# Decolonising Your Course Toolkit – STEM Courses

**This toolkit has been created in consultation with The Black Curriculum and is presented with thanks for their expertise.**

This toolkit is designed to guide you through decolonising your Scholars Programme handbook.

There are many reasons we might seek to decolonise our curricula. The first and most pressing for many is the moral and ethical imperative to share the perspectives and provide room for the voices of those who have been silenced and sidelined. There is also an intellectual imperative – as scholars we make claims often about how our work fills gaps in our understanding, questions the status quo and provides new understandings of old problems. Pedagogically, there is an imperative to provide material to students that they can relate to and connect with – it is often said that 'if you can see it you can be it'. Additionally, it is important to encourage pupils to be critical about the objectivity of STEM – to understand that STEM research is influenced by history and society and to not take the narrative presented to us at face value.

**Decolonisation** is something that has sometimes been misunderstood in the news media as being about removing White authors and adding token Black figures into courses. This is not the aim of **decolonising,** which is the process of seeking out and eradicating assumptions based on colonial values or habits and instead providing thorough and accurate context and a more comprehensive perspective on topics and issues. It is also different from **diversifying**, which is a more simple process of adding to the curriculum to include more perspectives, focussing particularly on those of underrepresented backgrounds. **Decolonising** goes deeper, into the assumptions we make and the approaches we take.

The **decolonisation** of curricula is an ongoing process rather than a simple goal. As scholarship, cultural and political understanding of the legacy of colonisation evolves, so will understanding of what it means to design, teach and revise material to provide rigorous and thoroughly decolonised courses to our students. We appreciate that this process may be new for you, as it is for many of us, and so we have provided this toolkit to help you work through getting started on the process.

**If you do one thing…**

If you do one thing, ensure you understand the historical and cultural context of your research. Do you have a critical understanding of the historical context of the key concepts/research in your course, for example, the rise of modern science (C17th) and the Enlightenment (C18th)? Do you know how **colonialism** may have affected our understanding of the development of ideas and scientific knowledge?

Although it may not directly impact the content of your handbook, having an understanding of the historical context of your research, and the tools to share this, will allow pupils to critically engage with a decolonised approach to STEM. In doing so, this will lead to pupils having their own tools to question and challenge colonised narratives in STEM subjects and highlight to pupils the range of people who contribute to scientific discoveries. The rest of this toolkit includes some big questions to ask of your course, some practical tips

information on further reading/resources and a glossary. We have also included some appendices containing key information on commonly held beliefs in STEM and key overlooked figures.

## Contents

How to decolonise: key approaches and terminology 4

Questions to consider 6

Practical Tips 8

Glossary 10

Appendix I 11

Appendix II - Further Reading/Resources 15

## How to decolonise: key approaches and terminology

The core of decolonising is **recognising the positionality** (defined below) of the material you are using, identifying it, and viewing it with a critical eye. We must consider the **intersectional** nature of the identity of an individual or group, and examine with care the way that identity is constructed, interpreted and lived.

In order to decolonise, we must recognise the ongoing **coloniality** of the academy and of our educational system. We must recognise that colonialism is ongoing. If we are to take **decoloniality** as our **praxis**, then we must constantly seek to identify and acknowledge the intersecting forms of power exerted by **coloniality** and actively work to centre a variety of forms of knowledge and multiple ways of being in the world.

**Decoloniality** is a **praxis** that we hope will enable you to produce courses that you can be confident reflect the plurality of the field and the voices within it, enriching the curriculum, whilst dismantling the ways in which contributions from some individuals, communities and societies may have been made invisible due to bias and prejudice. It is also an **ethical** lens which we hope to use to inform professional standards of best practice in teaching and academia.

