Oide

Tacú leis an bhFoghlaim Ghairmiúil i measc Ceannairí Scoile agus Múinteoirí

Supporting the Professional Learning of School Leaders and Teachers

Mathematics

Professional Learning Experience (PLE) 2026-2027

Continuity and Transition:

Cultivating key competencies in Transition Year to support student engagement at Leaving Certificate



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Senior Cycle Redevelopment Update



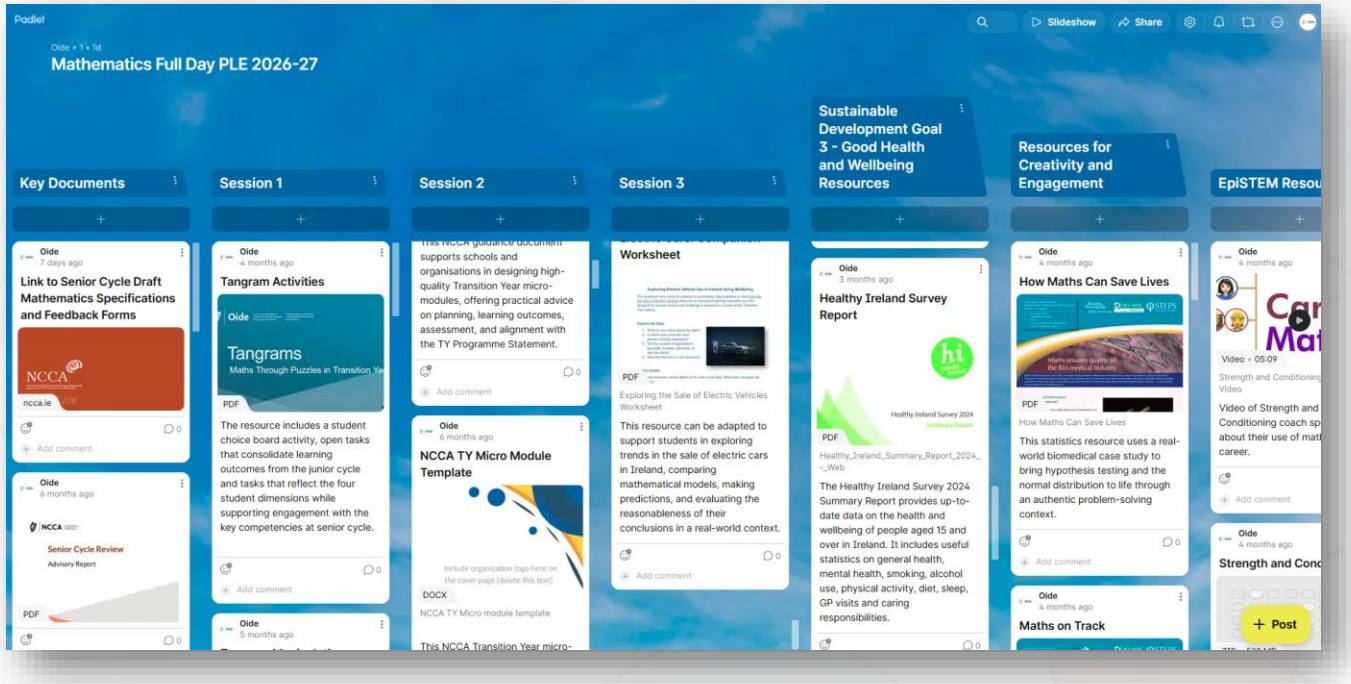
The Draft Specification for Leaving Certificate Mathematics has been approved for public consultation.

Consultation Period:

20th August - 18th November 26

Have your say:

Supporting Resources



https://tinyurl.com/Maths-Cluster-PLE-2627

Pieces of the Puzzle



Option 1: Quick Build Challenge

Use a tangram set.
Recreate one silhouette.
When finished, agree:
What made this easy or tricky?

Option 2: Create Your School Symbol

Use tangram pieces to create a shape that represents your school.
It could reflect ethos, students, subjects, or “vibe”.

Option 3: The Fastest Shape Wins

Make a perfect square (or rectangle) using all 7 pieces.
Can everyone at the table explain *how you know it’s correct?*

Looking forward we will….

Session 1

To explore the rationale, aims and Student Dimensions of TY Mathematics, and consider how developmental indicators and student experiences can support students' transition into senior cycle learning.

Session 2

Explore how the Curriculum Dimensions can inform the design of TY Mathematics micro-modules and consider Global Citizenship Education as a meaningful context for learning.

Session 3

Investigate engaging TY Mathematics approaches that promote challenge, engagement, and creativity through the use of visual representations, problem posing, and digital technology to support mathematical modelling.

Key Message

Transition Year offers a valuable space to explore continuity and progression, where students build on their junior cycle learning while engaging with senior cycle key competencies through inquiry, modelling, and meaningful use of digital tools.



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Supporting the Professional Learning of School Leaders and Teachers

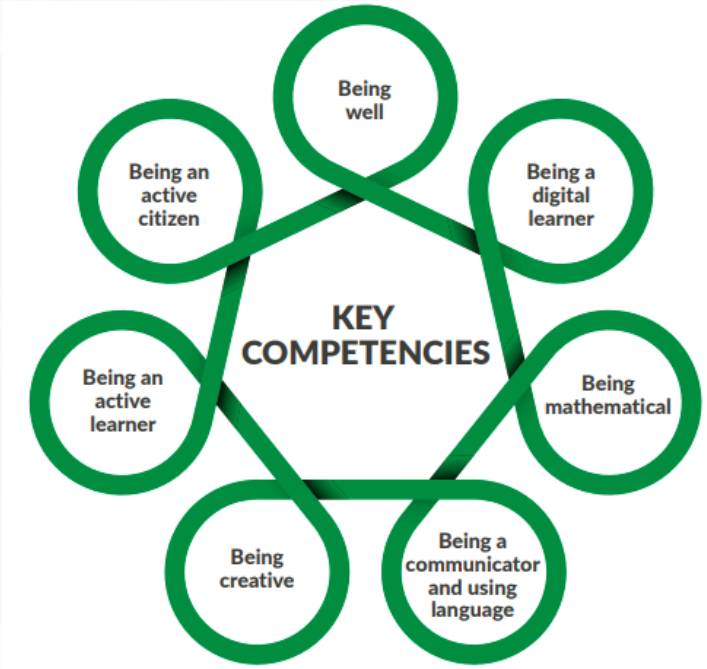
Session 1

We will:

