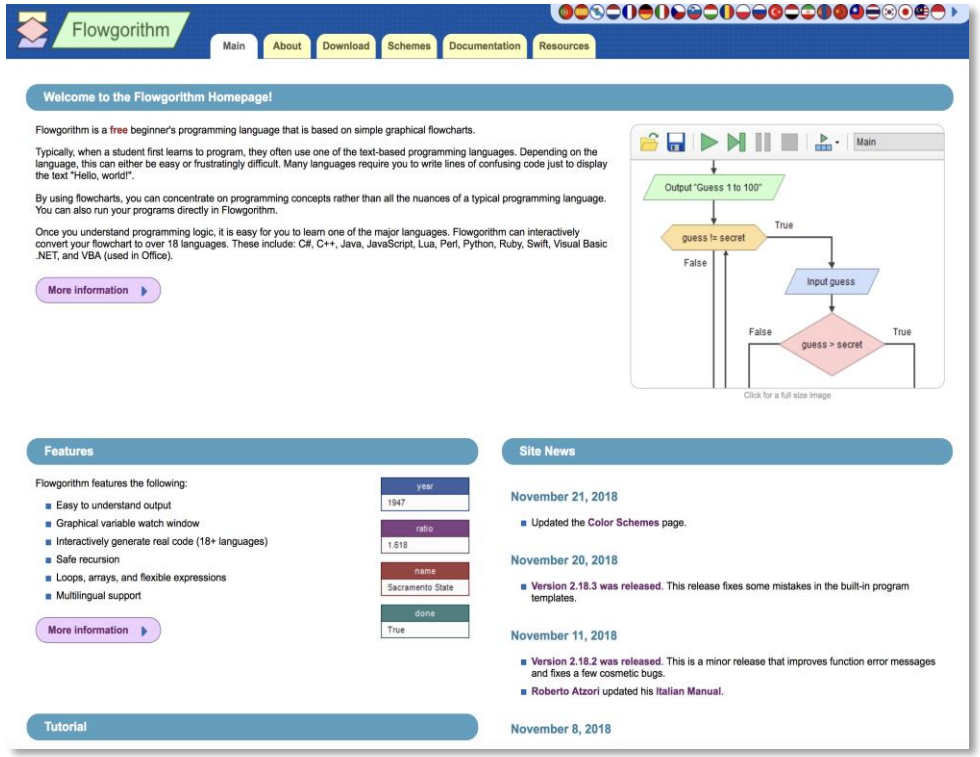
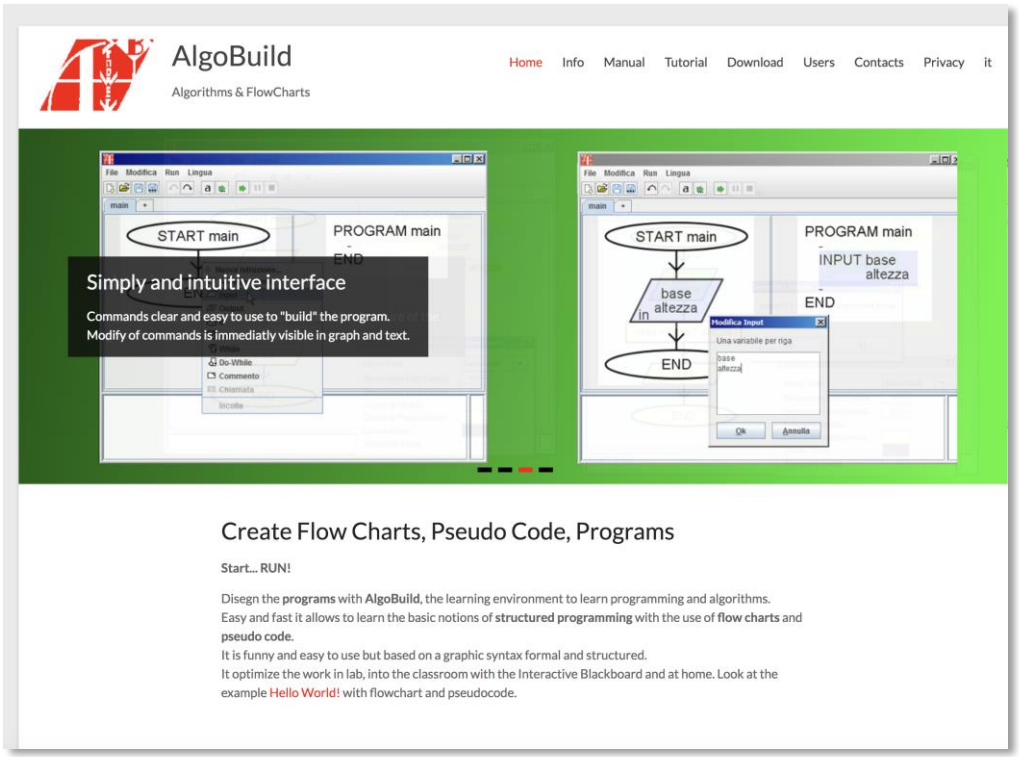
Flow charts – Additional Online Tools