| Key terms | |
|---|---|
| **Positionality** | Your positionality is the social and political context that creates your identity in terms of race, class, gender, sex, and ability status. Positionality also describes how your identity influences, and potentially biases, your understanding of and outlook on the world. |
| **Intersectionality** | The interconnected nature of social categorisations such as race, class, and gender as they apply to a given individual or group, and the ways in which these categorisations create overlapping and interdependent systems of discrimination or disadvantage. |
| **Coloniality** | Emerging from theories of decoloniality, coloniality is the assertion that colonisation has not ended, but is instead reified through systems of power such as the political economy, the production of knowledge, and a hierarchy of cultural systems – all of which are known as the 'colonial matrix of power'. |
| **Decoloniality** | A method of praxis that seeks to continually undo the various interlocking themes of coloniality by acknowledging coloniality's intersecting forms of power, and resisting them by putting into practice actions that constantly centre the plurality of knowledge, and the multiples ways of being in the world. |
| **Praxis** | The process of putting a theory into practice, then reflecting on that theory in practice. This is an on-going developmental process to ensure theoretical aims align with what we actually do in teaching spaces. |
| **Episteme** | Implicit 'rules of formation' which govern what constitutes legitimate forms of knowledge for a particular cultural period. |

| | |
|---|---|
| **Racialisation** | The ways in which society imposes identities of 'race' onto those that are ethnically minoritised. |
| **Ethics** | The moral principles that govern a person's behaviour and actions. |
| **Enlightenment** | The Enlightenment was the period in 18th Century Europe when the idea began to emerge that understanding the world was not something only God could do, but something a rational man – implicitly a white, European male – could do. Some thinkers began to emphasise the importance of science and reason and disregard the value of religion and tradition. This period is commonly identified as the origin point of modern science and has its roots in the work of some 17th Century thinkers including Francis Bacon, Isaac Newton, Rene Descartes, Baruch Spinoza and Christian Wolff.<br><br>The rise of modern science and the Enlightenment, when coupled with co-opted and corrupted ideas of supposed 'Anglo-Saxon' indigeneity, was used to support and embed scientific race theory to justify constructed racial hierarchies and systemic racism. Contributors such as David Hume advanced these theories of white supremacy within their research. |

## Questions to consider

| *Question* | Example |
|---|---|
| How can we be more honest about the reality that subjectivity exists within STEM research?<br><br>Can you challenge the belief that STEM subjects are objective and neutral? | Introduce an element of questioning the neutrality of STEM research to embed critical thinking as an instinctive practice.<br><br>Ask pupils to consider why we think some knowledge is more important than others, and who they think the research and its presentation serves. |
| What 'standard' is used in STEM research? Is it just the 'White western male'?<br><br>What are the implications of this? | For example, if discussing cardiovascular health, acknowledging that symptoms are often based on standard male symptoms.<br><br>Including discussions about the origins and history of scientific terminology, such as 'hysterectomy'.<br><br>Opening discussion about how things are designed, for example, safety technologies and protocols being based on a standard western male body (i.e. seatbelts and vehicle crash tests). |
| How has progress been depicted and who is left out/silenced?<br><br>Who is excluded or harmed when we talk about "good" scientific advancements? | Can you open a discussion to acknowledge how scientific discovery can often do damage/harm to people? Introduce the idea of needing to create a balance with this?<br><br>For example, in a discussion about astronomy engaging students in a discussion about Mauna Kea as sacred land or ideal telescope site for astronomy research. The discrimination against and exploitation of indigenous knowledges, lands, heritage and culture has been active for centuries. You could prompt your students to trace the roots of this skepticism and suspicion towards religion, spirituality and divinity in indigenous cultures back to the Enlightenment.<br><br>Acknowledging that the quest for advancements in medicine have been at the expense of others. For example, the story of HeLa cells, or experimentation conducted on black and brown bodies (e.g Tuskegee Experiment or James Marion Sims). Opening a discussion about the legacy of such scientific work.<br><br>You could also contextualise this within wider political systems. To return to the example of the hysterectomy, women were not able to vote during its development as a surgery, and had little agency without the support of a husband, |

