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# Science Capital in Practice

## Information and Invitation to Participate



**A National Training Programme  
for Science Centre Professionals**

**Deadline for Applications: 4 March, 2019**

## Overview

The UK Association for Science and Discovery Centres (ASDC) is delighted to be partnering with the Science Museum Group to deliver a national training programme for Science Centre professionals that focuses on how to use the concept of science capital in their day to day science engagement practice.

The concept of science capital, which has been led by the work of Professor Louise Archer and her teams from University College London and King's College London, give us a valuable insight into why and how some people engage with STEM, and why some do not. It also helps us to frame and shape experiences which are designed to support STEM engagement.

We know people can experience and learn science in many different places - at school, at home and in their everyday life. Science Centres and museums play a key role in the STEM learning landscape by supporting and encouraging audiences to extend their science learning within and beyond our spaces. The informal science sector helps to broaden people's perception of STEM and has the potential to inspire people of all ages and backgrounds with the opportunities and wonders of STEM.

The science capital research provides us with a good practice framework that can be used to help us to improve science participation in both individuals and society by designing environments and delivering programmes that are welcoming, inspiring and memorable for as wide an audience as possible. We know that no one institution, or experience can build a person's science capital in isolation, and by working collaboratively together, through this and other initiatives, we can maximise the impact of all our STEM experiences.

### **ASDC and The Science Museum Group are seeking 15 Science and Discovery Centres and Museums to partner with us for this exciting UK wide Programme.**

We are asking science centres to bring their exceptional talents in engaging communities, families and schools with science in fun and engaging ways as well as their experience working in communities and with underserved groups to the 'Science Capital in Practice' Programme. The 15 selected centres will be members of ASDC.

This programme follows the launch in October 2018 by the Science Museum Group of their Academy of science engagement. At the core of the Academy's work is the concept of science capital. This programme has been made possible through the Science Museum Group Academy's founding partner, BP who also funded The Enterprising Science Project which focused on much of the early academic work on science capital.

The [Science Museum Group Academy](#) is bringing this latest research into practice at scale by working in partnership with ASDC.

## The 'Science Capital in Practice' Programme

### The Vision

To build a 'community of good practice' that enables professionals to effectively apply the science capital concept to their practice so that more diverse audiences feel that science, and science centres and museums, are for them.

### The Mission

- To train and support professionals in 15 selected UK science centres and museums to feel confident to apply the science capital research to their practice and to incorporate this learning more broadly into their organisation.
- To share tried and tested ideas and to generate new ideas and formats.

### The Programme Goals

The key goals for this 3 year national programme, are as follows:

- Science centre professionals deeply understand what science capital is, and how to apply it effectively to their work.
- To make a step change in our sector's engagement by creating a community of practice and sharing what does and doesn't work.
- To support audiences with low to medium science capital engaging with our institutions and organisations to feel that science is something they are a part of, and that it is for them.
- To strive to ensure the programme has a long term and sustainable value and benefit to staff and their wider organisation.

## The types of interactions and programmes you may propose

This programme is about embedding good practice informed by the latest science capital research across your organisation to help a more diverse audience to participate in science-related experiences and feel that science is 'for me'.

This is an opportunity to trial and test ideas that will have longer term benefits for your organisation. What teams within your organisation you pick that can deliver to this long term approach is up to you.

You can work with any audience group (schools, families, teachers, community, your staff etc.) It can also use any content area you choose.

**Ideas could include:**

- Develop or redevelop a suite of resources or activities for families or schools now shaped by the science capital approach.
- Trialling a new innovative marketing, arts or social media campaign, to communicate or connect with your chosen demographic or a new under-represented audience.
- Running a new afterschool or weekend club, special membership or other multiple visit activities.
- Establishing an organisation-wide training and support programme for all your teams or departments.
- Running teacher events or training that has been shaped by the science capital approach.
- Establish or work to sustain a local community partnership or participation project
- Integrating new evaluation visitor studies work to your practice, shaped by the science capital approach.
- Creating a volunteer programme or career ladder.
- If you are building a new exhibition, training your exhibition designers, graphic designers and exhibition staff to use the science capital approach in all they design.
- Changing something about what people see of your main entrance so that it is more welcoming, using the science capital approach.

**To note for the avoidance of doubt:**

A standalone one-off activity, either on or off-site, would not be eligible, whereas a programme that includes pre- or follow-up activity that can be used in school or at home that you can track would be considered.

## The key audiences

The key audiences for this national programme are people who are likely to have medium to low science capital\*, as well as staff at your centre or other groups as listed above.

\*Further guidance will be given at the Training Academy on who this precisely includes, however for this proposal you may use the proxy of 40% on the Indices of Multiple Deprivation.

