Girls in DEIS Schools: Changing Attitudes / Impacting Futures in STEM

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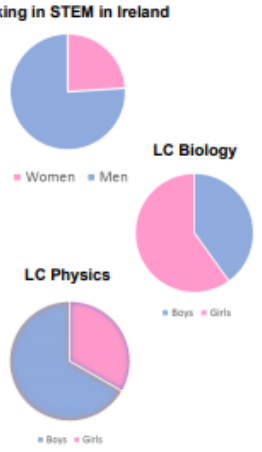
Background

Despite the advancements made by women in the employment sector and the academic success enjoyed by girls[1], women continue to be persistently underrepresented in the fields of science, technology, engineering, and maths (STEM). In Ireland, **women represent fewer than 25% of people working in jobs that use STEM skills**[2].

Research on gender and STEM tells us that in order for young women to pursue a career in STEM, **they must believe in the importance of STEM and believe in their ability to succeed in the field**[3]. Research conducted by Microsoft has revealed that most girls become interested in STEM at age 11, but their interest starts to wane by age 15.

Students in post-primary schools designated as disadvantaged (**DEIS**) are **particularly under-represented in STEM in Ireland** and are less likely to pursue STEM after post-primary school[4].

This project aims to develop and strengthen the interest and attitudes of young girls in post-primary schools designated as disadvantaged (DEIS) in STEM.



Cross-curricular Collaboration

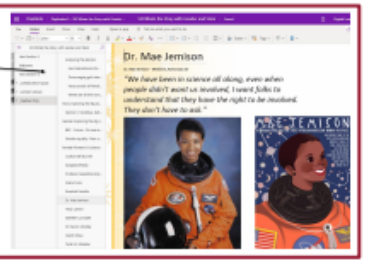
Professional development days are designed to:

- Allow teachers to develop a **cross-curricular, collaborative** approach to the teaching of STEM supporting the key skills and principles of Junior Cycle.
- Introduce teachers to our **online platform** and resources
- Support teachers employing **story-telling methodology** and **Philosophy for Children (P4C) pedagogy** in their classrooms
- Provide opportunities to **develop communities of practice** amongst the teachers
- **Share** learning and identify good practice
- Provide the opportunity for **students and teachers** to **shape and guide the future** of the project.

An tSraith Shóisearach Junior CYCLE

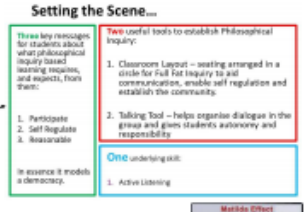
On-line Platform

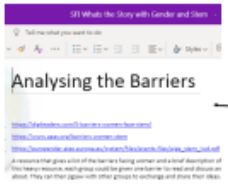
A **library** of resources that aim to foster an emotional connection with STEM women leaders through the mechanism of story-telling, which is a powerful tool for developing growth mindset and fostering critical thinking.



Interviews with women working in STEM, such as Dr Marion McAfee in Sligo IT, allow students to discover the range of careers and opportunities that exist in STEM.

A wide range of **activities** to support the use of P4C and storytelling pedagogy in the classroom.





Stimuli to interrogate and explores the issue of gender in STEM and use the past as a lens to analyse the current attitudes toward women in STEM

Innovative Pedagogy

Philosophy for Children (P4C)
The underlying principle of P4C is for children and young people to experience rational and reasonable dialogue about things that matter to them and their teachers.

All participants work together in a 'community of enquiry'. The aim for each child is not to win an argument but to become clearer, more accurate, less self-contradictory and more aware of other arguments and values before reaching a conclusion.

'Story always improves communication' Annette Simmons

Storytelling is being advocated as the methodology for this project in order to access the lives, experiences, characteristics, and impact of women leaders of STEM.

Joining our project

The next phase of the project is to cascade the model nationally through various teacher networks so that this type of pedagogy is available in all primary and post-primary schools in the country over the next three years.

If you would like to learn more about our project or have your school participate we would love to hear from you.

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Funding and partners

Science Foundation Ireland For what's next
WITS
UCD DUBLIN
IEA Irish Economic Association
Philosophy Ireland
JuniorCYCLE for teachers
Laois Education Centre
PDST
Microsoft edu

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3 Accenture (2014). Powering economic growth: Attracting more young women into science and technology.
4 Weir, S., Kavanagh, L., & St. Patrick's College (Dublin, Ireland). Educational Research Centre. (2018). *The evaluation of DEIS at post-primary level: Closing the achievement and attainment gaps*. Dublin: Educational Research Centre

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