| | |
|---|---|
| | including seeking redress if they survived. It was not until 1928 that all women and men over the age of 21 were able to vote in the UK. The right to vote allows people to access democratic freedoms and influence societal systems from public health to education. Remind your students that even now there are still numerous groups denied this agency, from those within the criminal justice system to refugees and asylum claimants. |
| Are there any commonly held beliefs about progress and discovery in your field that you could challenge? | What do we actually mean by the term "scientific discovery"? Explore whether research from other people might have contributed but not acknowledged. For example, western astronomical and mathematical knowledge is described as "discovery" when there has been a wide breadth of contributions from diverse societies to the fields. Similarly, how was local and/or indigenous knowledge of flora and fauna used as the basis of "discovery"? |
| How has "progress" in STEM been depicted as evidence of Western superiority?<br><br>To what extent was our STEM knowledge reinforced, used and resisted by colonised people? | Acknowledge when "discoveries" that were attributed to one person, usually a white Western man, are now credited more widely (i.e. Rosalind Franklin's double helix or Annie Jump Cannon and our knowledge about stars).<br><br>Consider how the rise of modern science (C17th) and the Enlightenment period (C18th) was also used to develop scientific race theory which justified the practice of enslavement and subsequent embedding of racial hierarchies and systemic racism that we are still working to address today. |
| Given that academic research often marginalises, centres or fictionalises certain voices, how can students see themselves reflected in positive ways in the context of your research? | Including a diverse body of researchers to create your course and to underpin activities with pupils. Consider resources outside of academia that still hold relevance within your subject area. It is important for students to recognise that communities that may not have access to academic research still enact research, and theorise on that research, with the means that they have.<br><br>If the key researchers in your field are not diverse, you can engage pupils in a discussion about why this may be the case. |

## Practical Tips

These are a list of things you can do as practical strategies to decolonise your handbook. Not all will be applicable, but we suggest selecting at least two to try for yourself. Not only are these steps useful for decolonising your course, but they may allow pupils to see the different voices that have contributed to the science we have today. This may lead them to explore forgotten or excluded voices, or question why there may be a lack of diversity in the field.

| Task | What could you do? |
|---|---|
| Check that you have included a variety of voices | If your course provides multiple research articles or opinion pieces, does this include a variety of voices, not just those who are traditionally represented?<br><br>If you are including "characters" within your handbook such as a list of names taking part in an experiment, is this inclusive of different genders and cultures? |
| Provide pupils with some context of how we got to where we are now with this research | Add "See the World from Where They Stand" prompts that actively highlight the positionality of the thinkers on the course. Encourage students to take an empathetic approach and to use their critical thinking to imagine how different perspectives and identities might intersect. |
| If your course provides historical context, be aware of the positionality of the information. Check whose version of events is told, and make sure you are aware of how this relates to an intersectional understanding of the research topic and of coloniality. | Think about the ways in which you may approach material that privileges particular colonial perspectives. How can you engage students in dialogue about this and cultivate critical discussions?<br><br>Be sure to provide students with material that engages in parallel narratives to that which you are using in your session, and in doing so apply value to multiple types of sources (i.e. oral histories, material culture etc and not just 'academic research'). |
| Use the homework tasks to broaden pupils' understanding of the historical context of the research | Could pupils research someone who made considerable contributions to the research, but didn't have the work attributed to them at the time? For example, consider James Petiver (c1665-1718) who rarely left his home but offered a variety of incentives to acquire specimens for his collections. The collectors were based worldwide and of those it is estimated that between 25 to 33% were based in the Transatlantic Trade of Enslaved People meaning that many of these specimens were collected by Enslaved Africans. |

| | |
|---|---|
| | Could pupils look beyond the content of a journal article to consider who wrote it, who the subject of the work was and who will have influenced them? This could allow pupils to start to critically engage with the cultural and historical contexts of the work.<br><br>Could you set a task where pupils must research the historical context of the content? For example, "We know this now, but where did this knowledge come from?" To enable pupils to find the silenced voices, you may need to provide some articles to support. |

