

# BUILDING BRIDGES

Understanding infrequent  
and absent visitors

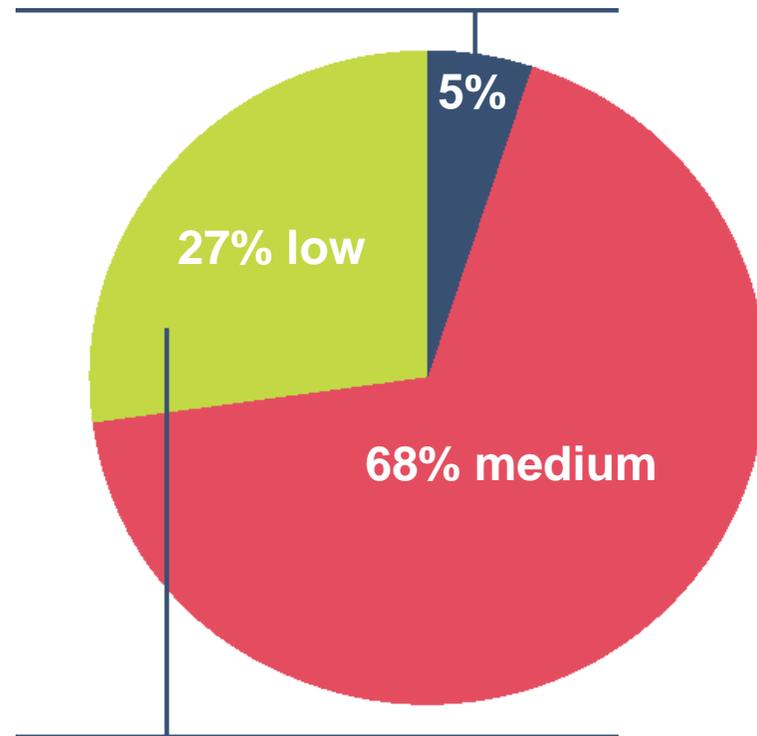
**Beth Hawkins**  
Science Museum, London  
15<sup>th</sup> November 2017