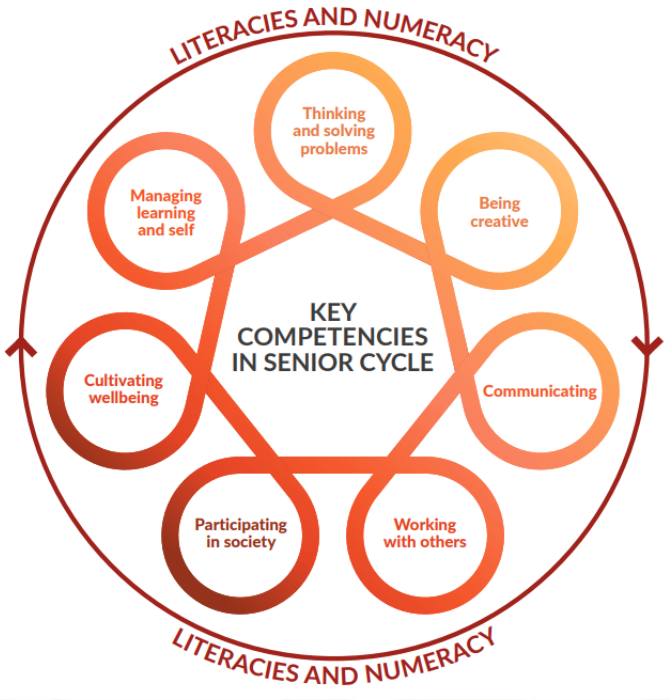
- Explore the rationale and aims of Transition Year Mathematics in supporting students' transition into senior cycle learning.
- Develop an understanding of the student dimensions by engaging with the developmental indicators and student experiences, and considering how these can be reflected in TY Mathematics.

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A Continuum of Learning







Primary Years

Junior Cycle

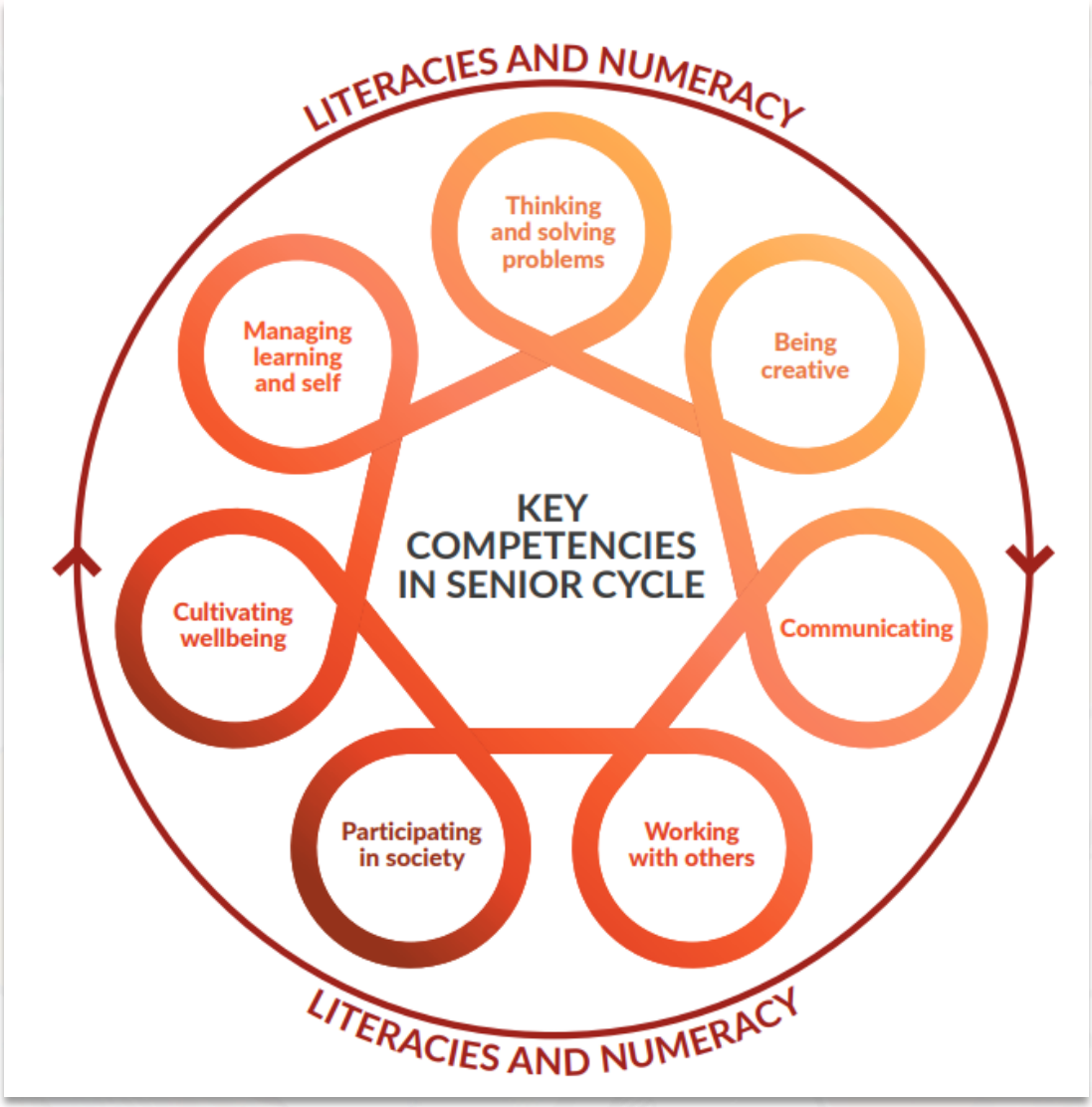
Senior Cycle

Continuity

Pause for Thought

What mathematical competencies/skills could my TY students further develop, and how can I support their development?

Key Competencies in Senior Cycle





(NCCA, 2024)

TY Programme Rationale

TY offers…

"….time, space and autonomy to create enjoyable and meaningful educational experiences that support students….."

TY enables…

"..develop a greater capacity to respond to uncertainty, manage complexity, nurture personal interests and become agents of positive, ethical change in society."

TY supports…

"students to become more adaptable, empathetic, competent and resilient human beings…"



(DEY, 2024)

TY Programme Aims

Whole-Person Development

- ✓ Support personal, social & emotional growth
- ✓ Build on prior learning experiences

Meaningful Learning Experiences

- ✓ Create engaging, enjoyable opportunities
- ✓ Develop key competencies in school, home & society

Future Pathways & Lifelong Learning

- ✓ Explore careers and further education options
- ✓ Foster independence and lifelong learning skills

