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

An Roinn Oideachais agus Scileanna
Department of Education and Skills

National Workshop 1

LEAVING CERTIFICATE
COMPUTER SCIENCE

LCCS Team

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slack

Workspace = pdstcs2020

twitter

@PDSTcs

Schedule

9.30am - 11.00am	Session 1 - Introduction to LCCS
	Break
11.30am - 1.00pm	Session 2 - Applied Learning Tasks and Computational Thinking.
	Lunch
2.00pm - 4.00pm	Session 3 - Teaching and Learning Programming for LCCS. Q & A.

Key Messages

- Computer Science is a subject for everybody.
- There are many ways to use this specification.
- All learning outcomes are interwoven and can be studied in any order.
- LCCS can be effectively mediated through the use of a constructivist pedagogical orientation.
- Digital technologies have the potential to enhance collaboration, learning and reflection.

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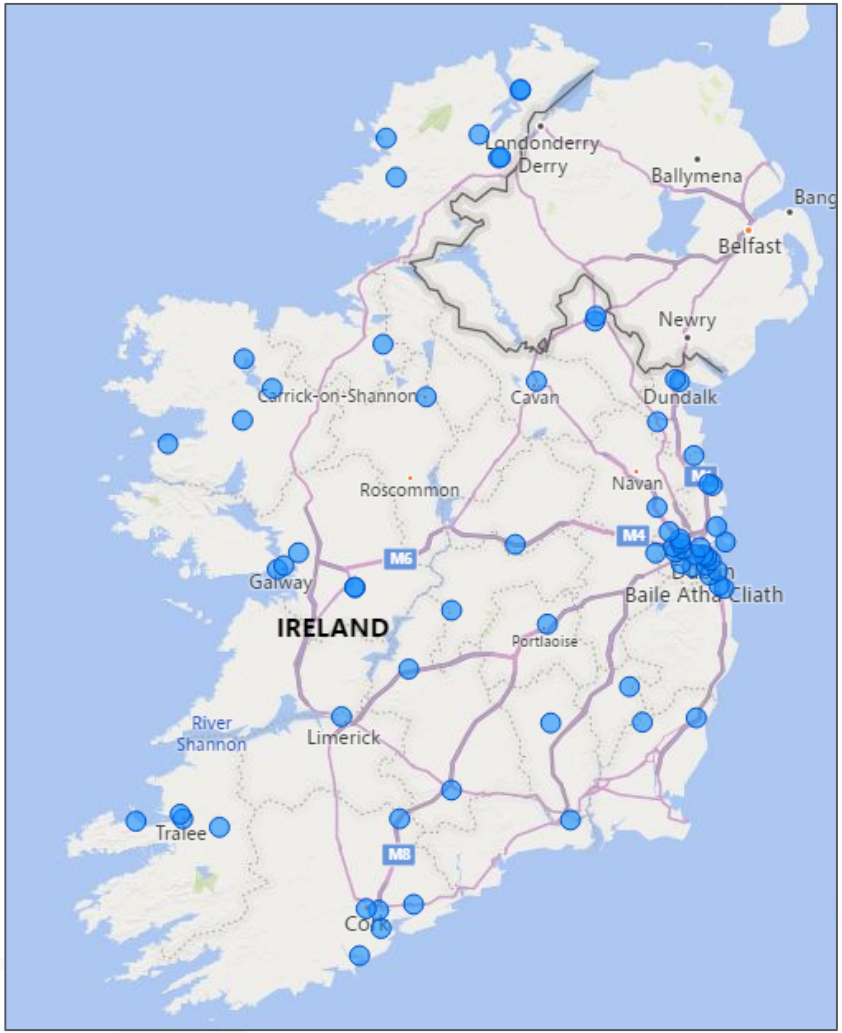
Culture and Expectations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Portlaoise
River
Shannon
Limerick
Tralee
M8
Cork

Teachers are the Key

Leader & Champion

Privileged Place

Bring Different Experiences

Questions:

1. What should the culture be in the group?

2. What expectations do you have from each other?

Mentimeter

URL = www.menti.com

Code = 10 78 86

Go to **www.menti.com** and use the code **10 78 86**

Mentimeter

What should be the culture in this group? What expectations do you have from each other?

Open Sharing Supportive

Collaborate and learn from each other. Develop a PLN locally to discuss issues.

That we will all help and advise each other. Shared resources and ideas.

SHARING OF RESOURCES AND IDEAS

I would expect a culture of collaboration, sharing and support and would hope that everyone will genuinely buy into that.

Culture of collaboration.