www.flowgorithm.org



www.algobuild.com

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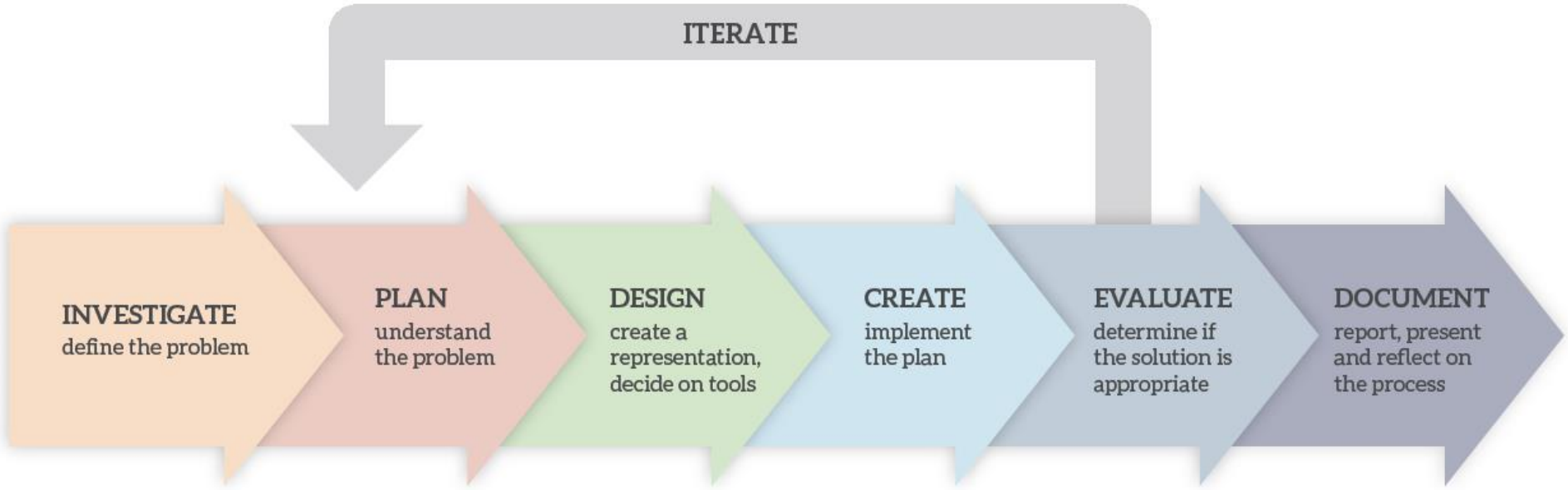