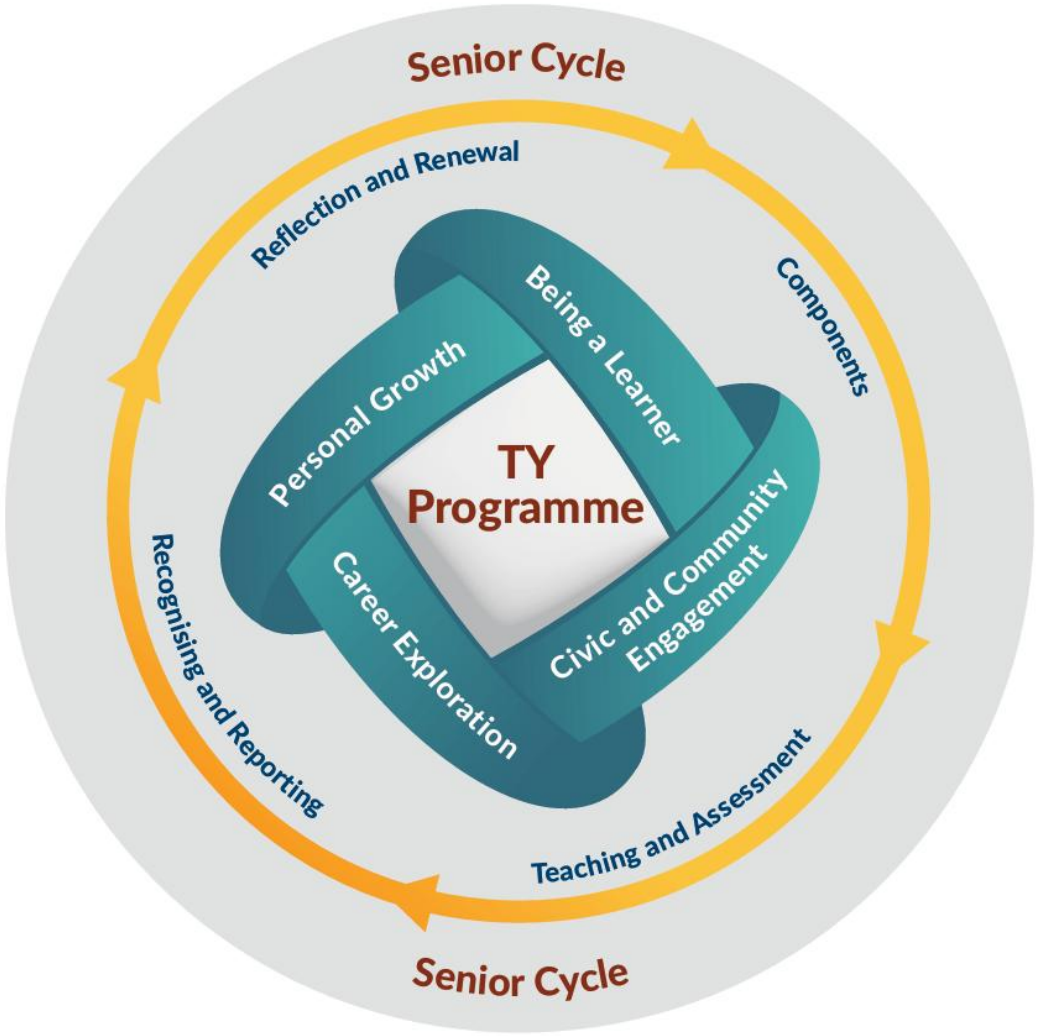
Continuous Improvement & Collaboration

- ✓ Evolve through reflection and feedback
- ✓ Involve students, teachers, parents & community



(DEY, 2024)

The TY Programme Statement



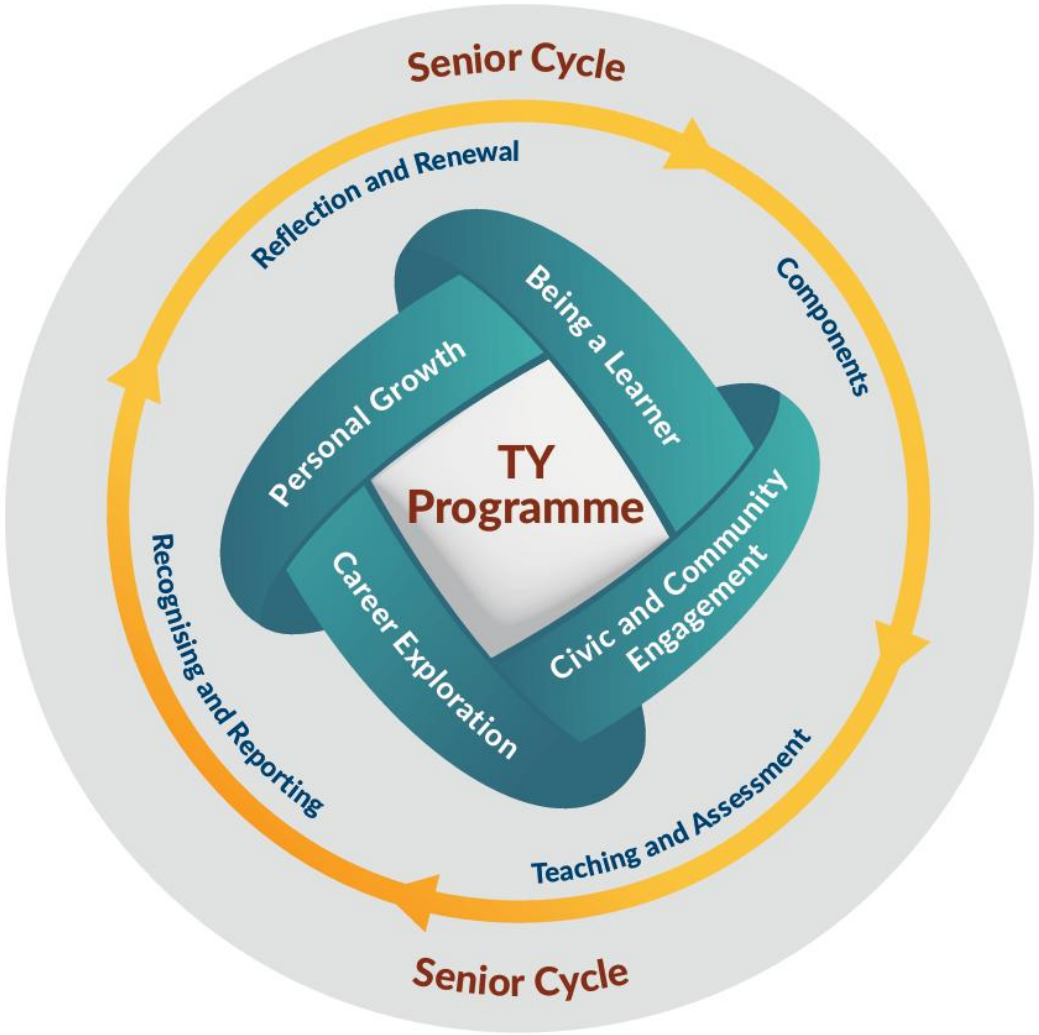
Student Dimensions

Curriculum Dimensions



(DEY, 2024)

Student Dimensions



Personal Growth

Being a Learner

Civic and Community Engagement

Career Exploration



(DEY, 2024)

Developmental Indicators and Student Experiences

> *Developmental Indicators… are intended to **guide** the student and the school and **set out the parameters for the learning and development** of the student during TY.*

> *Student Experiences… are intended to provide a **variety of possible opportunities and contexts** to support student learning and development consistent with the developmental indicators.*



(DEY, 2024)