Collaborative

collaboration

collaboration

Pause scroll | Show image

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The Role of the PDST

What we are not

- Evaluators
- Policy makers
- Curriculum developers

What we are

- Teachers & school leaders
- Teacher Educators
- Facilitators / Enablers
- Purveyors of lifelong learning

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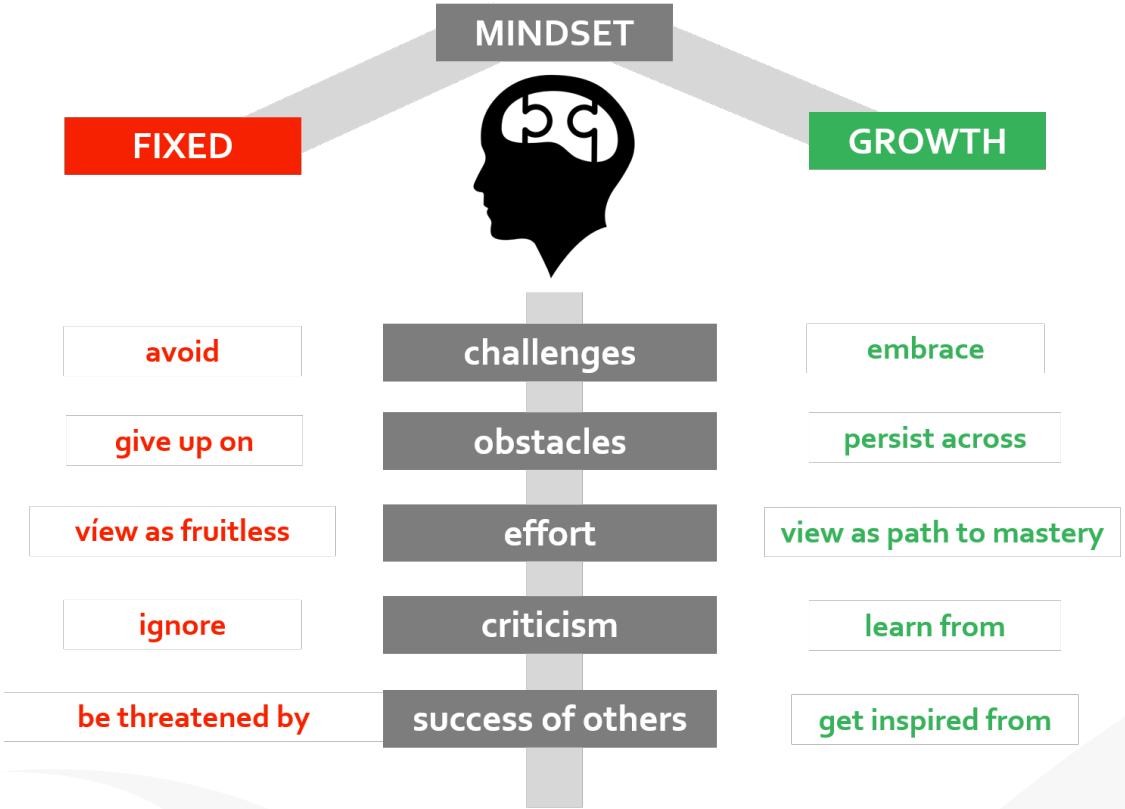
Growth Mindset

