SCIENCE MUSEUM GROUP

Equity Framework

The purpose of this document is to provide a consistent Science Museum Group wide approach to working in partnership with people who currently do not see our museums and sites as places for them. It provides **top-level definitions, rationale,** and **principles** to enable all SMG sites and departments to work together towards our organisational value of being Open for All.

This framework will need constant reflection and adaptation as we continue to learn. It focuses on our visitor-facing work, rather than our workforce, which is being addressed elsewhere.

Why take an equity approach?

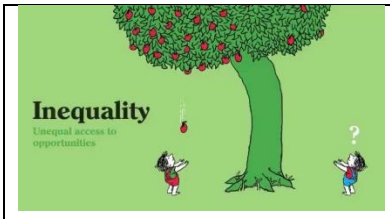
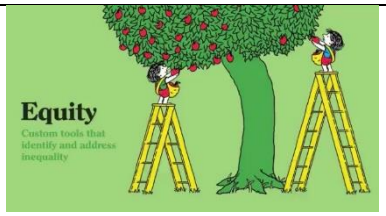
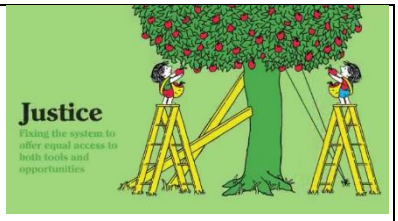
Some people have been historically excluded from STEM. They do not see science, and museums and sites like ours, as places in which they belong, or are welcome. Most often, those excluded from STEM are those who face inequalities in wider society due to class, race, gender, disability, and sexuality.

Audience, market, and academic research show that our ways of working do not address issues that affect exclusion from STEM and wider museum culture. We can and must do better. To achieve our strategic objective to grow science capital in individuals and society and to be truly open for all SMG needs to acknowledge that we play a role in exclusion from science and change the way we work.

Science capital research can guide us to make change. Making science fun is not enough to support a broader range of people to feel they belong or are welcome. We also need to think about who is represented and whose ideas and cultures are centred and valued. We need to focus on changing our museums and sites rather than on changing the groups who experience exclusion.[1]

[1] An overview of science capital, including a link to the original academic paper, can be found here: https://learning.sciencemuseumgroup.org.uk/blog/what-is-science-capital/

Equity and SMG

		
[2] SCIENCE CAPITAL	EQUITY FRAMEWORK	OPEN FOR ALL
Science Capital gives us research-based insight into what influences and shapes people's engagement with, and attitudes towards, STEM. It explains how the methods we use favour those who are already engaged and exclude those who also face inequalities in wider society.	Our equity framework outlines a set of principles to consider in our work with audiences who feel excluded from science. It focuses on organisational change by suggesting ways to address the unequal distribution of power and resources.	We are working towards a vision where all people can engage with STEM and access the social and economic benefits it brings. We cannot achieve equality without first establishing equitable practice. Improving our internal practices, and working with groups facing exclusion, is central to this.

Why Equity and not Equality?

Equality aims to ensure that everyone is provided with the same resources and support to access opportunities. Like equity, equality aims to promote fairness and justice, BUT it can only work if everyone starts from the same place and needs the same things.

Equity recognises difference in people, and how they are differently affected. It involves trying to understand and give people what they need to access opportunities in society. While equality means treating all people the same, equity identifies the changes needed to ensure all people have equal access to resources and experiences. Importantly, equity is both the way in which we work and the outcomes which we seek to gain from doing this work.

Equity, Social Justice and Science Capital

Social justice considers the distribution of wealth, opportunities, and privileges across populations. Within society there are stark inequalities in the distribution of resources across systems of class, race, gender, disability, and sexuality. These are reflected within the cultural sector, including the makeup of our staff and volunteers and in the stories we choose to tell.

[2] Images created by Tony Ruth based on Shel Silverstein's The Giving Tree for John Maeda's 2019 Design in Tech Report

Equity is a model used when thinking about social justice. An equity model takes a needs-based approach to social justice and pays attention to difference. People's needs must be considered in relation to who they are and what their lives are like, differences must be valued and seen as positive aspects of our society, to be recognised and respected.

Science capital is a tool for understanding participation and supporting equitable engagement. It provides us with a good practice framework that we can all use to help improve science participation and grow science capital in individuals and society.

Our current practice

Across SMG steps have taken place to address the way in which museums favour some groups and exclude others, and to understand how to develop better partnerships. These include:

- Being more representative in when portraying who does science e.g. STEM Ambassadors and Future Engineers
- Working with people to tell their stories on gallery and digitally e.g. Science Museum Medicine Galleries
- Research partnerships which aim to identify how certain groups of people are excluded within wider STEM practice e.g. Building Bridges and Enterprising Science projects
- The use of science capital practice in the development of interpretation and resources
- Identifying how sites can set up new ways of working in close collaboration with partners in their city e.g. "Bedtime Stories", and Bradford's National Museum Project

Whilst there have been examples of success much more can be done to prioritise and embed an equity-led approach. The Learning Strategy 2020-30 will help to drive this work with a stated aim to 'to bring authentic, diverse voices into our practice'.

Guiding Principles

The equity framework outlines a cycle for colleagues to identify processes of exclusion, work in partnership to remove these, and reflect on and embed changes. We need to identify barriers that exclude groups and take actions to recognise, reflect and value different ideas and knowledge. [3]

IDENTIFY EXCLUSION AND INEQUITY

- **Embed learning around social justice, exclusion, and equitable practice.** All colleagues need to be able to identify how groups are excluded to be able to make change.
- **Identify the structural barriers** that lead to groups feeling excluded from our museums.