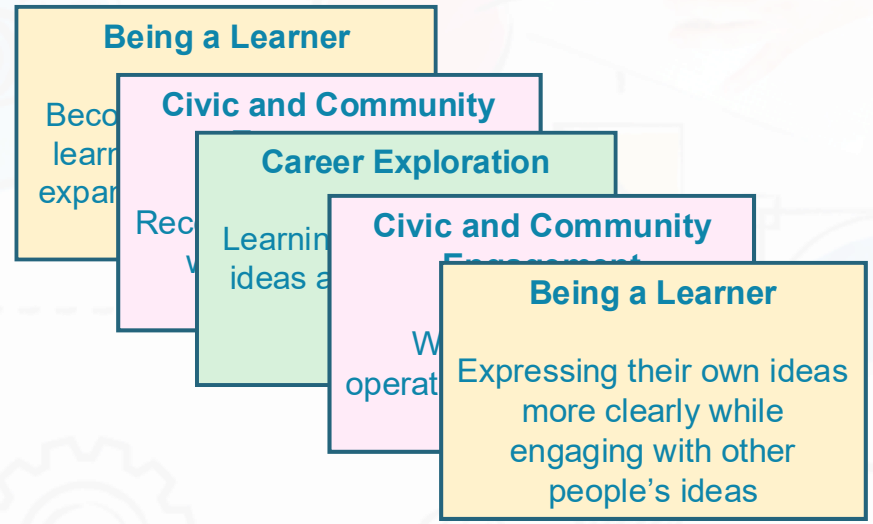
Learners in Practice

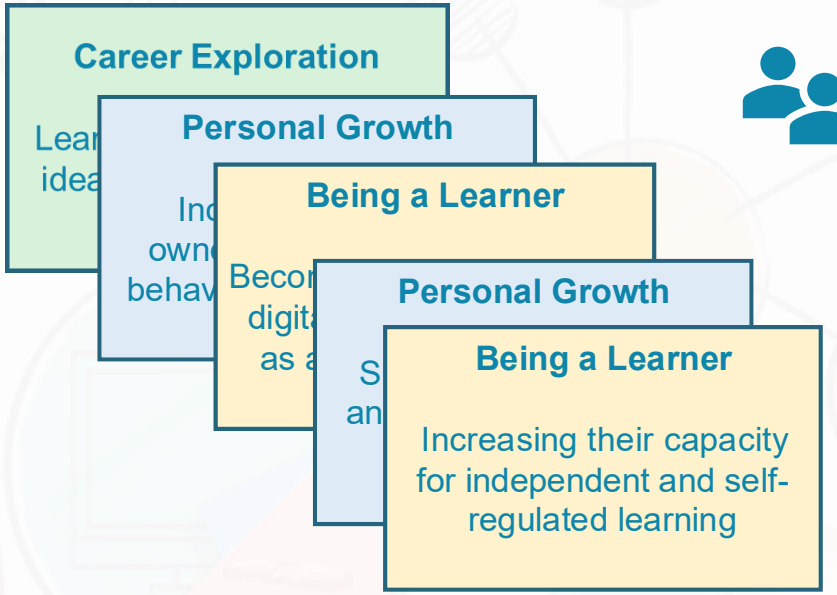
Sort the sample of 10 developmental indicators into three categories as they relate to students in your context:

- Strongly evident (3)
- Partially evident (4)
- Not really evident (yet) (3)

Looking at the bottom 3, which of these feels most important but is currently underdeveloped in your context?

What one small, realistic way could you bring this into the students' experience?





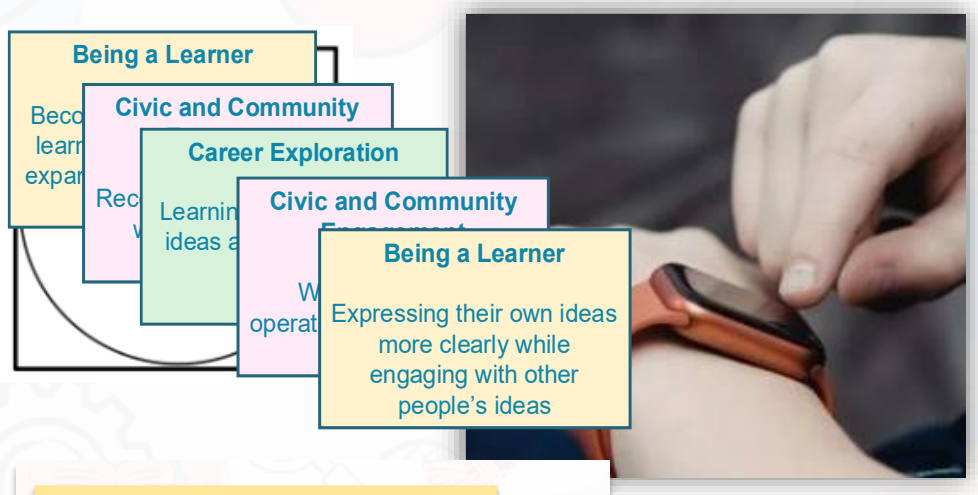
Smart Design Challenge

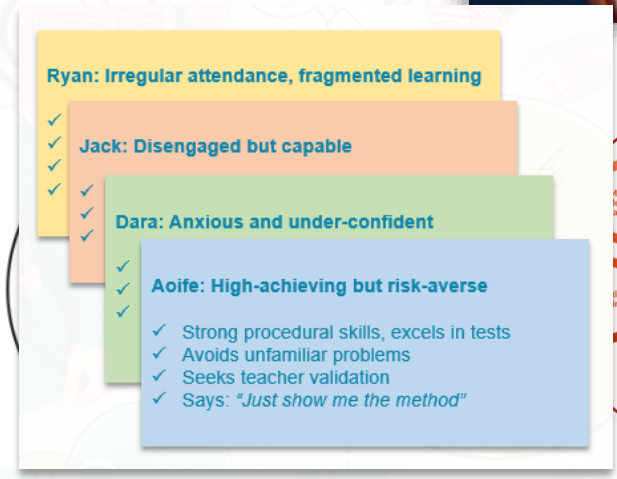
1. Which TY developmental indicators are supported in this experience?

2. Choose **one** learner profile:

a) What are the barriers to learning for this student?

b) How could you overcome them and what teaching strategy would facilitate this?



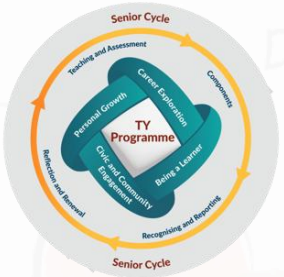




Blue Sky Carousel



- ✓ In your groups, rotate clockwise through each station in the carousel.
- ✓ At each station, generate and record ideas for student experiences relating to each student dimension that you could design for your TY Mathematics context.