https://www.youtube.com/watch?v=75GFzikmRY0

Growth Mindset



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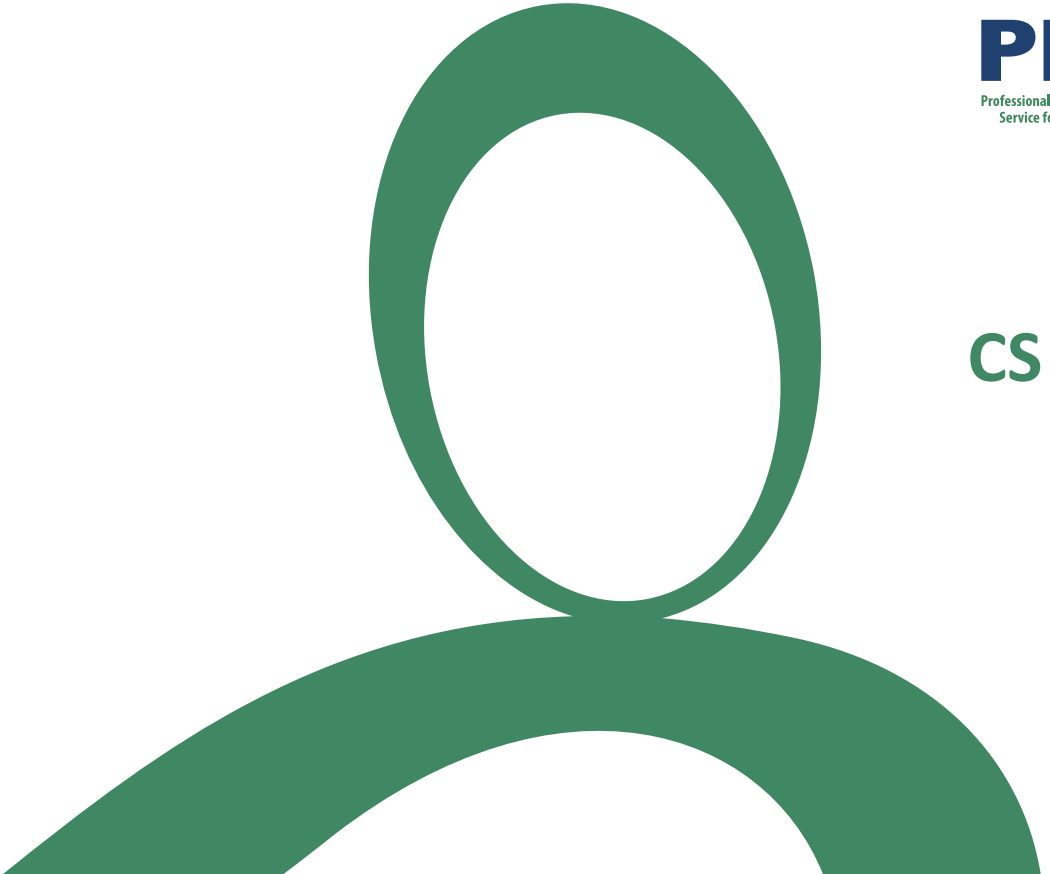

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CS For All

‘The Leaving Certificate Computer Science specification is designed for all students.’

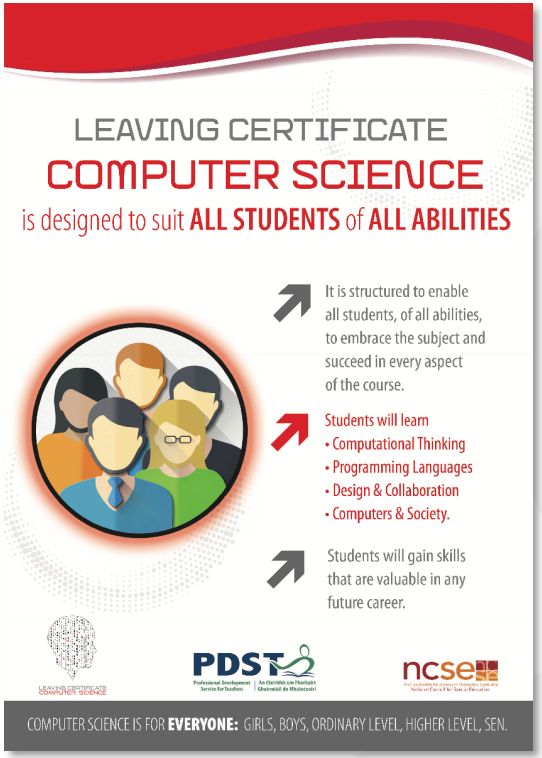
‘It applies to many aspects of students’ lives and is therefore relevant to a wide range of student interests.’

LCCS Specification, p2

CS For All – For all students who want to do it!