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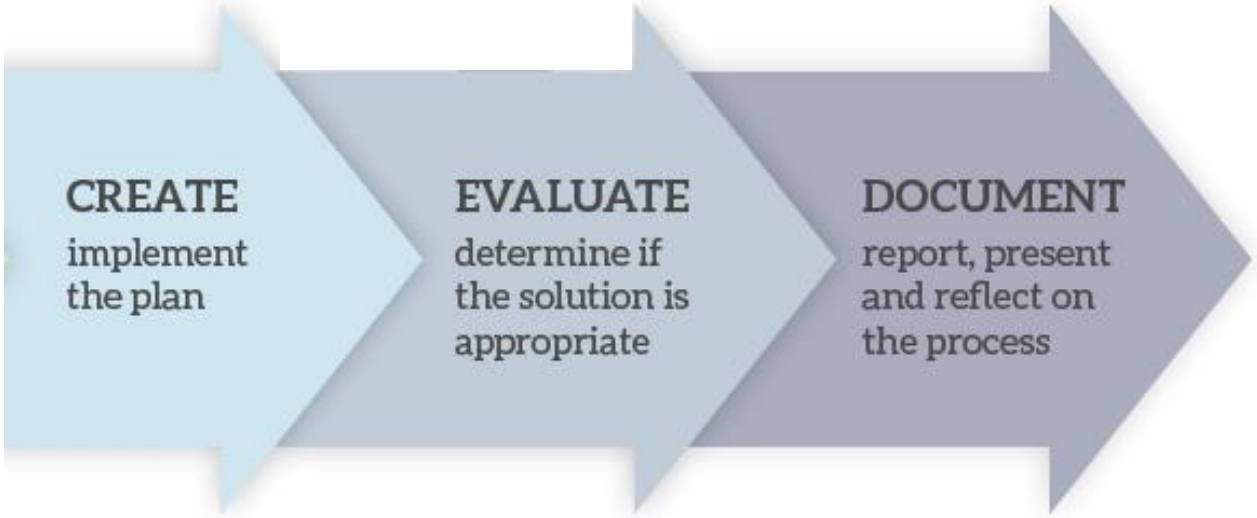

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COMPSCI.IE
Each group will upload their work
for sharing via Compsci.

What did you do?

How did you do it?

How would you support students to engage in a similar process

Roles & Group Dynamics

What has challenged your thinking?

Making Links

Problems

Which LOs did you use?

How did you engage with the Design Process?

Presentation & Debrief

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Curriculum & Assessment Planning

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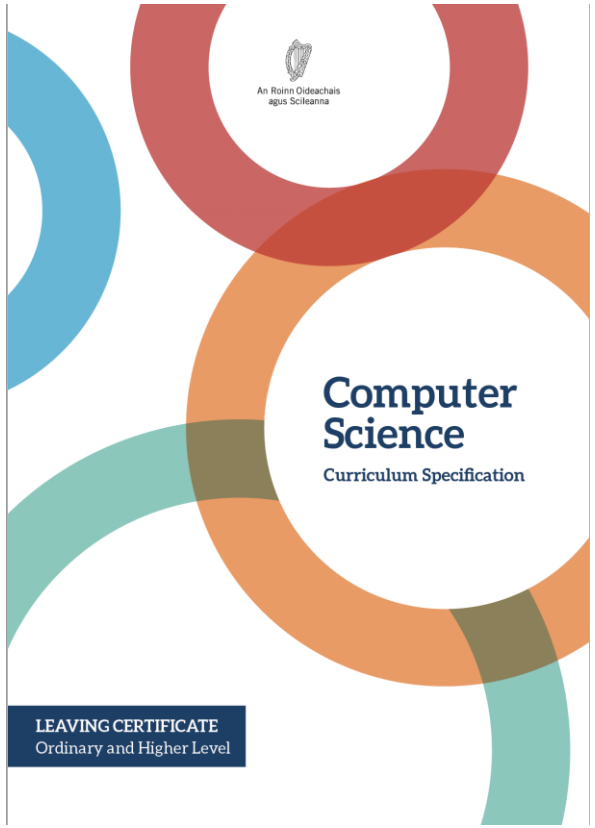

'Learning outcomes can best be defined as statements of what a learner knows, understands and is able to do after completion of learning.'

CEDEFOP (2009)