## Glossary

| Word | Definition | In a sentence |
|---|---|---|
| Colonialism | the policy or practice of acquiring full or partial political control over another country, occupying it with settlers, and exploiting it economically. | **Colonialism** has led to indigenous people to become minorities where they were once the majority, for example, the First Nation people of Canada, or the Maori of New Zealand. |
| Neo-colonialism | the use of economic, political, cultural, or other pressures to control or influence other countries, especially former dependencies. | Instead of direct military control, **neo-colonialism** relies on conditional aid and cultural pressures to control countries that previously were colonised. For example, this includes financial organisations that offer loans or economic aid that are conditional on the recipient countries implementing practices and steps that may harm their economies. |
| Imperialism | a policy of extending a country's power and influence through colonisation, use of military force, or other means. | Often, colonialism and **imperialism** are used synonymously, but more accurately, **imperialism** is the practice of ruling informed by the theory of colonialism. |
| Decolonisation | the action or process of a state withdrawing from a former colony, leaving it independent. | **Decolonisation** refers to the withdrawal of imperialism from colonised countries. In addition, the definition has expanded to include 'freeing of minds from colonial ideology'. |
| Eurocentric | focusing on European culture or history to the exclusion of a wider view of the world; implicitly regarding European culture as pre-eminent. | The history of mathematics is often told in a **Eurocentric** way, focusing on the works of, often white, European males. |
| Eugenics | is a movement aimed at improving the genetic composition of the human race. Eugenicists, in history, advocated selective breeding to achieve these goals. | **Eugenics** was popular in the early 1900s and was used as reasoning for many horrific atrocities that occurred including Hitler's belief in creating a superior race, and the mass sterilisations that took place. |

# Appendix I

In this toolkit we provided some practical tips to start the process and to begin thinking about work you can do in and around your course. This will often involve understanding the historical and cultural contexts of your research and developing tools to begin to share this with pupils. To aid you with some of the practical steps, listed above, we have here included an appendix which begins to demonstrate how we should present a balanced and informed history of topics we teach, including context for key people and work. It is important to acknowledge all contributions to an idea or discovery as well as some of the reasons behind research. This list is not exhaustive but will hopefully be a starting point to get you thinking about similar incidences involved in your own subject.

Consider also viewing this as an ethical practice. Decoloniality provides a unique ethical lens, expanding the remit and model of ethical and sustainable practices and consequently enriching the research and widening participation within the field. Due to increasing pressure on researchers within the scientific establishment, from applying for grants to submitting manuscripts and maintaining high visibility and impact with their publishing record, some sectors in STEM – for example, medicine – are reporting a tenfold increase in misconduct cases, ranging from plagiarism to fraudulent practices.

### a. Historical Context of Key Figures, Advancements, and Discoveries

Below we have provided some brief examples of how the historical context behind key scientific figures or technological advancements could be more widely taken into account. Worth noting is that we are not suggesting this information takes away from any scientific discoveries or work, but instead we want to demonstrate the often-colonial context behind a theory and discovery, that has influenced the way it is researched and developed. These examples, or your own, could be useful as discussion points for your students to think about how societal views and opinions shaped the way research was published or analysed, and how this same reasoning could be applied today. It is also by no means a comprehensive list but these are some of the most well-known examples.

| | |
|---|---|
| Francis Galton | Galton was an anthropologist and explorer. He was the first person to use the term eugenics, as defined above in the glossary. He published extensively in his field and argued intellectual standards of white races were higher than others. See *Superior* by Angela Saini (as listed below) for more. |
| Charles Darwin | Darwin is best known for his contributions to evolution. He travelled on the HMS Beagle and mapped out areas around South America, carrying out geological observations and also playing a part in developing British colonial control of the area. He believed natural selection theory justified arguments that white races were superior. He also argued that women were inferior |