CSforALL

https://www.csforall.org/



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CPD Framework Review

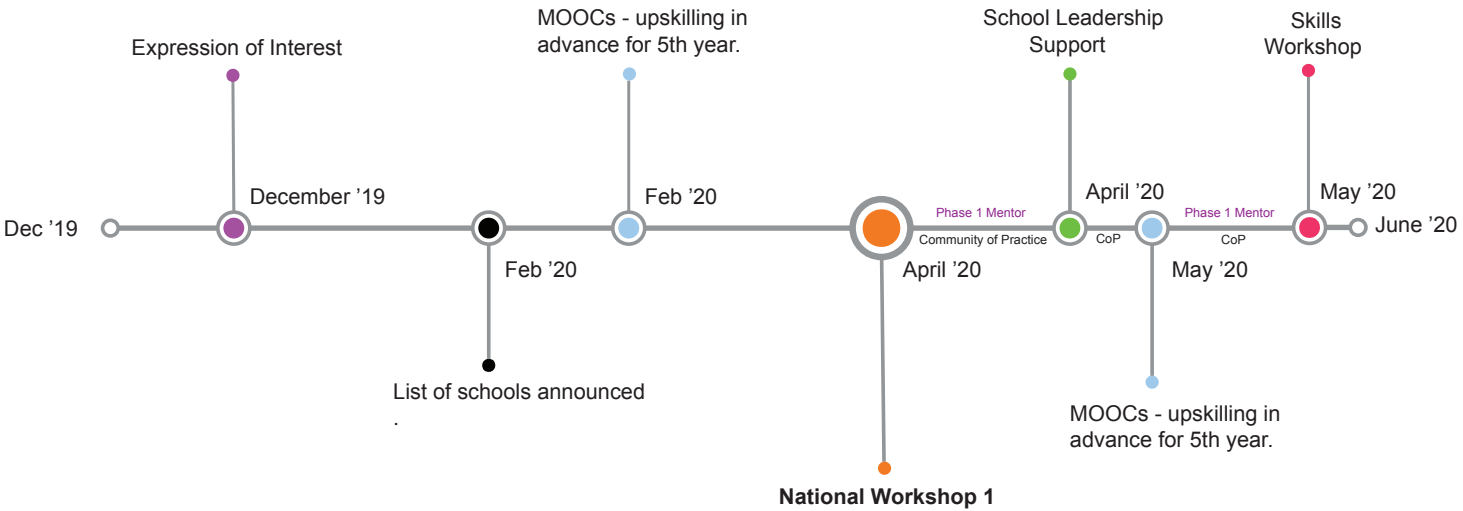
slack

COMPSCI.IE

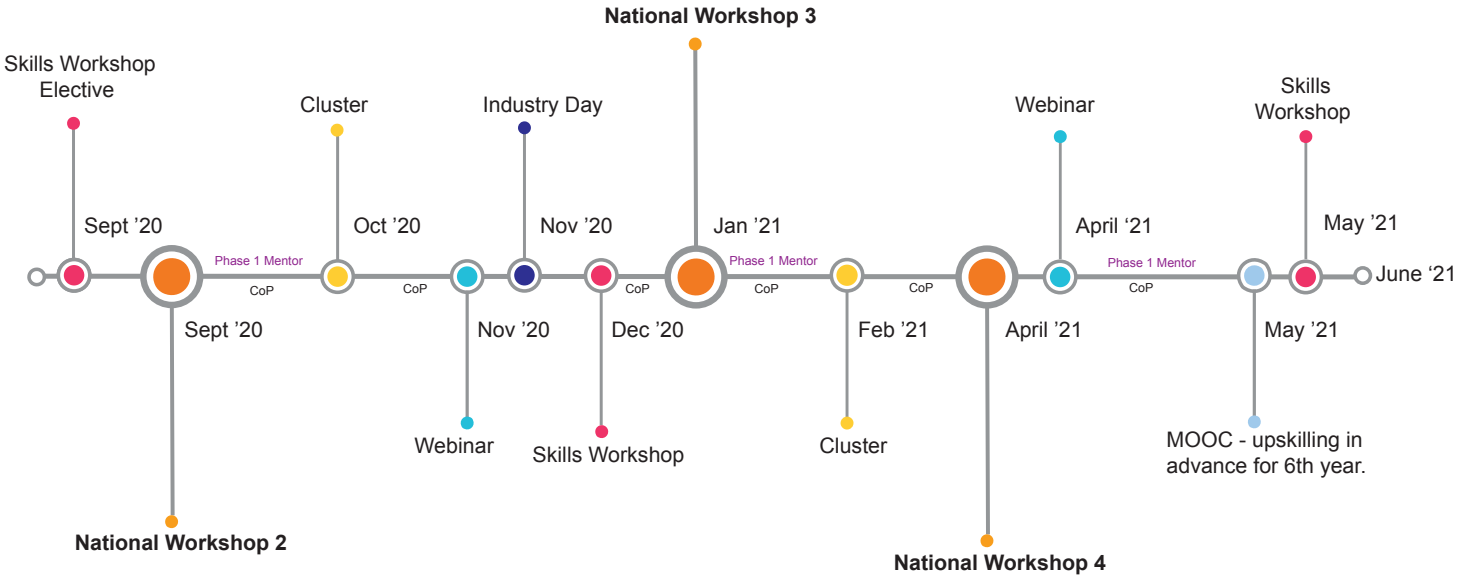
Community of Practice

Phase 1 Mentor