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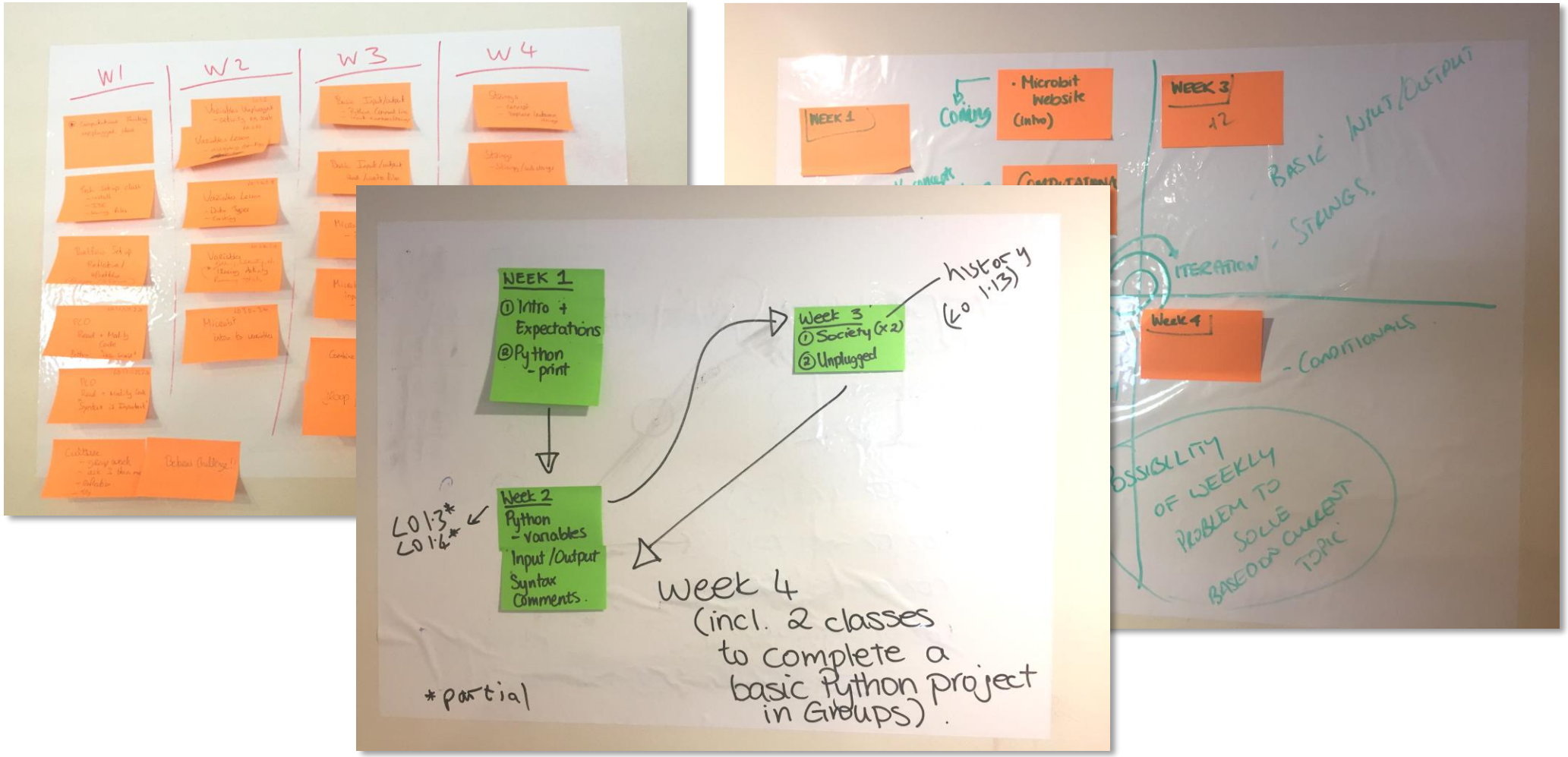
Mapping Activity from NW1 - May