| | |
|---|---|
| | to men based on genetics and biology. Much of his work compared certain races to animals in behaviour and affiliated this to genetics. |
| Carl Linnaeus | Carl Linnaeus came up with the modern system for naming and defining species and organisms. His human race classifications positioned white Europeans above BIPOC groups, which then descended in hierarchy. These classifications have become a paradigm for later racist thinking. |
| Infrastructure: Building of the Suez Canal | The Suez Canal is a man-made waterway which enabled more direct routes of shipping between Europe and Asia. It was considered one of the greatest engineering feats of the 19th century. It played an essential role in transforming a lake to a geopolitical area, which connected European empires and therefore use of the canal helped further colonise African countries. |
| Infrastructure: The Indian Railway System | The building of the railways in India was cited as one of the major contributions to the country, when in fact the historical context is that they were developed to benefit the commercial, governmental and military control of the country, and provided a healthy return for British investors. The purpose of this infrastructure was to benefit the occupying powers and not the people in the country. |

### b. Alternative Perspectives and Overlooked and Excluded Individuals

STEM subjects can struggle to decolonise curricula as there is a culture of 'whiteness' and white-centred narratives. We know today there is a culture of 'whiteness' in relation to the diversity of students and researchers in these subjects. Statistics relating to 2018/2019 show over 80% of researchers and teachers in higher-education were white (HESA, Jan 2020). This demonstrates just one reason why it is important as part of this work to think about overlooked and excluded individuals. As above, we are not removing the importance behind an individual's work, but here addressing where the Eurocentric and Colonised History of a subject has resulted in someone's work being overlooked. These examples are commonly found in school and undergraduate modules, and we have included them to show that giving them a voice, and understanding the bigger picture, can make a difference to the story that is portrayed.

Importantly some of these examples are from those who were undervalued or exploited in some way, but often still able to participate in their subject area. There will have been many who were prevented from pursuing their careers and hypotheses in the first place. This is also a snapshot but should provide some direction and examples for how a decolonised narrative can be more widely used. These examples model the highlighting of positionality that you may want to include both in the written content of your course and in your verbal discussions in tutorial.

| Eurocentric and Colonised History of Maths: | Global History and Decolonised Narrative: |
|---|---|
| Archimedes is a well-known mathematical figure. The Greek mathematician, born in 287 BCE, is a common figure in the cultural narrative of mathematics. He is most famously known for his 'Eureka!' moment in the bath. By noticing how the water level rose as he got in, he was able to measure the volume of a crown. | Mathematics as it is taught and practiced today is more closely related to 'Arabic Mathematics' than Greek, which mostly consisted of geometry. Al-Khwarizmi, developed the beginnings of Algebra, which united the theories of rational and irrational numbers as well as geometrical magnitudes, as they could be treated as 'algebraic objects'. Despite this fundamental shift informing modern mathematics, Al-Khwarizmi is not a known name in the canon of mathematics, unlike his Greek counterparts (Euclid, Archimedes, etc). https://mathshistory.st-andrews.ac.uk/HistTopics/Arabic_mathematics/ |
| **Popularised Narrative:** | **Alternative Perspective and Overlooked Work:** |
| James Watson and Francis Crick won the Nobel Prize in Medicine, in 1968, for their discovery of the structure of DNA. Noted as one of the most significant scientific discoveries of the 20th century. Watson and Crick studied the structure of DNA and published their work on the double helix in 1953. | In 1953, Nature published the Watson and Crick theoretical article, relating to DNA structure. Alongside this, two other articles were published containing data relating to this same subject, one by Maurice Wilkins and colleagues, and another by Rosalind Franklin and a student, Ray Gosling. Together their work demonstrated the DNA structure of the double helix. Watson and Crick were awarded the Nobel Prize in 1968. Rosalind Franklin died four years prior, and the Nobel Prize committee did not acknowledge that her |