SCIENCE  
MUSEUM



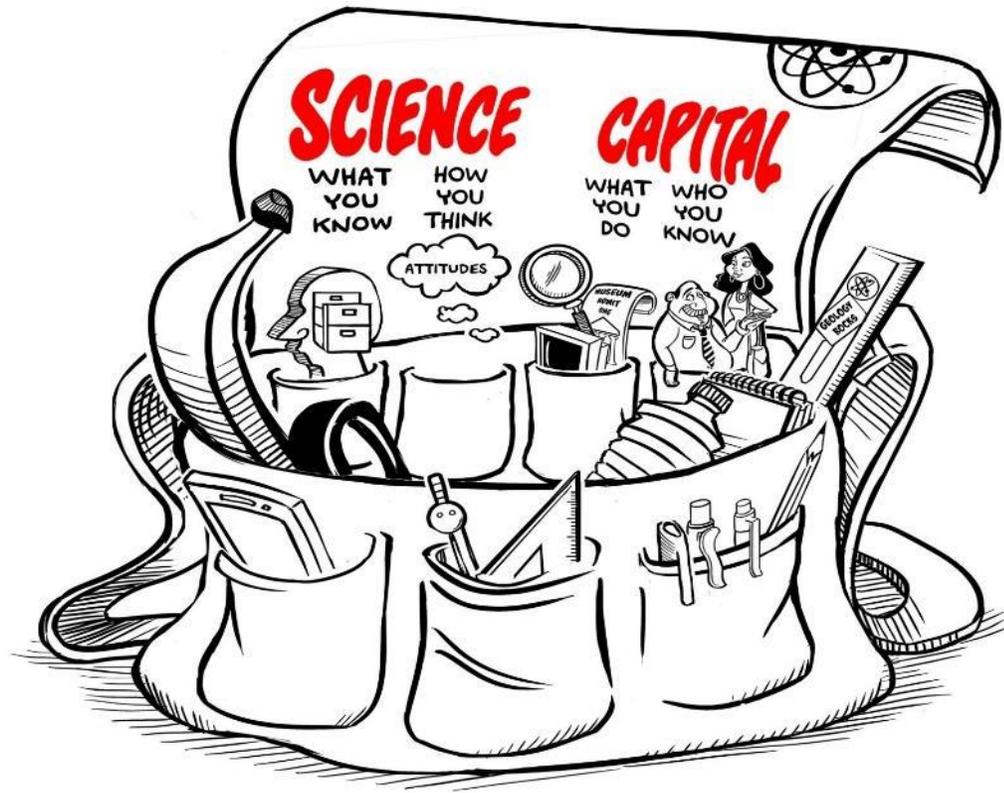
# Science engagement in the UK

**5%** have high science capital (*actively engaged*)  
*More likely to be male and socially advantaged*



**27%** have low science capital (*science is not for me*)  
*More likely to be female and socially disadvantaged*

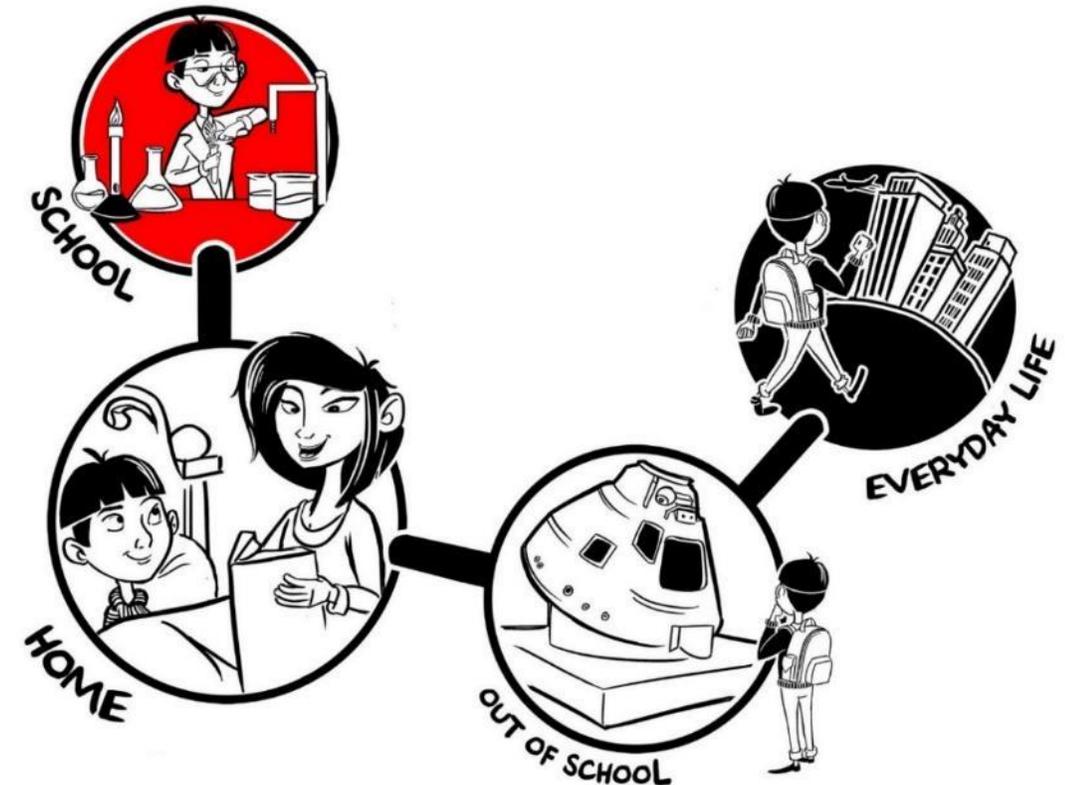
# Your science capital...



- **What you know** about science/ STEM
- **What you do** – different science related activities
- **Who you know** who use and talk about science
- **How you think** about science

# The Building Bridges project

- Link school, the Science Museum, and every-day family science experiences
- Ran from 2012 - 2017
- 11-12 year olds
- 18 schools each year
- Focus on science skills
- Set of different experiences across a year



**SCIENCE  
MUSEUM**

# Project programme



# Research questions

- How might families' cultural references and values, including their interests and aspirations, affect their engagement with science?
- How do families' everyday conversations, activities and skills relate to science content, process and/or practice?
- What is the impact of families' involvement in the 'Building Bridges' project on their views, conversations and activities related to science?