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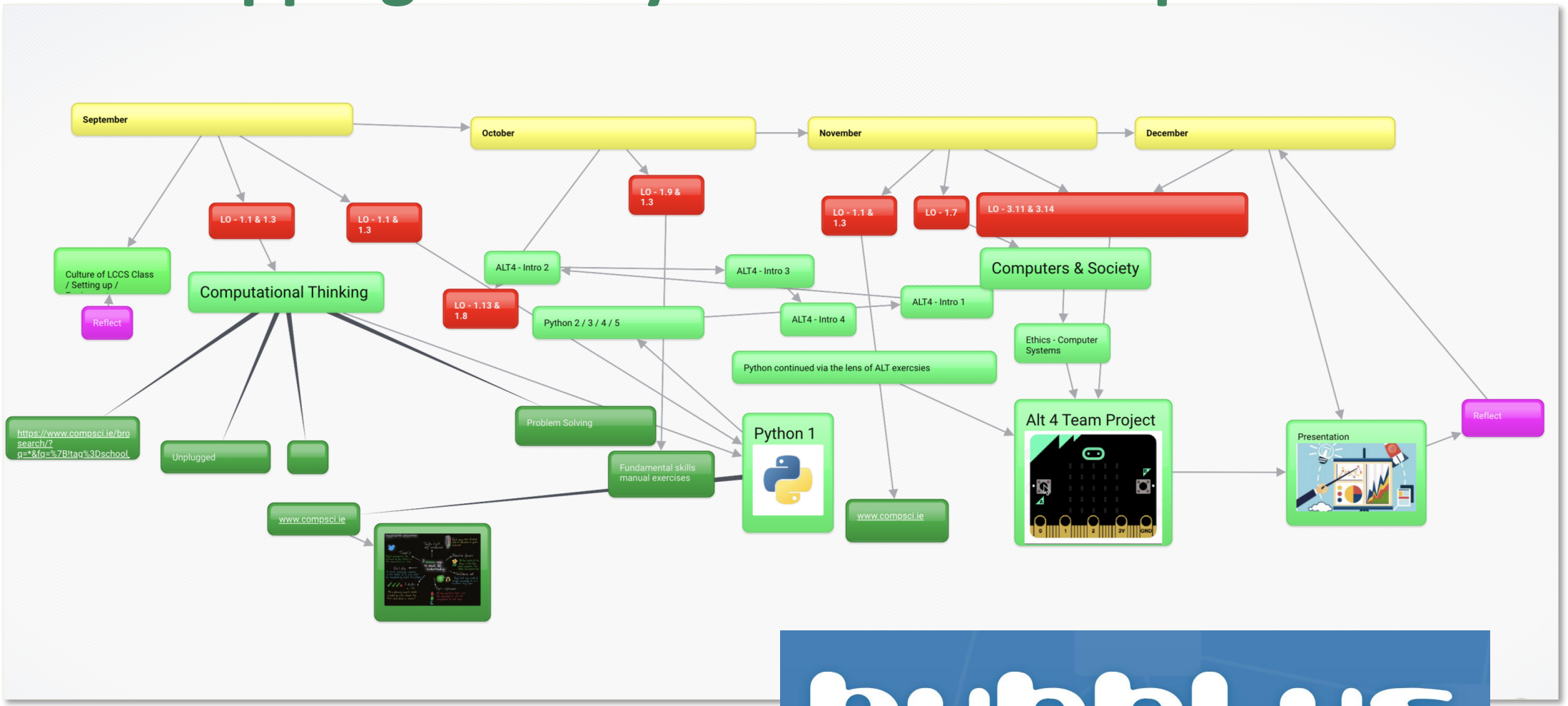
Mapping Activity from NW2 - September



bubbl.us

https://bubbl.us/NDcyMDQ2My84MTA1MjEvMDY4Zjc4M2E0N2Y3N2E3OWNlMGQ2NzUxZTk2M2NiMGE=@X?utm_source=shared-link&utm_medium=link&s=9137683