| | |
|---|---|
| | understanding of the DNA structure or her crystallographic work were contributing factors towards this discovery. |
| Popularised Narrative: | Alternative Perspective and Overlooked Work: |
| Neil Armstrong became the first human to set foot on the moon in 1969. He took part in the Apollo Program of the 1960s and, along with other well-known names in space flight such as Buzz Aldrin and John Glenn (who orbited the earth in 1962), became a prominent figure for NASA's successful endeavour into space. | NASA is still viewed as a predominantly white and male agency, though this has improved over recent years. During World War II the computer pool was expanded and NASA recruited African-American women to work as computing staff. Segregation policies required them to work in a separate section, however. Katherine Johnson and other NASA female scientists hired in this scheme started to receive credit when their stories were told in a 2016 non-fiction novel about their involvement in the Space Race. These women of colour were hired by NASA during World War II to fill vacancies left by those who were at war overseas. Katherine Johnson is just one example of a person key in the historic moon landing and earlier space missions of the 1960s. She was heavily involved, and now more recently credited, with performing the calculations that made possible such accomplishments. |
| Popularised Narrative and Eurocentric Benefit: | Individual Narratives: |
| Mrs. Lacks began undergoing radium treatments for cervical cancer before a sample of her cells were retrieved in a biopsy and sent to a nearby tissue lab. John Hopkins Hospital discovered that, unlike other cells collected, these cells were unlike others and would double, and grow, roughly every 24 hours. Leading to an immortalised cell line. HeLa cells are still used today, in laboratories across the world, in molecular and cellular biology research. These cells continue to impact the world as they are used in research on infection, cancer treatment and drug and vaccine development. | Henrietta Lacks passed away in 1951, and her cells continue to impact the world through their use in ground-breaking biological research. A sample of her cells was taken during a biopsy, and given, without knowledge or consent, to a research facility. Researchers then began using these and sharing widely with other scientists. Henrietta was a Black woman, and the hospital where her cells were taken was only one of a few that provided medical care to Black people. Researchers and Doctors failed to ask family for consent in the decades after her death and published information without approval. Biotechnology companies and researchers benefited and profited from these cells, and no money was passed back to her family. Whilst some want an end to their use, due to their unethical means of origin, many others instead want the work to carry on but with the acknowledgement that the cells came from an African American woman. Stronger rules have since been established to govern use of the cells, and any future biological specimens in similar categories.<br><br>https://www.nature.com/articles/d41586-020-02494-z |

## Appendix II - Further Reading/Resources

**Articles – Short Reads**

[Science curricula must be decolonised too]

***"The main opposition to "decolonising" science is the persistent belief that science is objective and neutral. Yet if scientists live in a society with enormous biases, how can science be objective?"***

***Understanding the need for Decolonising in STEM:*** Short article that raises questions about the objectivity of science and its connections to racial science and white supremacy. The article also suggests that engaging in these difficult questions can make for a more engaging learning environment

[AdvanceHE: Weaving People and History into STEM education]

***Approaches to teaching:*** Short article which explores how the STEM knowledge of non-Western people has been subsumed into the dominant narrative of scientific knowledge, silencing the contributions of those peoples. Discusses approaches of how to teach (not just what) to teach.

[Decolonising Science Reading List]

- ***Understanding context:*** Blog post that explores the relationship between colonisation and science. Also include a short reading list of other resources.

**Longer reads**

[Decolonise Science – time to end another imperial era]
(Also available as audio – 22 mins)

***Understanding context:*** Explores how STEM knowledge is inextricably intertwined with empire and imperialism in a range of ways. Acknowledging this legacy can be an important step to crafting a decolonised course.

[Decolonising STEM – Annotated Bibliography]

***Approaches to teaching:*** The above is a list of existing works that demonstrate how other scholars have tried to shed a light on how STEM knowledge is rooted in colonialism. This is less of a reading list of sources to read, but more to showcase some of the questions decolonised scholarship engages with across a range of disciplines

[Three ways to decolonise science]

***Approaches to teaching:*** Consolidates the context and the reasons decolonisation is necessary into practical applications to various science disciplines (and how these intersect, particularly how maths influences science).