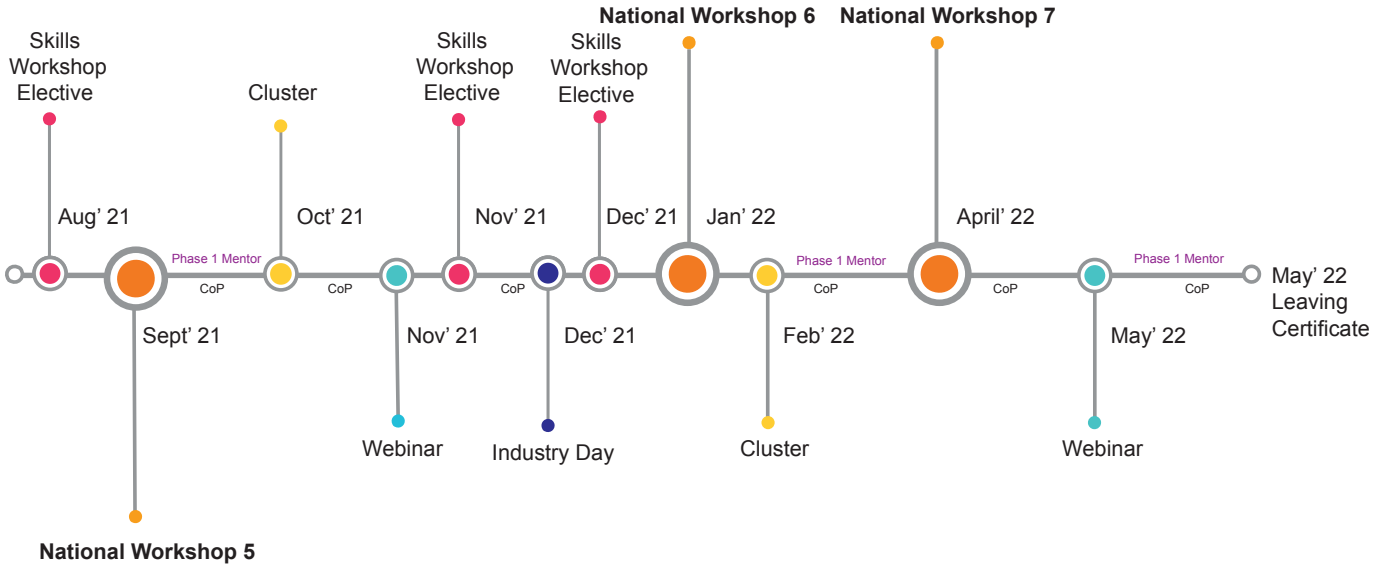
Overview of Framework



Timeline - Round 0



Timeline - Round 1 - 5th Year



Timeline - Round 2 - 6th Year

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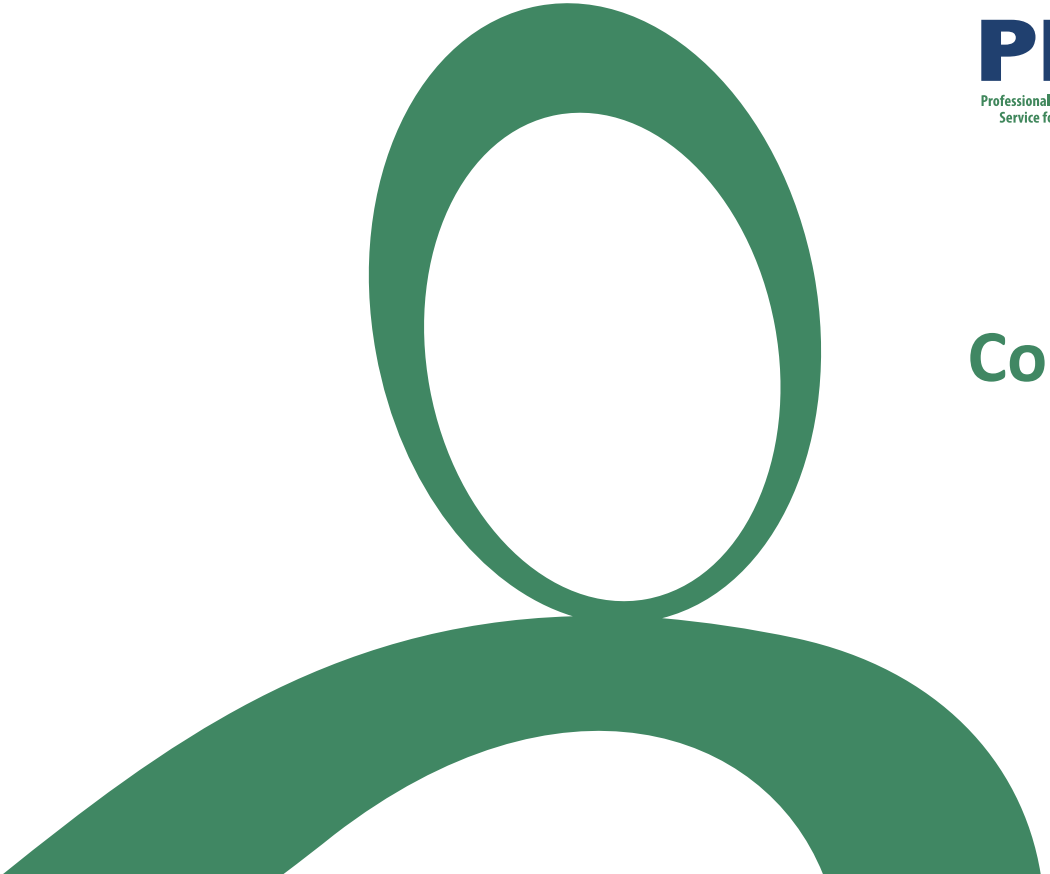
Community of Practice