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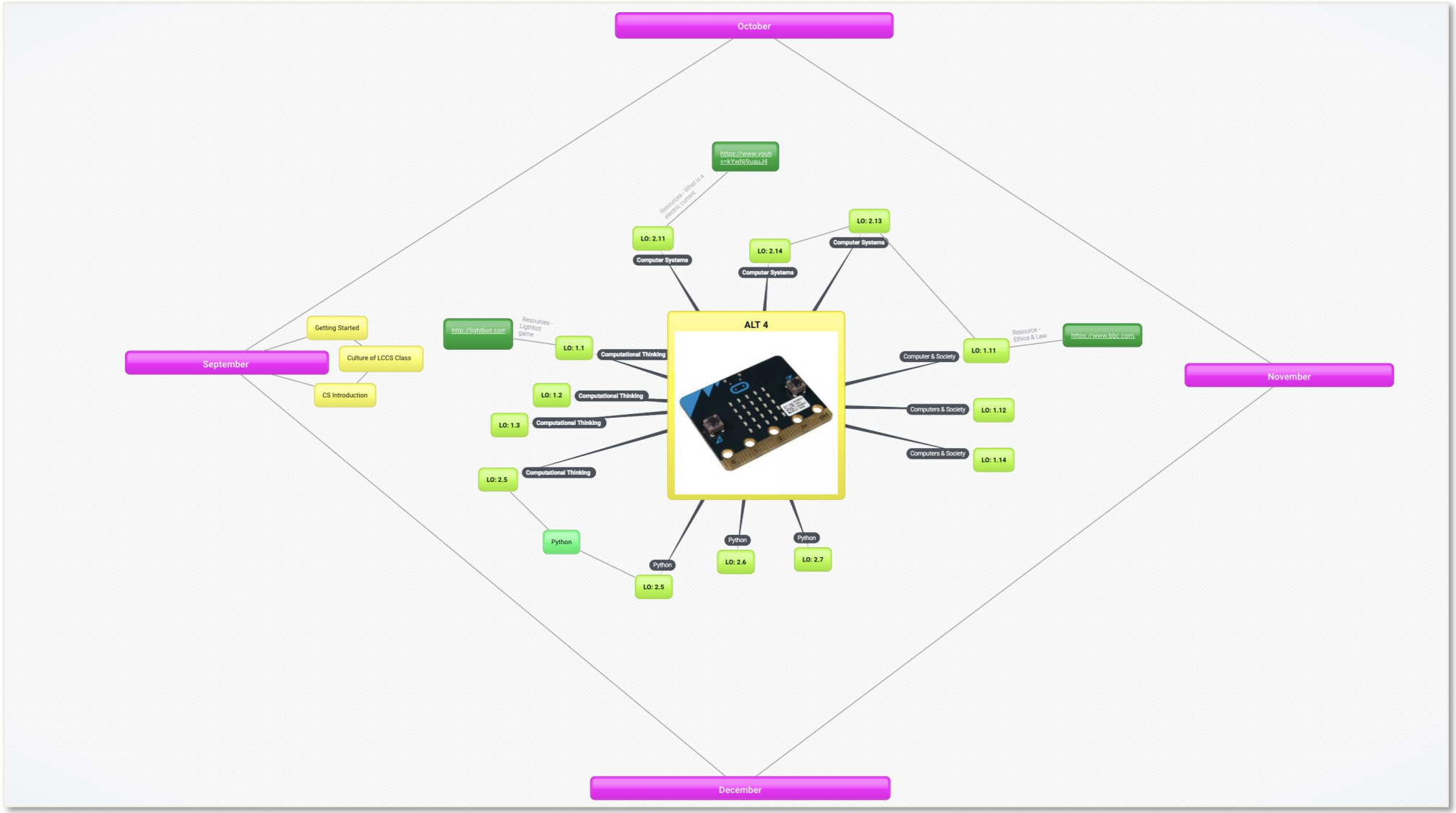

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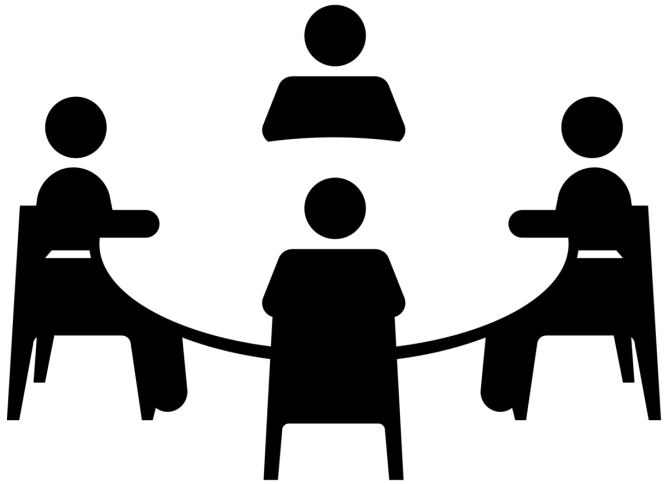
Group Activity



Develop in groups a curriculum map for January to May 2019 – Focus on ALT2 initially but include space for ALT3.

