

# The Delivering Excellence in Teaching STEM in Schools Conference 2023

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National and South East regional Winner : Excellence in STEM Teaching –Post 16 ( Year 2022)

# Introduction Skills, skills and Skills (OFSTED )

The following four topics are going to be discussed

1 -Developing approachable teaching relationships with students to ensure their security in asking for help

2 -Practical Skills activities to engage students in new technologies and explore less conventional STEM-related career pathways

3 – Motivation -Tips for promoting post-secondary STEM opportunities to female students and their parents to tackle negative stigma

4 – Sharing good practise across the departments and whole college

## Developing approachable teaching relationships with students to ensure their security in asking for help

As educators, it is our responsibility to create a safe and welcoming environment where students feel comfortable to ask for help.

We need to build relationships with our students and show them that we care about their success.

To do so, we can:

- 1 - **Be approachable and friendly:** Greet students with a smile and a positive attitude. Show genuine interest in their lives and make them feel valued.
- 2 - **Listen actively:** Give students your full attention when they speak. Ask questions and clarify their concerns. Let them know that you are there to help.
- 3- **Create a non-judgmental atmosphere:** Avoid criticizing or belittling students' questions or ideas. Encourage them to share their thoughts and be open to different perspectives.
- 4 - **Provide support:** Offer extra help, resources, or tutoring if needed. Show that you are invested in their success and that you believe in them.



By following these tips, we can build trust and rapport with our students, and create an environment where they feel safe to ask for help when they need it.

Practical activities to engage students in new technologies and explore less conventional STEM-related career pathways

STEM education is not only about learning theory but also about applying it to real-life situations. To engage students in new technologies and explore less conventional STEM-related career pathways, we can:

1 - **Use hands-on activities:** Provide students with opportunities to experiment, build, and create using different technologies. This can include programming, robotics, 3D printing, and virtual reality.

2 - **Connect with industry professionals (Stakeholders):** Invite experts in STEM-related fields to speak to your students or to offer mentoring and job shadowing opportunities. Teachers we must have up to date information about the job market

3- **Highlight diverse career options:** Showcase a variety of STEM-related careers that students may not be aware of. For example, careers in environmental science, biotechnology, or game design

4 - Strong relationships with a range of local and regional stakeholders that are used effectively to identify new and emerging skills needs



By exposing our students to a variety of STEM-related experiences, we can spark their interest and help them see the possibilities that STEM education can offer.

# Tips for promoting post-secondary STEM opportunities to female students and their parents to tackle negative stigma

Women are underrepresented in STEM-related fields, and this is a problem that we need to tackle. To promote post-secondary STEM opportunities to female students and their parents and tackle negative stigma, we can:

- 1 - **Create a welcoming environment:** Make sure that women feel welcome and included in STEM-related activities. Avoid using gender-biased language or stereotypes.
- 2- **Highlight female role models:** Showcase successful women in STEM-related fields to inspire and motivate female students. This can include inviting female guest speakers or highlighting women's achievements in STEM.
- 3- **Use female students in your school/college open evenings** – Female students would be the guide for new STEM learners and parents
- 4 - **Address stereotypes:** Challenge stereotypes about women's abilities in STEM fields by highlighting the achievements of women in STEM and debunking myths about gender differences in STEM ability.
- 5- **Offer support and mentorship:** Offer female students support and mentorship to encourage their success in STEM fields. This can include mentoring, networking, and scholarship opportunities



By promoting post-secondary STEM opportunities to female students and their parents, we can help break down gender barriers and create a more diverse and inclusive STEM community.



# 4 - Sharing good practise across the departments and whole college

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As educators, we should always be looking for ways to improve our teaching practices and support our colleagues.

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We can do this by sharing our knowledge and resources, providing feedback and constructive criticism, and collaborating on projects and initiatives.

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We can also attend professional development workshops and conferences to stay up-to-date with the latest teaching trends and techniques.

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By supporting our colleagues' teaching and sharing resources across departments, we can create a more cohesive and effective learning environment for our students.

# summary

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- In conclusion, these four topics are essential for creating a positive and supportive learning environment for our students.
- By developing approachable teaching relationships, engaging students in new technologies and unconventional STEM pathways, promoting post-secondary STEM opportunities to female students, and supporting colleagues' teaching and sharing resources across departments, we can ensure that all students have access to the same opportunities and support.
- Let's work together to inspire the next generation of learners and leaders in the STEM field.
- But Leave two questions to the audience :
  - 1 – What would be the Future of T –Levels and job markets?
  - 2- How we educators support our learners in period 2025-2027likely to prove crucial in firming up the landscape