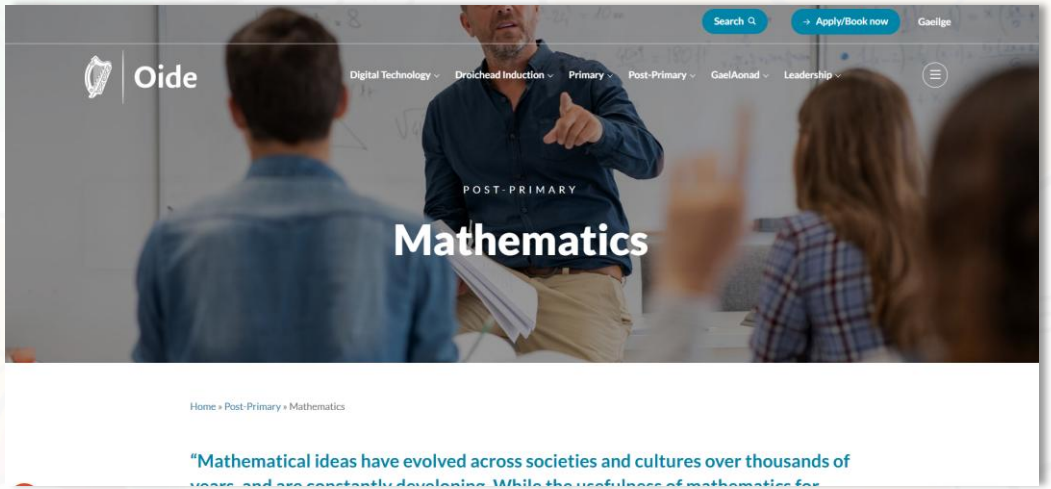


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Session 2

We will:

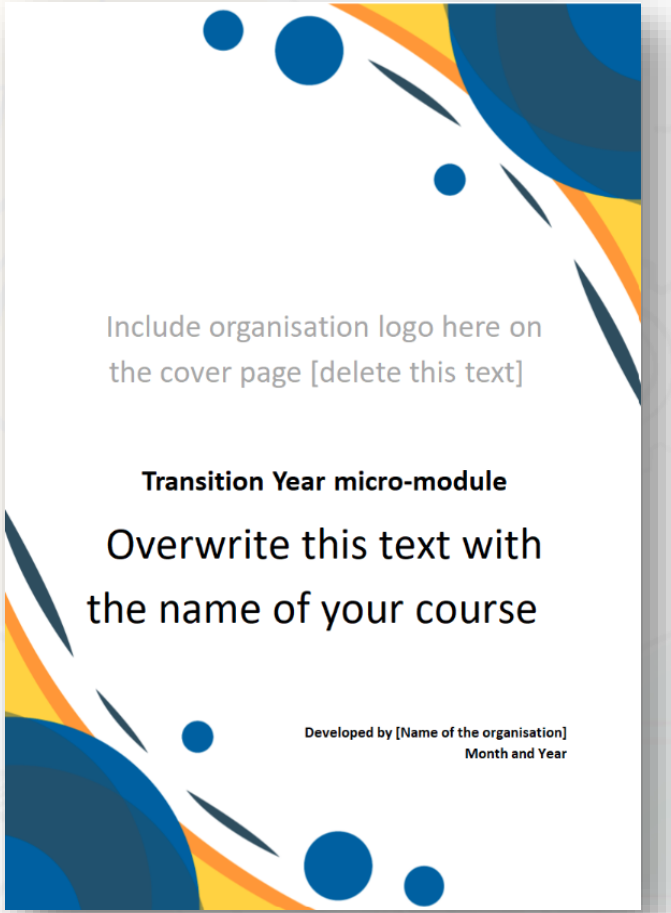
- Develop an understanding of the Curriculum Dimensions and their role in informing the design of TY Mathematics micro-modules.

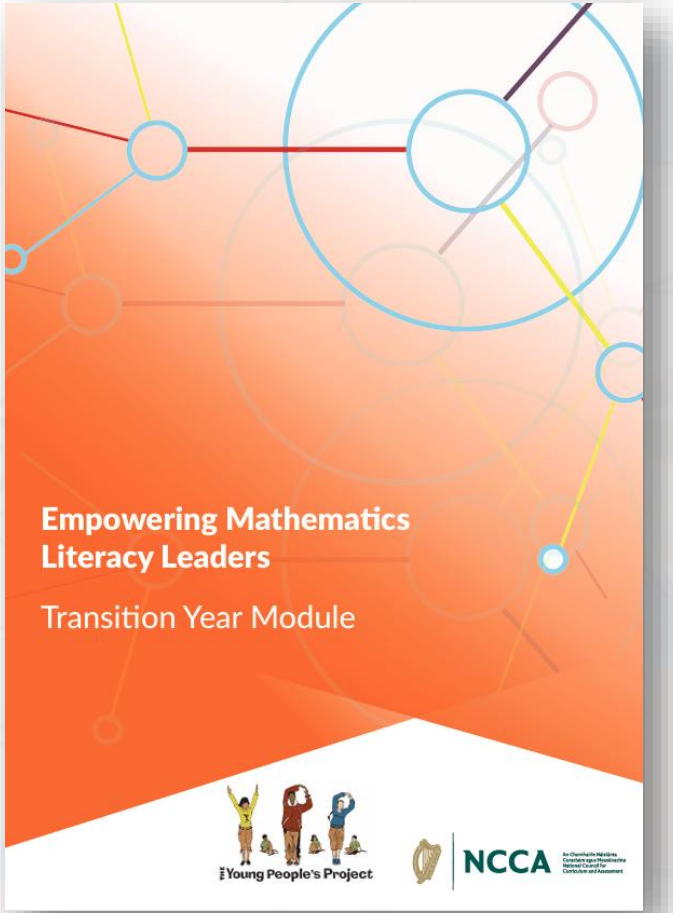
- Engage with Global Citizenship Education as a theme in the TY mathematics context.

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Building a Micro-Module







Planning with Curriculum Dimensions



Teaching and Assessment

*TY affords teachers the opportunity to be **innovative** in devising and delivering high quality **broad-based teaching** and assessment opportunities to support student learning.*



(DEY, 2024)

Teaching and Assessment: Individual Classroom Practices

- Appropriate student-centred approaches
- Planning for learning opportunities to support all students
- Preparation of appropriate resources and use of digital technologies
- Opportunities for students to work on extended tasks, such as projects and competitions
- Genuine and meaningful collaboration between students, both within and across TY components
- Creating and sharing of success criteria with students to enable peer and self-assessment
- The use of a variety of modes of assessment, for both summative and formative purposes
- Opportunities for students to experience success within and across curriculum components
- Constructive and timely feedback from the teacher, designed to improve learning and development
- Effective questioning and opportunities for the student to give and use feedback



(DEY, 2024)

Reflection Informing Planning

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Appropriate student-centred approaches

Planning for learning opportunities to support all students

Preparation and use of

Opportunities extended task competitions

Genuine and meaningful collaboration between students, both within and across TY components

Creating and sharing of success criteria with students to enable peer and self-assessment

The use of a variety of modes of assessment, for both summative and

experience curriculum

dback from improve learning and development

Effective questioning and opportunities for the student to give and use feedback

On reflection which of these is most evident in your own teaching practice?



(DEY, 2024)

A Theme for TY Mathematics

Global Citizenship Education (GCE):

- Links global and local justice issues
- Explores the root causes
- Equips learners to:
  - ✓Think critically
  - ✓Build empathy
  - ✓Challenge unjust global systems
  - ✓Take meaningful action.

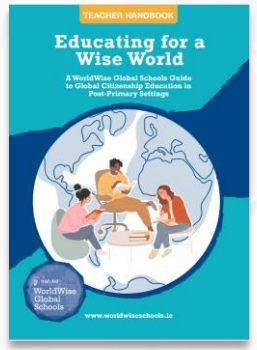
Supports the development of Junior Cycle key skills

Supports the development of TY Student Dimensions



Aligned with the guiding principles of Senior Cycle

Supports the development of Senior Cycle key competencies



Sustainable Development Goals: A Stimulus for GCE



Source: THE 17 GOALS | Sustainable Development

Focusing on a Sustainable Development Goal (SDG), what might engagement with this look like in your mathematics classroom?