Please note, this further reading is less about practical strategies and more a list of resources to get you thinking about what decolonising your course might mean for your own area of expertise by engaging with the questions raised in the works below.

## Books

**Superior, *Angela Saini***
This non-fiction book published in 2019 details how scientific fields are built upon and perpetuate racist theories. Using interviews with experts, the scientific consensus, and the author's analysis, it argues that the concept of 'race' persists, even though it is biologically meaningless. This book covers a range of historical instances of when 'science' was used to defend the argument that some groups of people are superior to others. Topics covered include: the history and modern story of eugenics, the colonial context of the development of 'race' categories and colonial human 'zoos'.

**Natives, *Akala***
*A 2019 British book by the rapper Akala. Part memoir, the book provides race and class analysis of a variety of historical eras, in addition to contemporary British society. This book is less focused on STEM and decolonisation, but is a modern take of colonialism and how this continues to impact modern Britain. In particular, there is a theme throughout of colonialism and 'British racism' in an education context. This is an accessible and important read to fully appreciate the extent of how colonialism continues impacts society today.*

**Invisible Women: Exposing Data Bias in a World Designed for Men, *Caroline Criado-Perez***
An account of the data-gap in society in terms of gender and the far reaching implications. While this is not focused on colonisation or race, the implications of excluding half the population in data-modelling and decision making shows how important representation and decolonisation as a theory are to everything including medicine, safety regulations and transport. However, this book approaches this issue in a binary way and has been widely criticised for excluding non-binary and trans people and being biologically inaccurate in it's description of X and Y chromosomes, this is worth keeping in mind when you read this book.

*Disclaimer: Not an exhaustive list! Please share any Decolonising STEM books and resources you have that you think would be helpful to tutors.*

## Videos

Interview with science journalist Angela Saini about decolonisation of STEM subjects (6 mins)

Chimamanda Adichie – The danger of a single story (18 mins)

'Decolonising Education: The challenge of Whiteness' (1h 39mins)

## Podcasts

We Need to Talk About the British Empire - Hosted by Afua Hirsch, (author of Brit(ish)) podcast discusses how the legacy of the British Empire continues to shape our lives, and sense of collective identity today.

In Search of Black History with Bonnie Greer - Bonnie Greer uncovers the lives of people of African descent that don't fit with the accepted history of Western Civilisation we've traditionally been taught.

## Other resources

**Twitter:**

@DecoloniseSTEM
@CurriculumBlack
@DecoloniseSOAS
@DecoloniseUoM
@DecoloniseQMUL
*Decolonise Contraception* @DecoloniseContr
*Decolonise EDUCATION* @DecoloniseUKC
*Decolonise not diversify!* @decoloniseveryt
*Youth Equity + STEM* @YESTEM_UK
*STEM Participation & Social Justice* @_ScienceCapital
*Decolonial Subversions* @_decolonise
*White Spaces Project* @SpacesWhite

**Websites:**

- https://theblackcurriculum.com/
- https://decolonisestem.home.blog/
- https://www.mpls.ox.ac.uk/equality-and-diversity/diversifying-stem-curriculum
- https://equityandeverydayscience.wordpress.com/zine/
- *Decolonial Subversions* is a newly established open access, multilingual, peer-reviewed publishing platform committed to the decentring of western epistemology www.decolonialsubversions.org
- *Youth Equity + STEM* Supporting Anti-Racist and Social Justice Pedagogies and Designs in Informal STEM http://yestem.org/
- *The Ethics of Fieldwork, Professor Jenny Pickerill https://shefgeographylives.wordpress.com/2014/11/21/the-ethics-of-fieldwork-prof-jenny-pickerill/*

**Future Learn Short Courses:**

Decolonising Education: From Theory to Practice – 4 weeks, 3 hours
Teaching Black British History: A Teacher Training Guide – 3 weeks, 3 hours