[3] Influenced by the work of Emily Dawson. More information can be found here: https://equityandeverydayscience.files.wordpress.com/2019/05/3e-zine-2019.pdf

- **Identify working practices which enable exclusion of groups from our museums to continue.** Question whose stories are held in our collections, what stories are valued and presented on gallery and digitally and who we are working in collaboration with.

FOSTER AN EQUITABLE ENVIRONMENT

- **Focus on making change to our museums and practices** rather than framing non-participation of excluded groups as a deficit or lack of interest.
- **Broaden what counts and is recognised as science.** Represent a wider range of cultural experiences, interests, identities, skills, and behaviours.[4]
- **Foreground the knowledge, interests, aspirations, and experiences of historically excluded groups** in our museums and our practice

WORK IN PARTNERSHIP TO MAKE CHANGE HAPPEN

- **Work with excluded groups on mutually beneficial collaborations.** Engage in open and critical discussion with groups, starting from who they are and what their lives are like rather than the needs of our museums
- **Trial new ways of working in collaboration with external groups**. Reflect on what works, and what could be improved to move our equitable practice forward
- **Reflect on our internal decision-making processes and adapt these in collaboration** with partners so that change happens at all levels.

REFLECT AND EMBED STRUCTURAL CHANGE

- **Set equity-based outcomes** where we prioritise the needs of audiences who are excluded from our work and programming.
- **Embed a cycle of reflection based on equitable practice**. Reflect on outcomes for community audiences, museum visitors and SMG.
- **Embed equitable practices across all levels and departments.** Organisational change is key to embedding equitable practice and outcomes.

How might we measure our progress?

Creating change on a structural level takes time and we need to be open to learning and reflecting. As we begin our journey to become more equitable, we will define what success looks like and how this is measured. Methods may include:

- Audience Research (in-house and externally commissioned)
- Visitor Insight Reports
- Critical feedback from external groups and partners
- Science engagement measures
- Recruitment, retention and representation of workforce

[4] A video outlining ways in which science learning can be adapted to engage a broader audience can be found here: https://learning.sciencemuseumgroup.org.uk/blog/animation-science-capital-and-teachers/

Appendix 1: Further Reading

The guiding principles outlined in this framework are informed by science capital research. King's College London and University College London have led the research into science capital to help shed light on why many people remain underrepresented in STEM. SMG has adopted a science capital approach, committing to making a difference and to help build a STEM-literate society that celebrates science, technology and engineering and their impact on our lives.

Research states that social justice is central to taking a science capital approach. This involves understanding, monitoring, and challenging inequalities, recognising the importance of power in how inequalities are perpetuated in society and empowering audiences to be able to engage meaningfully with science. To do this, research states that we must take an equitable, audience centred approach whilst working to change ourselves and our institutions to enable more forms of science capital to be recognised and valued. This means:

- We must recognise our audiences' needs, provide them with choices, value their differences and recognise the rich resources and experiences they bring with them.
- We must acknowledge that not all audiences feel at home around science, particularly those from communities that have been historically excluded. We should support them to feel more comfortable and take ownership by changing who is represented in science and how, as well as how science itself is represented.

Taking a science capital approach will have a positive effect on audiences' lives – not just in terms of encouraging more young people to continue into science, technology, engineering and mathematics (STEM) jobs, but more importantly, as a tool for social justice, to help improve people's lives, life chances and choices.

Selected further reading about science capital, social justice, and equity

Science Museum Group Publications
The Science Museum Group: Learning Approach
The Science Museum Group: Engaging All Audiences with Science
External Publications
Archer, L., Calabrese Barton, A., Dierking, L., Dawson, E., Seakins, A., Equity in Informal Science Learning
Archer, L., Dawson, E., Dewitt, J., Godec, S., King, H., Mau, A., Nomikou, E., Seakins, A., Science Capital Made Clear
Dawson, E., Wang, S., Equity Inclusion and Everyday Science Learning
Academic Papers

Archer, L., Dawson, E., Seakins, A. and Wong, B. (2016), 'Disorientating, fun or meaningful? Disadvantaged families' experiences of a science museum visit.', Cultural Studies of Science Education, 11 (4). Pp 917 - 939
Archer, L., Dawson E., DeWitt, J., Seakins, A., Wong, B. (2015). "Science capital": a conceptual, methodological, and empirical argument for extending Bourdieusian notions of capital beyond the arts. Journal of Research in Science Teaching, 52(7), 922-948

Appendix 2: Resources to help you embed equitable practice into your work

For guidance on local community partnership working please see the Community Engagement Framework for each site

- Science Museum
- National Science and Media Museum
- Science and Industry Museum
- National Railway Museum
- Locomotion

For practical information on how partnership projects work please see the Participation Toolkit

For practical information on how to embed science capital research into your work please see the Science Engagement Toolkit

For strategic information on target audiences and audience development at each site, please see the Visitor Plan

- Science Museum
- National Science and Media Museum
- Science and Industry Museum
- National Railway Museum
- Locomotion

For further guidance on accessibility for disabled visitors please see the Access Framework

For previous evaluation, best practice and lessons learned please see the Audience Research and Advocacy Intranet Page

For practitioner reflection on what research into STEM engagement means for our day-to-day practice please see the Transforming Practice Blog