How might the SDG support meaningful cross-curricular learning in TY?

Micro Module: GCE Theme

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Measurement and time
Calculate your carbon footprint or foodprint, and consider it in the context of local and global data.

Ratio and Fractions
Compare the proportion of energy generated from renewable vs fossil fuel sources in different countries.

Money and Finance
Calculate costs and savings from switching to green technologies.



How can mathematics help us to understand and tackle climate change?

Designing Solutions
Design a net-zero school or eco-village using mathematical calculations of energy use and emissions reductions

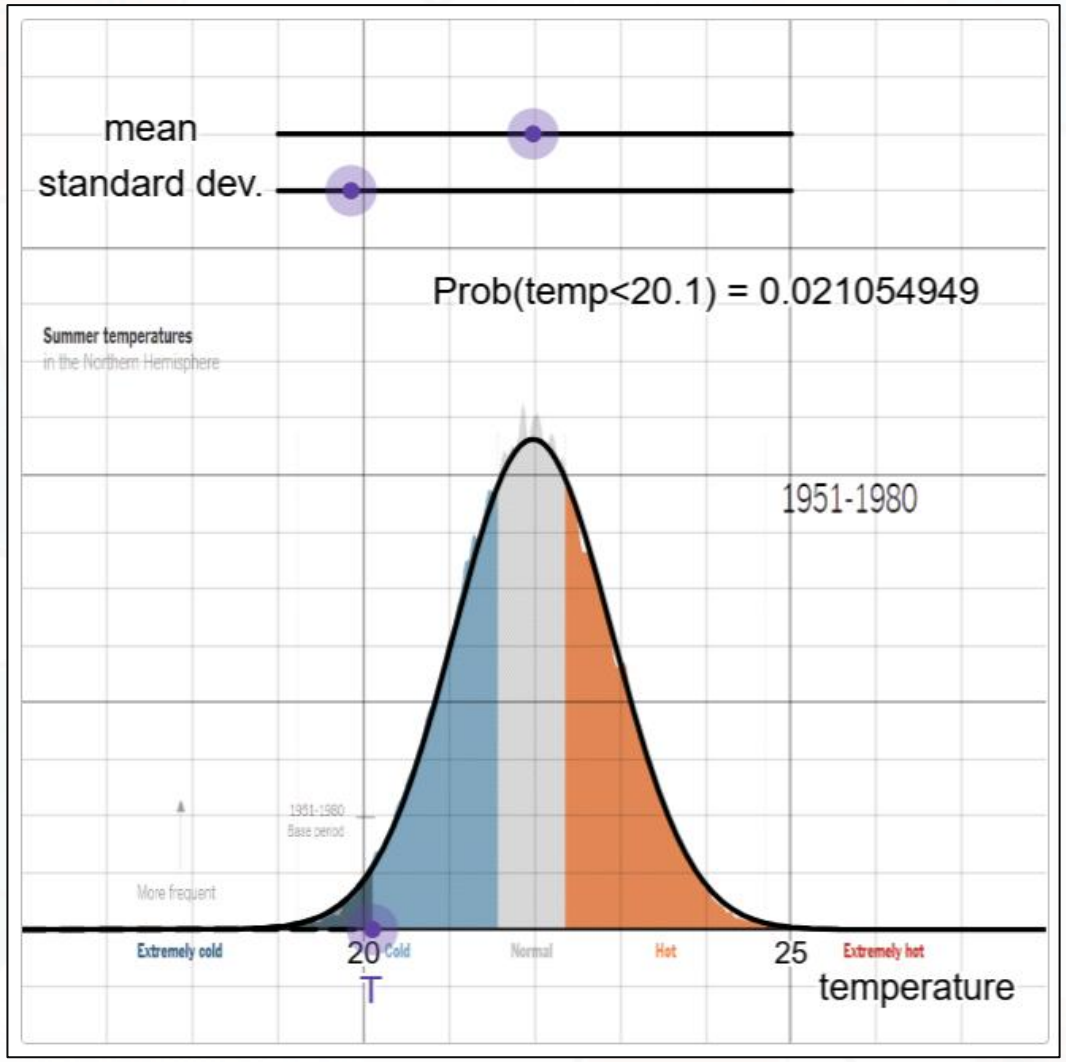
Modelling Data
Model climate and emissions trends over time

Working with Data
Explore climate indicators such as temperature and carbon emissions over time.

Data Sources: CSO, World Bank Open Data, UN data



GCE Theme: Climate Action





Working with Data
Explore climate indicators such as temperature and carbon emissions over time.

Adapted by AMSP

Micro Module: From Vision to Action

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Approaches to Assessment

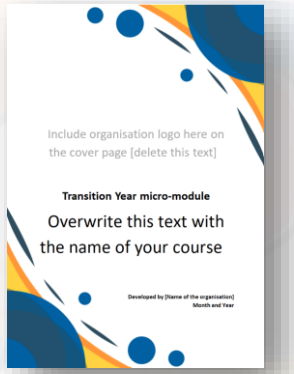
Student Dimensions

Teaching for student learning

Rationale and Aim

Learning Outcomes

Time Allocation



Planning for Action

Working in your groups:

- ✓ Choose a Sustainable Development Goal **or** an idea from the carousel activity in Session 1.
- ✓ Develop it into a plan for a micro module.
- ✓ Record your plan.



Headline Sharing

Speaker 1

- ✓ Student Dimensions of TY
- ✓ Rationale and Aim
- ✓ Time allocation

Speaker 2

- ✓ Learning Outcomes
- ✓ Teaching for student learning
- ✓ Approaches to Assessment