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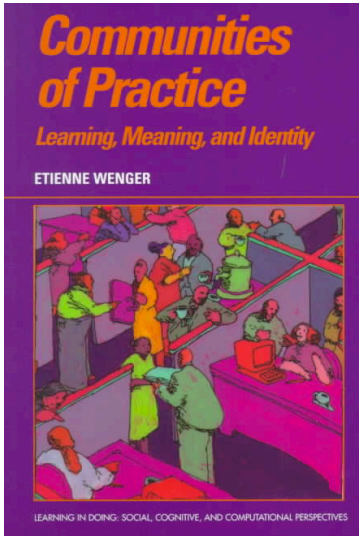

Communities of Practice
Learning, Meaning, and Identity
ETIENNE WENGER
LEARNING IN DOING: SOCIAL, COGNITIVE, AND COMPUTATIONAL PERSPECTIVES

‘Groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly’

‘Engage in a process of collective learning in a shared domain of human endeavor’

- Etienne Wenger

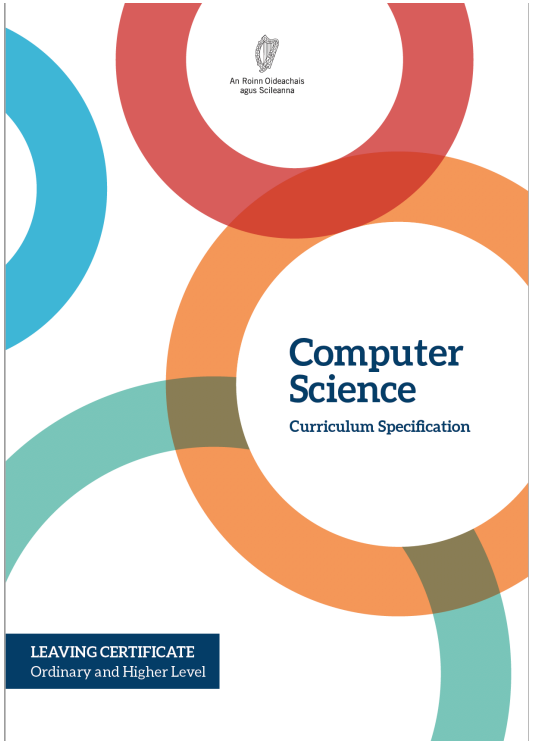
LCCS Community of Practice

Stretch break

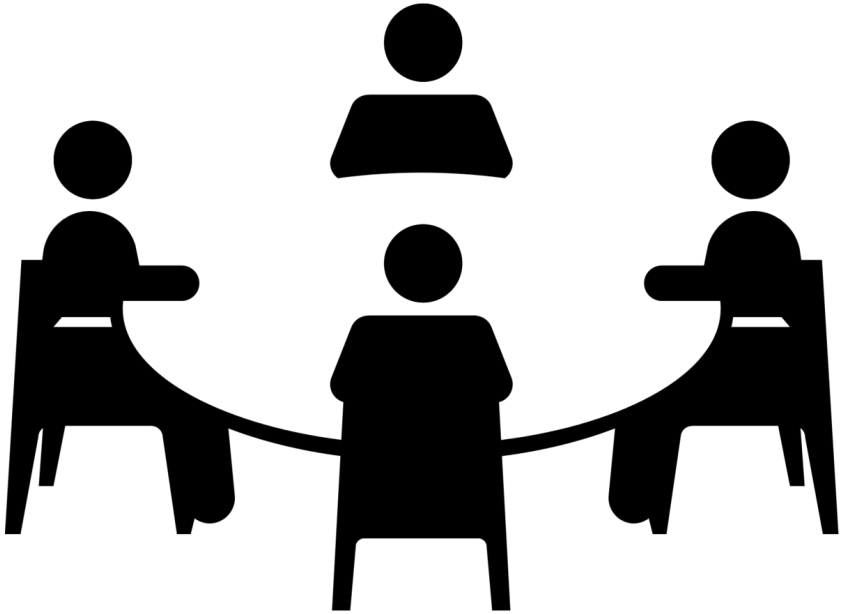
Group Activity

Explore the Curriculum Specification

Leaving Certificate Computer Science Curriculum Specification



Group Activity – ZOOM Breakout rooms



Group Activity - Instructions

1 - Each group will be given a section of the curriculum specification document to read, dissect and break down further (excluding the LOs).