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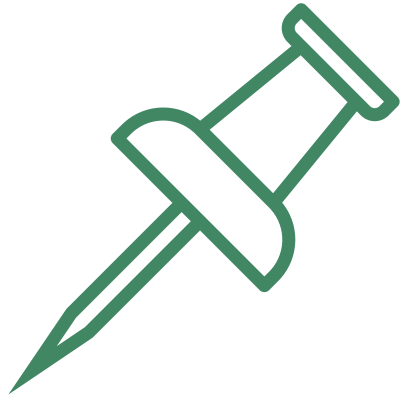

Key Message to remember:

Explore and teach the LOs through the lens of ALTs.

There are numerous ways to achieve this.

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Group Activity - Instructions

1. *In your assigned group go to the breakout area.*
2. *Take one laptop, pen and paper and the LCCS specification.*
3. *Log into the Bubbl site using your group's URL(see slack for url)*
4. *Develop in groups a detailed curriculum map for January to May – ALT2 & ALT3.*
5. *Work in your group and consider – Subject Topics / LOs / Resources / Assessment / Build up to ALTs / ALTs / Equipment etc.*
6. *Present back to the wider group.*

See slack for URLs for each group's URL.

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What will you do with LOs for ALT2 /ALT3?

What order should you teach them in?

What about repeating LOs / Linking to other part of the course?

How will students demonstrate they have achieved the learning outcomes?

What content or resources will you need?

What can you include for the Ordinary level students?

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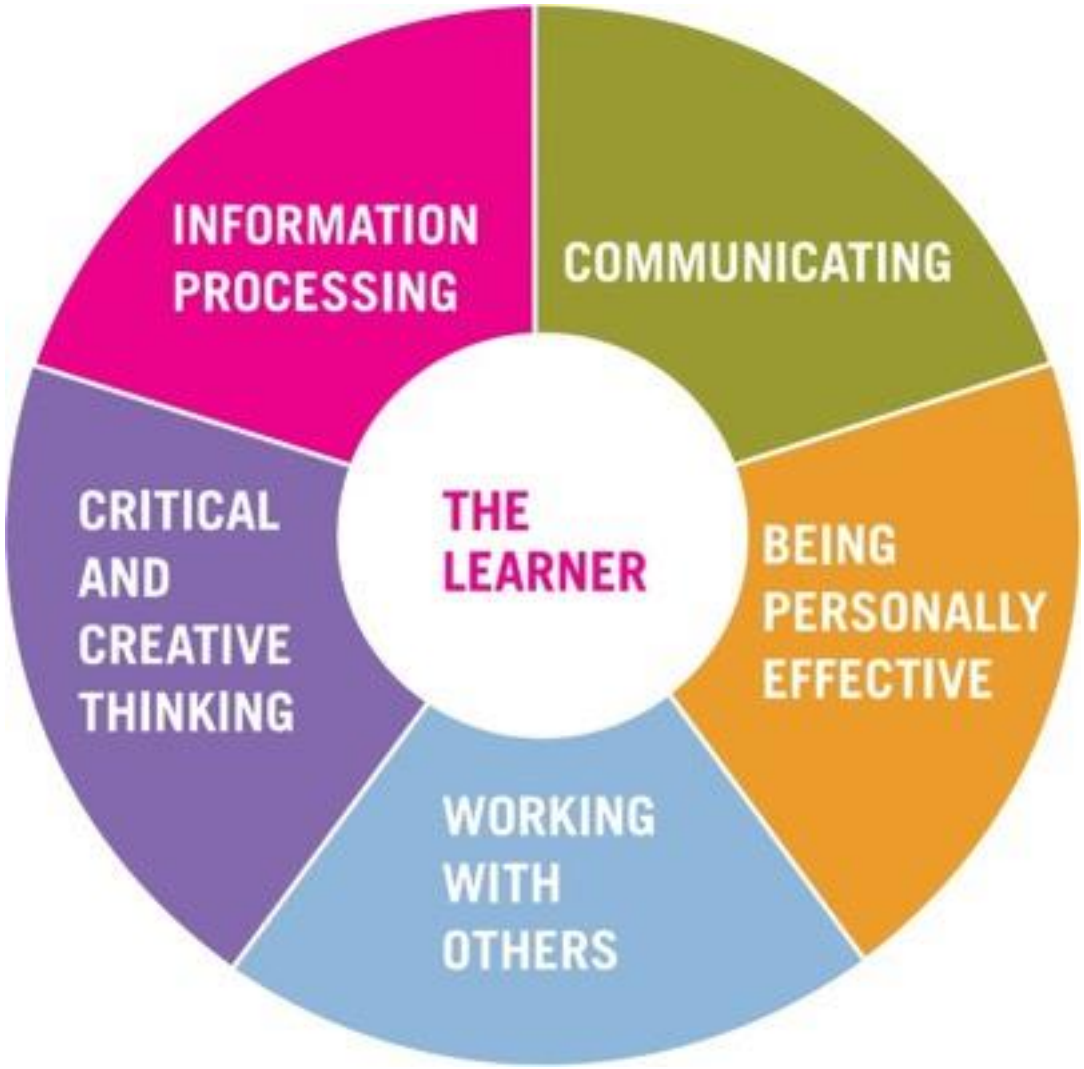

