**Tackling diversity and inclusion as part of a national computing curriculum  
  
Celebrating diversity in our subject!**  
Computing as a field has a rich and diverse history that can be traced back over many centuries, we have an enormous number of pioneers and role models in tech which enable us to celebrate diversity in respect to culture, nationality, faith, ethnicity, disability, gender, and sexuality within our discipline. We must promote and celebrate diversity within our subject and with the learners we teach at every opportunity.

There are tons of resources out there already that can be used on wall displays or as part of research activities with students in class that help celebrate diverse pioneers and role models in tech:  
  
[BAME Pioneers in Tech Poster – William Lau](https://www.youtube.com/watch?v=8KmSzSU7MVw)  
[I Belong In Computer Science Posters – Isaac computer science](https://isaaccomputerscience.org/pages/i_belong_poster_orders)  
[Black Pioneers In Computer Science – Tracy Williams](https://newrelic.com/sites/default/files/2021-08/black-pioneers-in-computer-science.jpg)  
[LGBT+ People in STEM – National Museums Liverpool](https://www.liverpoolmuseums.org.uk/stories/lgbt-people-stem)

The above resources represent just a handful of much excellent work that has been completed in recent years and are useful for raising awareness with students around representation within STEM related subjects. However, sometimes it might not be enough to guide students to existing resources, you may instead want to set students a task to do some independent research or complete a project around a topic related to inclusion and diversity.

**Discovering inclusivity hands-on with students**  
At Manchester Metropolitan University pre-service teachers completing their PGCE programme were tasked with doing just this during their university seminars as part of their studies. Students worked in groups independently to produce blogs in which they published new teaching activities and resources, collated useful secondary materials and produced research investigating emergent tech related issues facing society. Checkout the blogs below which cover some fascinating areas including: decolonizing the computing curriculum, impact of E-Waste on the developing world, toxic masculinity in technology, ensuring SEN pupils can access a computing curriculum, recognising the digital divide and addressing gender imbalance in tech.

[https://decolonizationandinclusion.blogspot.com](https://decolonizationandinclusion.blogspot.com/)  
<https://representing-inclusion-decolonization.blogspot.com/>  
  
**Exploring the intersections of an inclusive society and the digital world…**  
Much of the work in the student blogs offered a critical commentary on ethical and cultural issues we must be mindful of in the digital world. As part of the national curriculum we are asked to cover the ethical, legal, cultural and environmental impacts of digital technology on wider society. It is important therefore that the topics we choose to discuss with students in this space are a) contemporary and relevant to them, and b) link back to the notion of an inclusive and ethical society. Below is a list of some topics students can be introduced to that have huge implications societally in terms of tech bias and discriminatory practices:

* Use of algorithms and algorithmic bias – [BBC article on A-Level and GCSE exam algorithm](https://www.bbc.co.uk/news/explainers-53807730), [Coded Bias Netflix film investigating racial bias in facial recognition algorithms.](https://www.codedbias.com/about)
* Artificial intelligence – [Article exploring Microsoft chatbot Tay which used machine learning and started posting offensive content based upon discriminatory training data.](https://www.theverge.com/2016/3/24/11297050/tay-microsoft-chatbot-racist)
* The Digital Divide – [BBC news article discussing lack of access to tech as ‘locking children out of their education’.](https://www.bbc.co.uk/news/uk-england-55816686)
* The Metaverse – [Article investigating gender imbalance and sexist behaviour already manifesting in new virtual and augmented reality spaces which are accelerating as part of the Metaverse.](https://thestack.world/news/society/people/enter-the-men-taverse-what-does-the-metaverse-mean-for-women-1644941822912)

This blog has explored inclusion in two specific domains. We started with a focus on a key area which relates to how we can promote diversity and inclusion within our subject and the resources we use. Secondly, we considered how we can foster discussions with students considering the ethical challenges tech creates in relation to the ideal of a fully inclusive society. It is important that as potential STEM pioneers of the future our students leave education with a well defined moral and ethical compass to enable them to shape a desirable digital world that is inclusive of all.