2 - You should nominate a chair and a note taker.

3 - Use the Google doc provided to summarise your group's main points. Link via Slack.

4 - The chair presents your findings to the other groups at the end.

Groups:

Group 1 : Senior Cycle

Group 2 : Rationale / Aim / Objectives

Group 3 : Related Learning

Group 4 : Structure of LCCS

Group 5 : Key Skills

Group 6 : Teaching & Learning - ALTs

Group 7 : Teaching & Learning - Differentiation

Group 8 : Assessment

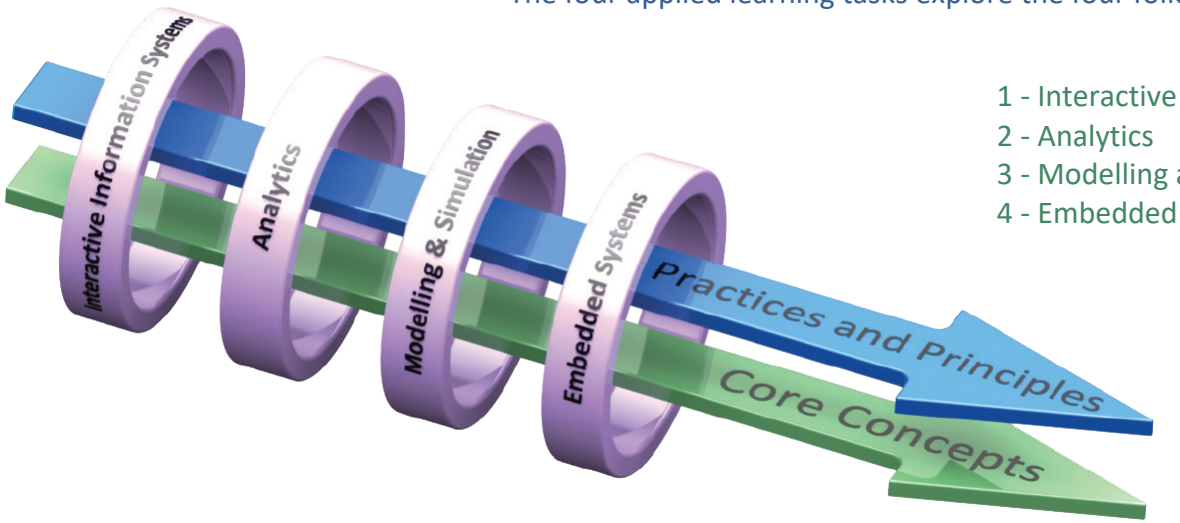
5 Key Skills at Senior Cycle

LCCS Strands

Strand 1: Practices and principles	Strand 2: Core concepts	Strand 3: Computer science in practice
▸ Computers and society ▸ Computational thinking ▸ Design and development	▸ Abstraction ▸ Algorithms ▸ Computer systems ▸ Data ▸ Evaluation/Testing	▸ Applied learning task 1 - Interactive information systems ▸ Applied learning task 2 - Analytics ▸ Applied learning task 3 - Modelling and simulation ▸ Applied learning task 4 - Embedded systems

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.

LCCS Assessment

Component	Percentage
End-of-course examination ▸ Computer-based assessment of learning outcomes	70
Coursework assessment ▸ One computational artefact with report	30
Total	100

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LCCS Phase 1 Case Study Video

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LCCS Phase 1 Teachers - Top Tips

https://ncca.ie/en/senior-cycle/curriculum-developments/computer-science

Go to **www.menti.com** and use the code **54 28 02**

Mentimeter

What top tip would you give the new LCCS teachers about to start their LCCS journey?

Python programming : Some students will find it very easy, others will find it very difficult - when covering a topic have plenty of easy, medium and difficult exercises.

When working on ALTs set several dates for deliverables during project; make sure that teacher and students know what they are doing at all times; get students to email updates at end of each class. Keep groups small.