# Key findings...

- See science as something that only happens in school or in a laboratory
- Science Museum was viewed as 'educational' rather than also fun
- Have different language and points of reference to us & frequent visitors e.g. '*statues*', '*interactives*'.



# Key findings...

- Families are a very influential part of students lives.
- Technology and connectivity is an extensive part of children's lives - from which parents are often excluded.
- Shared interests in food, shopping, music, sport and gardening.



# A whole museum approach...

Every moment in the museum is an opportunity to feel welcome in our spaces and to shape our visitors' attitudes towards STEM.

The image shows the cover of a report titled "INSPIRING FUTURES STRATEGIC PRIORITIES 2017-2030" from the Science Museum Group. The cover features a teal-to-green gradient background. On the right side, there is a white box containing the text "GROW SCIENCE CAPITAL IN INDIVIDUALS AND SOCIETY" and a small photograph of a child looking at a museum exhibit. Below the photograph is a small caption: "Nico Ordean takes over as Arthur in Residence at the National Science and Media Museum".

**SCIENCE MUSEUM GROUP**

**INSPIRING FUTURES**  
STRATEGIC PRIORITIES  
2017-2030

**GROW SCIENCE CAPITAL IN INDIVIDUALS AND SOCIETY**

Our offer and reputation for lifelong informal STEM learning and engagement will be the best in the world.

It will be recognised as being of strategic importance to the UK STEM agenda and sought out by policy-makers, funders, peers and partners. It will reach many more people beyond our walls through our reach and new programmes, including through national and international partnerships, compared with the 2014 JIS baseline. The Science Museum will remain the number-one museum destination for school groups, the number one young people visiting Wonderlab: The Great Gallery. The Science Museum free of charge on a school trip to be sustained at a minimum of 200,000 per year from 2019. All online learning resources will be highly regarded for quality and widely used throughout the UK and around the world. Museums will be key destinations for adult audiences.

ing continuity in science. Science Museum Group plays a central and irreplaceable role in deepening and expanding science literacy in the UK. The breadth of resources in the Group, the diversity of the audiences and communities we serve, and the expertise embedded in our teams, collections and exhibitions are world-class resources for public engagement in STEM. Our operating principle is to build science capital to enrich people's lives and enhance their contributions to society. Science capital is a recent concept that encompasses the varied factors that influence people's attitudes towards science, including who they know as well as what they know, past experience and exposure, and education.

Nico Ordean takes over as Arthur in Residence at the National Science and Media Museum.

**SCIENCE MUSEUM**

## Language (verbal and visual)

How can the communication methods and language we use help everyone to feel that they can do and be part of science?

*'...do I feel that science is something I am part of?'*

## Science content knowledge

How can we value and build on peoples existing STEM knowledge and experiences and broaden people's ideas around what science is?

*'...do I understand this science?'*

## Skills

How can we help visitors recognise that they have science skills and use them in all areas of their life?

*'...what skills do I already have and use?'*

## Use everyday examples

How can we link our STEM experiences to our visitors' rich and diverse interests, experiences and everyday lives?

*'...what does science look like when I bump into?'*

## People

How can we show that science isn't just for scientists and that there are diverse people who work in or benefit from science?

*'...are there people I relate to represented?'*

## Confidence and ownership

How can we make people of all ages and backgrounds feel welcome and confident to take part in our experiences and feel that our museums are a place for them?

*'...is this a place for me, can I get involved?'*

## Promote science talk

How can we invite and encourage visitors to talk and share their own stories and opinions about science?

*'...what might we talk about?'*

## Extend the experience

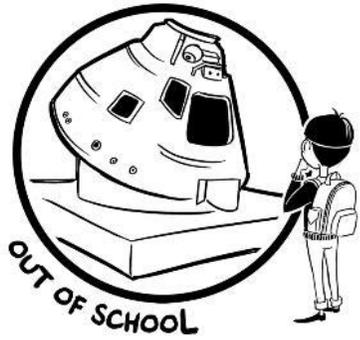
How can we extend our experiences in and beyond our museums?

