# Muinín Catalyst Sustainable STEAM

## YEAR 1 OFFERINGS

**(including lesson plans, worksheets and blended learning resources)**

## PROBLEM TO PITCH

Problem to Pitch is a generic project management programme that can be adapted to any topic. It introduces students to the concept and process of Design Thinking; the cognitive, strategic and practical processes for creative problem solving.

In this micro-module, the learner will...

- develop skills of organising, planning and scheduling
- develop awareness of the basics of design thinking for problem-solving
- practice problem solving and critical thinking skills as individuals and part of a group
- be introduced to project management tools such as Lean Canvas, Logic models, 5Ws (who, what when, why where)
- Vision boards and a Pecha Kucha presentation

There is also a marine plastic waste version of this Module


Business Studies, Science, Design & Technology, Maths, English

## SEEDING SUSTAINABILITY

Seeding Sustainability is a project-based learning unit with a year-end event, the Ice Cream Olympics. It uses the local place to enable learners to gain knowledge and skills around local ecology, environmental factors and issues, project management and execution.

In this unit, the learner will...

- develop an awareness of food sovereignty/ sustainability across social, environmental and economic factors
- develop an awareness of edible/medicinal flora in the local area, biodiversity and nutrition
- work on a project from planning, delivery, to evaluation
- develop project management skills
- be introduced to design thinking, resilient design and systems thinking
- design and create advertising materials


Business Studies, Communication Graphics, CSPE, English, Geography, Home Economics, Science, SPHE, Visual Art

## CLIMATE CHANGE ENGAGE

Climate Change Engage introduces students to the topic of game design within the context of climate adaptation. It introduces students to the concept and process of Design Thinking; the cognitive, strategic, and practical processes for creative problem-solving. The module enables students to develop a fundamental understanding of serious game design, world-building, character development, presenting, planning and time management

In this micro-module, the learner will...

- become more aware of the impacts of climate change and the adaptations required to exist within a changed world
- develop skills of organising, planning and scheduling
- develop awareness of the basics of Design-Thinking for problem-solving
- practice problem solving and critical thinking skills as individuals and as part of a group
- be introduced to aspects of serious game design and tools such as Lean Canvas, vision boards and a Pecha Kucha presentation
- develop skills of planning, division of workload and time management


Design & Technology, Science, Business Studies, Geography, English

## OCEAN LITERACY

The ocean is the blue heart of planet Earth and what allows us to survive on this planet. Having a better understanding of how important the ocean is in our daily lives help us as humans to understand how we need to take care of it better. The micro-module can be delivered as a whole over ten 1 hour lessons, combination with the Problem to Pitch Marine Plastic Waste module or as individual lesson plans to augment existing units of study.

In this micro-module, the learner will...

- develop an awareness of the ocean's impact on us, and our impact on the ocean
- understand the direct consequence that actions can have on the the ocean and the life that exists in it
- become aware of positive actions that can be taken to support the health of the ocean
- understand the importance of knowing the interconnections between land and sea and the ocean network
- practice observation, data gathering and analysis


Science, Geography, CSPE

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## MEDIA COMMUNICATION

Media Communication is a supporting programme with 4 micro-modules that links into the project-based learning modules that use local places to enable learners to gain knowledge and skills around contemporary issues of sustainable development. The main modules have a year-end goal that encourages linked learning, project management and Implementation. This micro-module offers media micro-projects; video, poster, presentation and audio, that can be short project-related assignment pieces or extended as stand-alone projects.

In this module, the learner will...

- develop skills of organising, planning and producing media outputs
- develop awareness of the basics of media production
- practice problem solving and critical thinking skills as individuals and part of a group
- be introduced to tools and methods for media production


Design & Technology, English, Communication Graphics, Visual Art, English

## ECO-ANXIETY

Eco Anxiety refers to a state of fear-based on the present and predicted future state of the planet due to climate change. Over the last few years, the rate of eco-anxiety has increased globally. Our eco-anxiety micro-module supports students to consider the concept of eco-anxiety and awareness and an understanding of climate action, youth leadership and awareness.

In this micro-module, the learner will...

- understand the meaning and concept of anxiety and acknowledge it to be a normal human emotion
- develop awareness on when anxiety can become a problem
- be able to recognise the similarities and difference between anxiety and eco-anxiety
- work with mood boards to develop ideas
- develop an understanding of what CAN be done to influence change.
- explore youth leadership and activism


CSPE, SPHE, Geography, Science, English

## ENGINEERING FOR GOOD

Engineering for Good has been designed to gain an introductory awareness of how engineering and innovation can be applied to the Sustainable Development Goals. The skills learnt promote the targets of SDG11; Sustainable Cities and Communities.

In this micro-module, the learner will...

- develop their understanding of what engineering looks like in the 21st century
- develop their understanding of how engineering can be used to help solve the issues raised within the Sustainable Development Goals
- learn the concept behind and utilise the idea of the engineering design process
- work collaboratively with peers on an engineering- related problem
- be introduced to 3D printing, waste recycling and innovation
- learn how to ideate effectively


Applied Technology, Business Studies, Science, Maths

## DIGITAL LITERACY

Digital Literacy is framed around the concept of the Digital Citizen. The module encourages students to recognise the rights, responsibilities, and opportunities of living, learning, and working in an interconnected, digital world, and they act and model in ways that are safe, legal, and ethical. The micro-module also links to SDG8 Media Communication Micro-Module and encourages the development of 21st Century skills supporting students to keep up with the lightening pace of a constantly changing technologised world.

In this micro-module, the learner will...

- explore digital citizenship
- analyse their digital footprint
- become more familiar with digital security and privacy
- become more responsible digital users


Applied Technology, Communication Graphics, English

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## DREAM DESIGNS

DREAM Designs is a project-based learning unit with a year-end focus on an exhibition showing learners' visions for derelict buildings in their local area. It enables learners to gain knowledge and skills around contemporary issues on a local scale, sustainable development and issues, and project management.

In this unit, the learner will...

- develop an awareness of design thinking and inclusive design
- develop an awareness of an integrated approach to solutions thinking
- begin to understand what Green Tech is
- identify opportunities in local place for learner engagement in community development, planning and policy
- develop an awareness and apply sustainable practices within community development
- learn the basics of project management and execution
- develop digital communication skills


Applied Technology, Business Studies, CSPE, SPHE, English, Geography, Home Economics, Science, History, Visual Art

## SUPPORTING SKILLS

Supporting Skills enhance the teaching and learning opportunities of the other modules. It allows more time to be spent on scaffolding and developing transferable skills that can be used to deepen the learning experience.

Supporting Skills includes...

- problem finding and problem solving
- observation and data gathering
- recording information
- facilitating a World Café
- debate and reflection
- interviewing
- sharing opinions and listening to other perspectives
- evaluating sources
- formal and informal writing


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