Key Skills of Senior Cycle

LCCS Specification: p12

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What has worked well for you?

What has challenged your thinking?

Why did you make these decisions?

Where are the links to other parts of the course

Which LOs did you use?

Where do you want to be in September 2019 in terms of the course?

Presentation & Debrief

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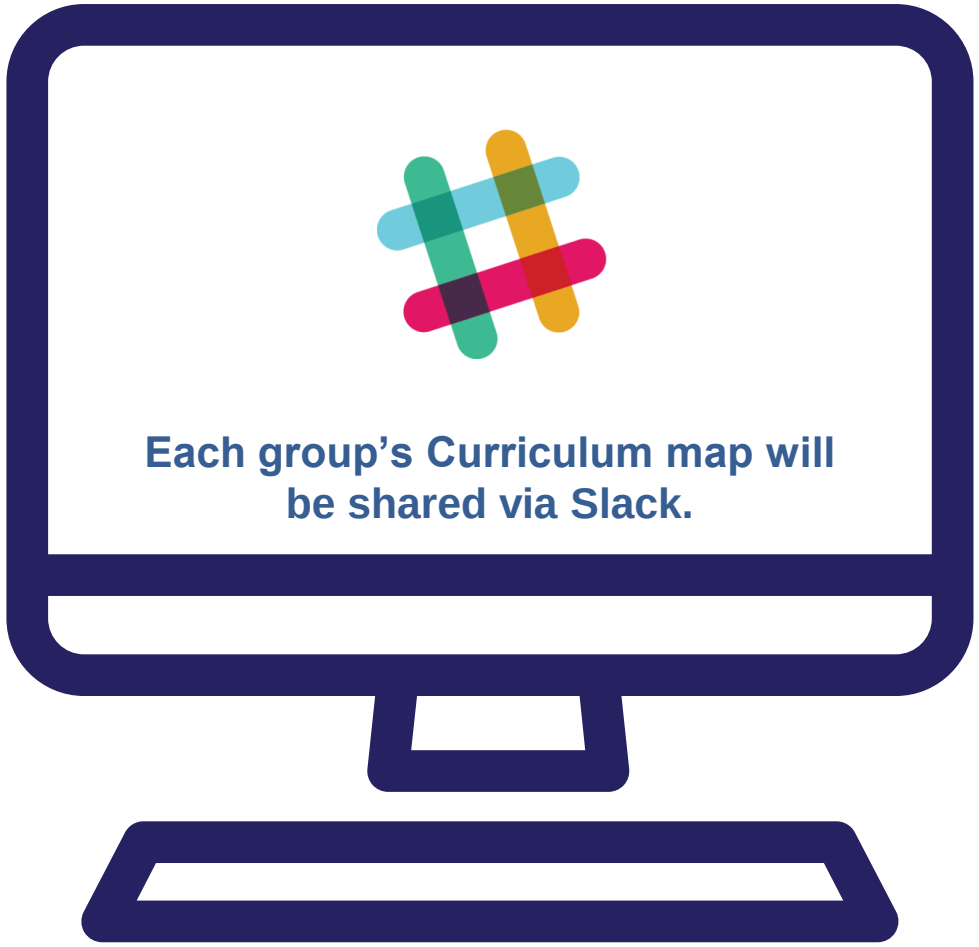

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