*'...how can I continue this experience or find out more?'*

## Positive reinforcement

How can we help our visitors feel that science is something they can do?

*'...is science something that people believe I can do well?'*

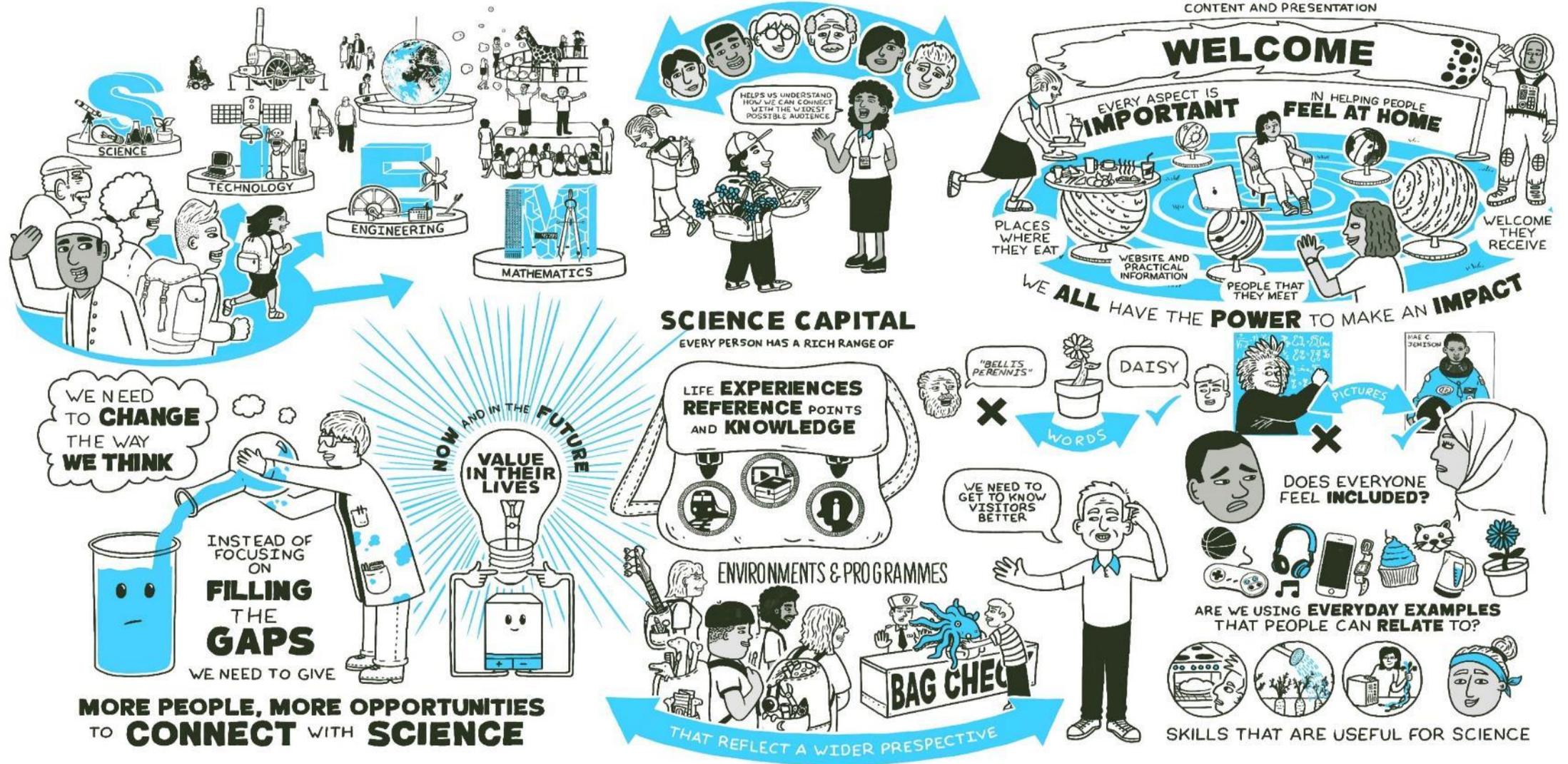


**Blog:**  
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Science capital and the informal science sector

[bit.ly/scicapinformalscience](http://bit.ly/scicapinformalscience)