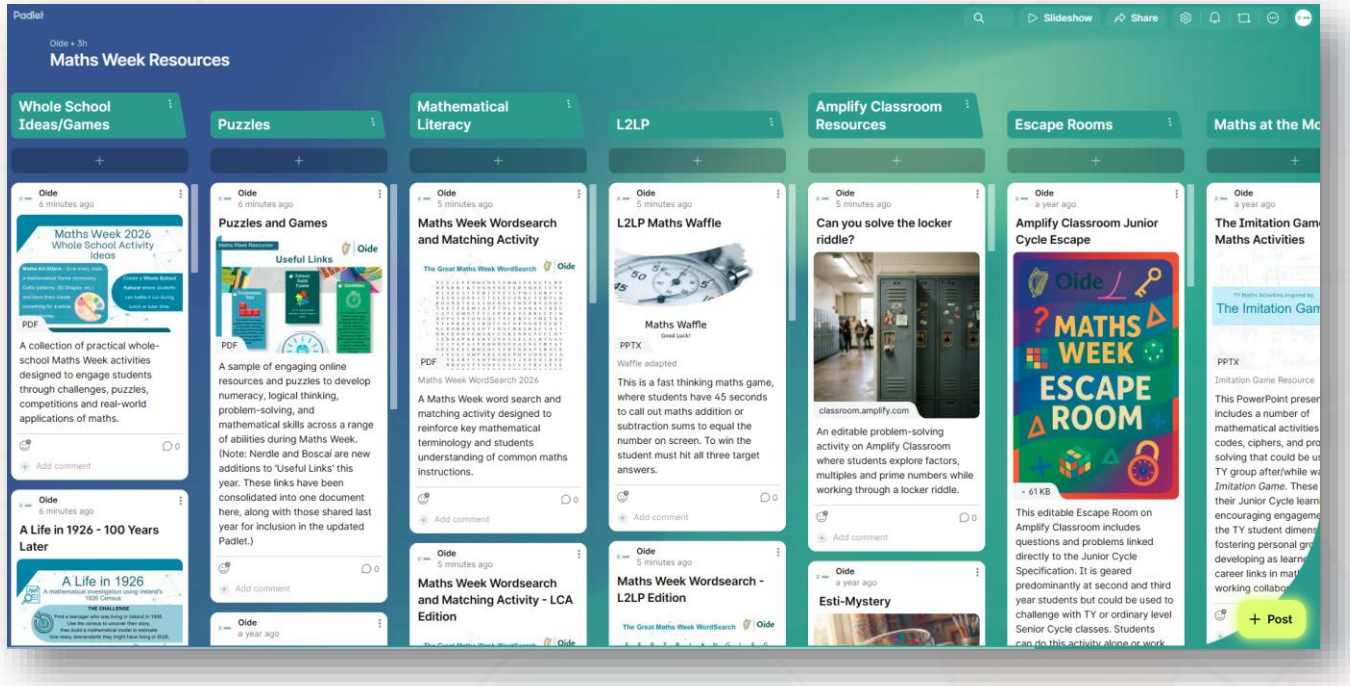


1 minute per table

Range of Supports



Maths Week October 10th - 18th



https://tinyurl.com/Maths-Week-Resources

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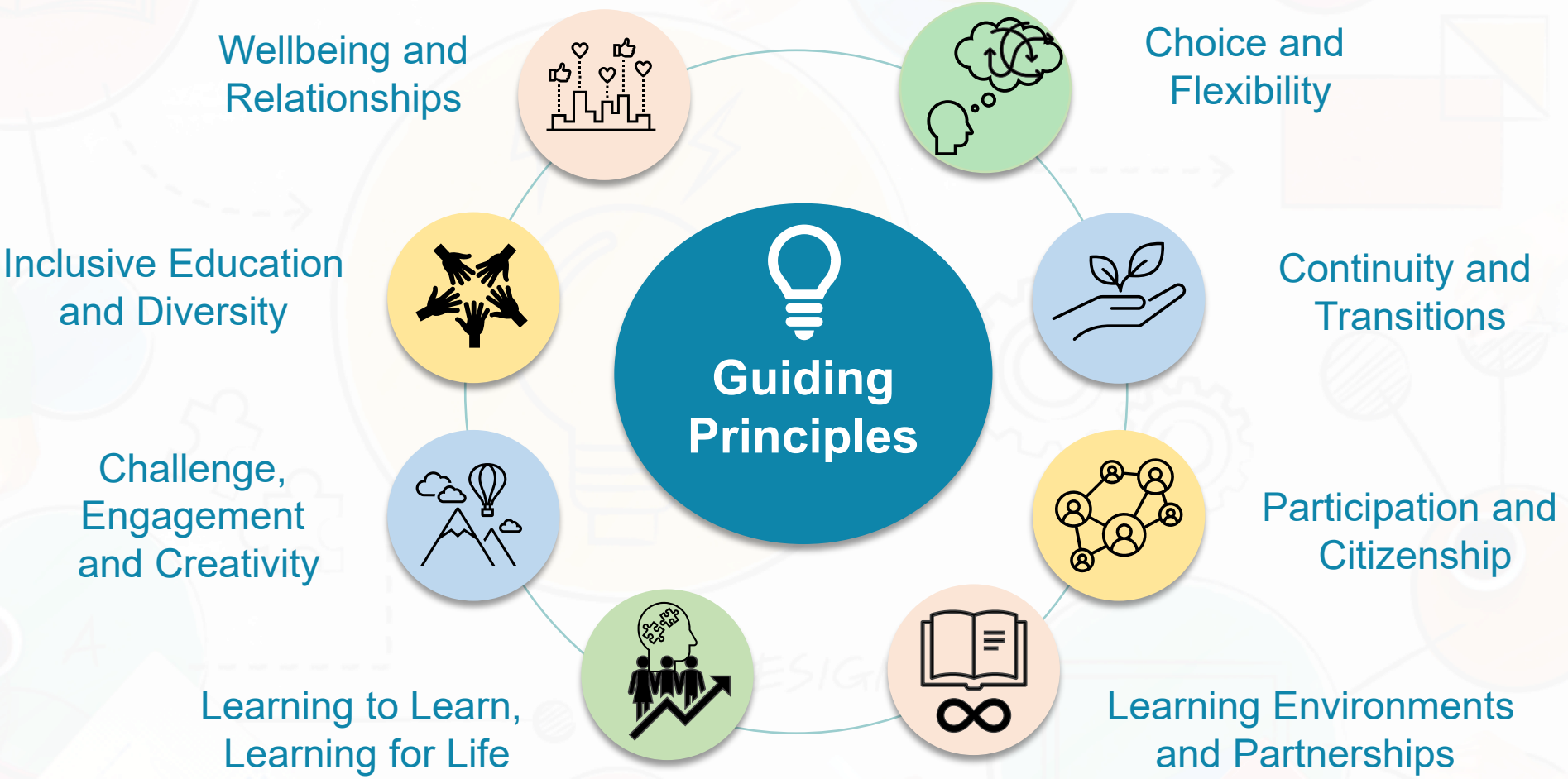
Session 3

We will:

- Investigate classroom approaches in TY Mathematics that foster challenge, engagement, and creative thinking.
- Apply visual representations to enhance engagement and encourage problem posing.
- Integrate digital technology as a cognitive tool to support mathematical modelling.

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Senior Cycle Guiding Principles



Collective Practice

> *Teaching and assessment across the entire TY programme are characterised by…the provision of experiences that are **challenging and engaging**, which can stimulate **creative critical thinking** inside and outside the classroom..*



(DEY, 2024)

Teacher Voice

Which idea from this video or your recent discussion could you adapt for your own practice?