Don't get overwhelmed by the staggering amount of resources for every topic. Pick a couple for resources for each topic that work for you or you'll be spending all your time throwing information at students

Don't Panic

Relax

Get students going with Python at the start - show them code, get them to predict output, moving

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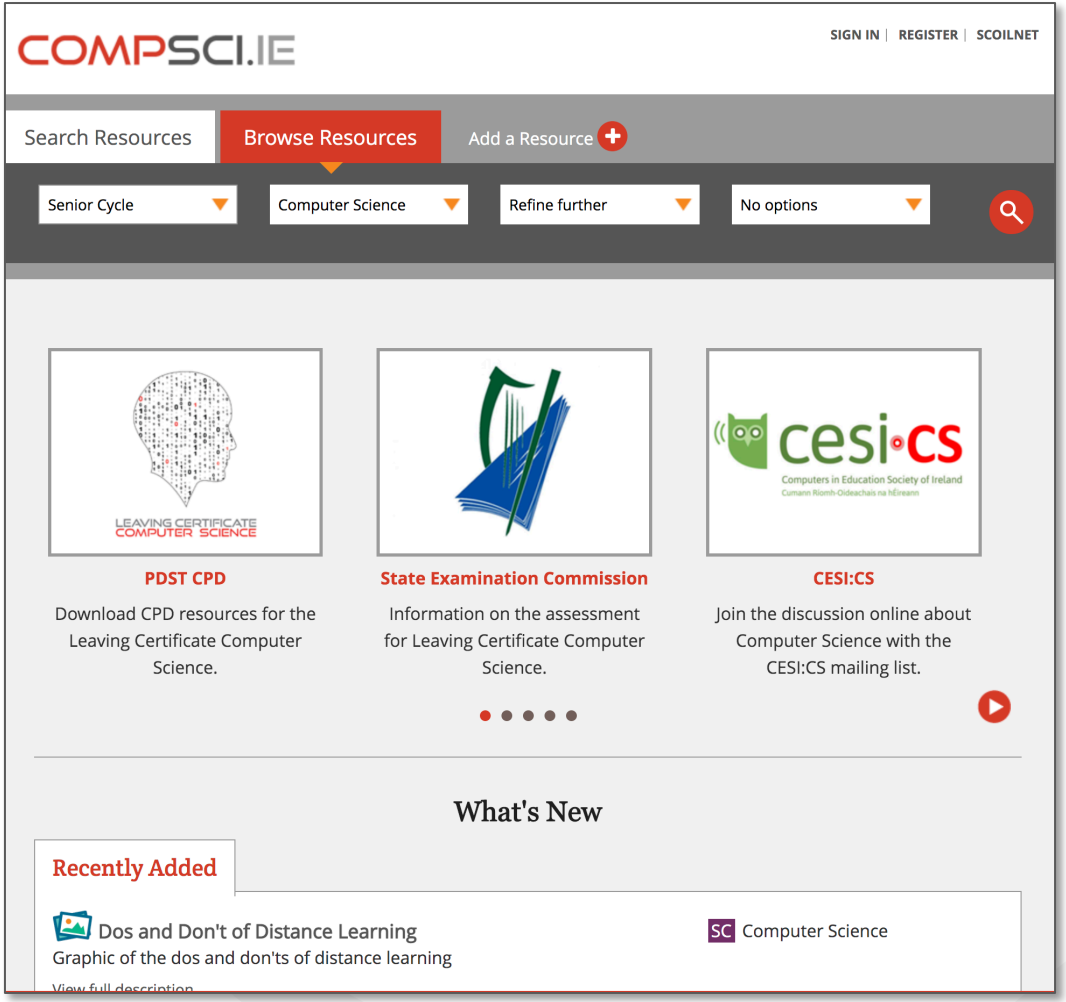
Resource Development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Search Resources
Browse Resources
Add a Resource
Senior Cycle
Computer Science
Refine further
No options
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Download CPD resources for the Leaving Certificate Computer Science.
State Examination Commission
Information on the assessment for Leaving Certificate Computer Science.
cesi·cs
Computers in Education Society of Ireland
Cumann Ríomh-Oideachais na hÉireann
CESI:CS
Join the discussion online about Computer Science with the CESI:CS mailing list.
What's New
Recently Added
Dos and Don't of Distance Learning
Graphic of the dos and don'ts of distance learning
View full description
SC Computer Science

What is Compsci.ie?

Who is it for?

COMPSCI.IE

Why is it needed?

How does it work?

Where is my role?

Activity to take home

1. Each teacher has been assigned a topic on Slack.

2. Find and upload to Compsci.ie **two** good resources for your topic before you break for the summer.

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