The ‘In-N-Out’ challenge







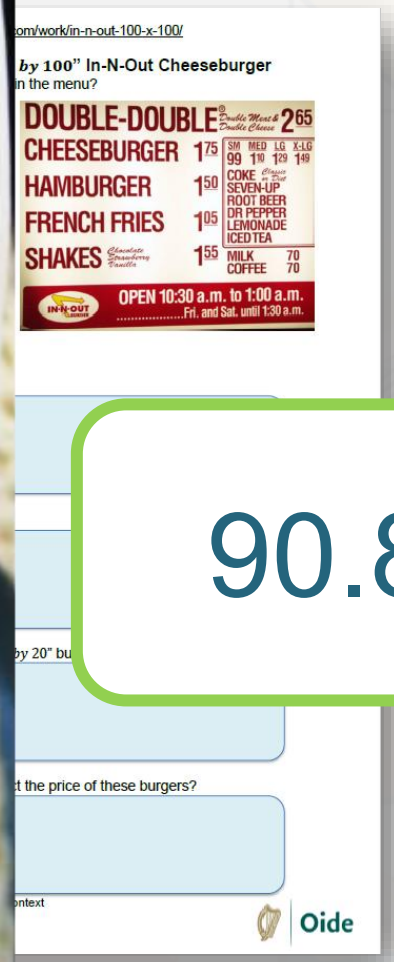


The Challenge

Hov The Big Reveal… 100 b







90.85

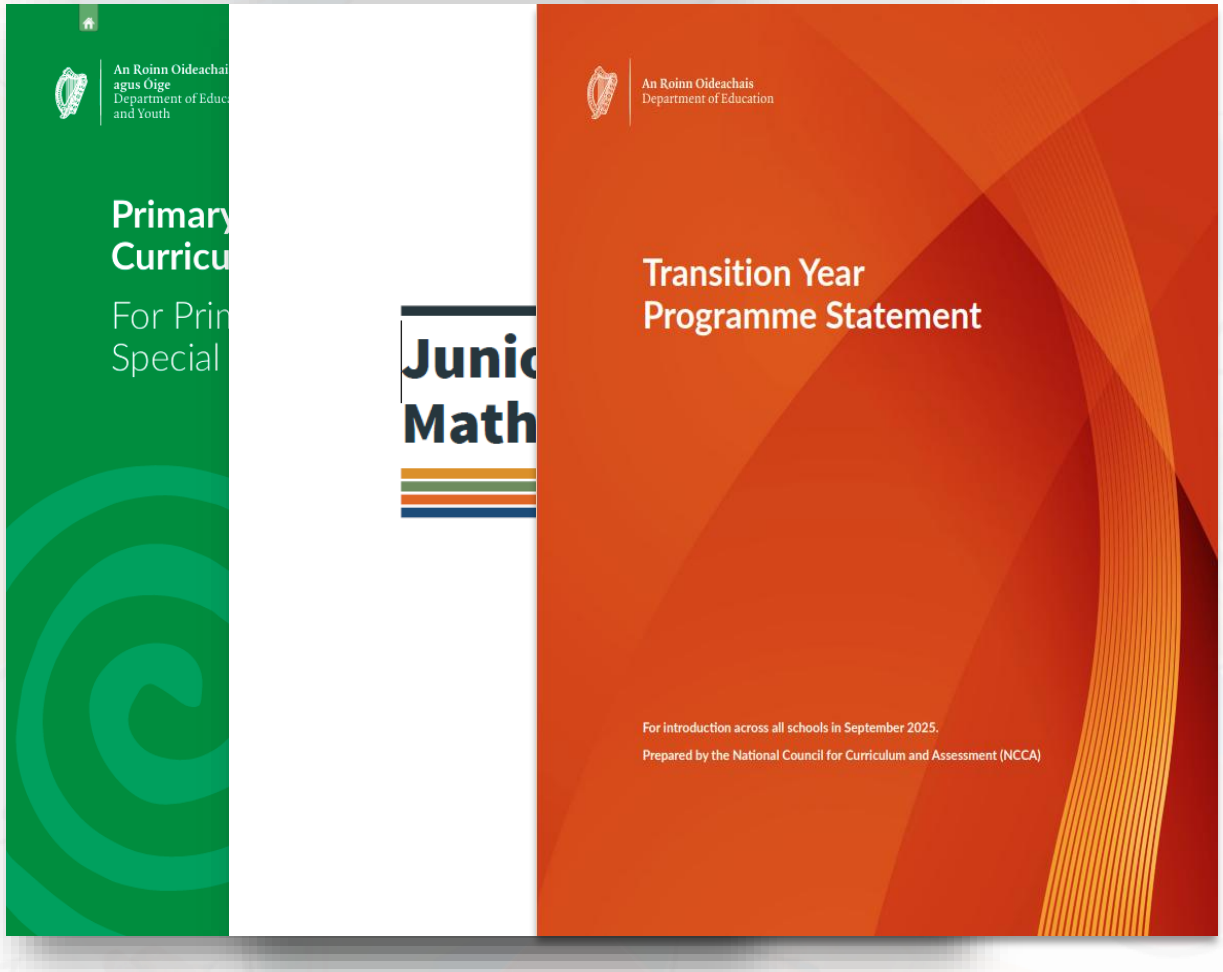
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Resource adapted from Robertkaplinksy.com

Pedagogy - Supporting Continuity and Transition

'Mathematical modelling is a process that uses mathematics to represent, analyse, make predictions or otherwise provide insight into real-world phenomena'

Society for Industrial and Applied Mathematics (SIAM) (2016)



Modelling In Action

Slides, Swings and Modelling Things



Source: Amplify Classroom | Amplify

How does this task support challenge, engagement and creativity in the TY mathematics classroom?

Using a Graphing Calculator

? Can you think of a TY Mathematics micro-module theme that these tasks could support?



Student Voice

What stands out about how students experience meaningful mathematical learning?

Reflection and Next Steps

What will you further enhance or change in your TY classroom and in planning for teaching, learning and assessment?



Range of Supports

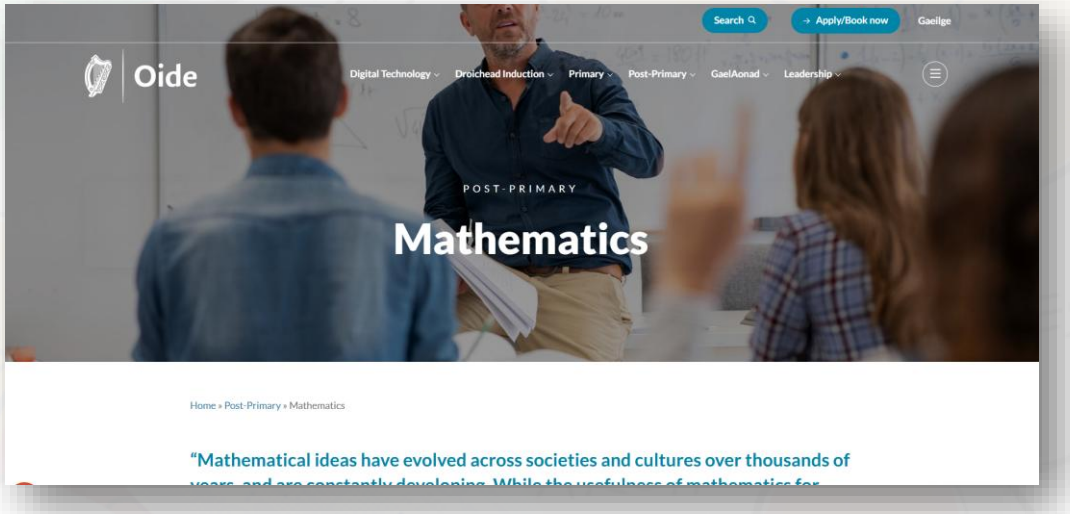


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Thank You!

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