## What is on offer for the 15 participating science centres and museums?

### The programme will offer the 15 selected centres the following:

1. A £3,000 grant to assist with delivery at each centre, which may be spent on staff time and other costs. (This is a grant. If VAT needs to be charged it must be part of the £3,000.)
2. A two-day national training academy in London, with all expenses paid, to train two members of staff from each of the 15 science centres / museums across the UK to support and enable them to run their specific proposed programme, and to apply research-led science capital approaches across their organisations as appropriate.
3. A one-day national seminar will be held at the end of the programme (Spring 2021). At least one member of staff from each of the 15 science centres will need to attend to share their learning and experience from the programme. Expenses for one person will be covered.
4. Training and dissemination resources to support delivery and training of further staff back at each centre.
5. A 'Science Capital in Practice' programme Hub, for 'Knowledge sharing and resources'.
6. On-going support across the programme over the phone and by email from the Science Museum Group for the 15 centres.
7. A 'Press Pack', with images, logos, sample press releases and approved copy for the web and social media delivered in a flexible manner for centres to use.
8. An evaluation framework and guidance on what data needs collecting.
9. A final report which will share detail and learning from all 15 programmes.

## Commitments of the 15 selected organisations

**The 15 selected organisations will need to commit to the following:**

1. To ensure two members of staff participate fully in the training academy in London on Tuesday 18 June and Wednesday 19 June 2019 (this will be part of your contract).
2. If, following the Academy Training, you wish to submit any changes to your proposed delivery you may do this by 10 July 2019. These will be reviewed and approved or amended by the selection panel.
3. To agree to ASDC sharing your contact details and proposals with the Science Museum Group Academy Staff so they can contact you for the programme.
4. To deliver your final programme proposal in a high quality, engaging manner by 31 October 2020 and to use approaches of the 'Science Capital in Practice' Programme at your centre and/or at outreach events into the future.
5. To ensure you have a mechanism in place so that all staff who are delivering your programme are fully trained in the science capital approach.
6. To share information on science capital with at least 50% of your staff back at your centre for example through a newsletter, at a staff meeting or by giving out the literature provided.
7. For at least one member of staff to attend the National Seminar in Spring 2021 to share your learnings.
8. To share information with ASDC and The Science Museum Group for the purposes of reporting in a timely manner.
9. To submit all required evaluation, on the date or dates given and in the manner specified. (Note the format will be similar to other ASDC national STEM programmes).

**Organisations wishing to apply should ensure that their chosen members of staff are available to attend the training academy and deliver to other deadlines.**

## Eligibility and Selection

### Eligibility

This grant is open to science centres, museums and others who are paid members of ASDC. They will need to remain members of ASDC for the duration of the programme.

If you have any questions about your membership position please telephone ASDC.

### The Selection Process

The 15 participating organisations will be selected through a competitive tender process.

Organisations wishing to apply must fill in the application form.

**The deadline for applications is 4 March 2019, 11pm**

### The Selection Panel

The 15 successful participating organisations will be selected by a selection panel, made up of the following people:

- Karen Davies, Head of Learning Research and Resources, Science Museum Group
- Beth Hawkins, Science Museum Group Academy Manager, Science Museum Group
- Dr Penny Fidler, ASDC CEO.
- And up to two external reviewers with public engagement or science capital expertise.
- The 15 selected centres will be notified by Monday 18 March 2019.

### Selection criteria

We will be looking for a mix of centres who feel that they have lots of experience of using and working with science capital and those who feel that they are just starting out.

**Priority will be given to organisations that:**

- Demonstrate a strong passion for learning the latest academic research around science capital and finding ways to apply this to their practice.
- Demonstrate passion to reach, or experience of reaching a wide range of underserved / under-represented audiences, especially those who are likely to have lower science capital, as part of their future normal operations.
- Take a creative approach with great ideas for activities and events that will help people from all parts of society get involved and feel science 'is for them'.
- Demonstrate how this programme will bring long term, sustainable value and benefit to their staff and wider organisation.
- Demonstrate a desire to train your wider staff in the science capital approach, to apply to your centre's activities.

- Demonstrate (if applicable), how you will bring lessons learned from other related programmes, including Inspiring Science, Explore Your Universe and The Crunch.
- Demonstrate opportunities to share evaluation and learning within the ASDC network and other networks/associations where relevant.
- Routinely reflect on and learn from their work.

### Other ASDC Programmes

Please note this grant programme has some overlapping goals with ASDC's flagship Explore Your Universe Phase 4 programme, as well as The Inspiring Science Capital Awards and other programmes to be announced. Please join the Bidders Conference call if you want further information on the complementarity of your proposals.

### Geographical considerations

The goal of this project is to give audiences from lower science capital groups across the UK the opportunity to explore and celebrate STEM through high-quality, engaging experiences.

When making the selection of the 15 centres, quality and interesting proposals will be the biggest factors, however, in the case of all other aspects being equal, the geographical spread of the 15 partners across the UK will be taken into consideration.

If there is a strong rationale, you may also partner with another ASDC centre. Please discuss this with us on the Bidders call or in advance of submission.

### The Bidders' conference call

ASDC will host a conference call at **2pm on Wednesday 13 February 2019** to answer any questions from all potential bidders in an open manner. To take part you must book a place.

Please book through this Eventbrite. <https://www.eventbrite.co.uk/e/science-capital-in-practice-bidders-conference-call-tickets-54936540672>

### Details of The Training Academy

The Training Academy will be open to two members of your staff.

This is a two day event in London on **Tuesday 18 June and Wednesday 19 June 2019** (participation in full will be part of your contract).

All travel and accommodation expenses for the training days will be covered.

The Training Academy programme will include:

- Overview and the latest research insights from the lead researchers into science capital
- Case studies from different organisations using science capital informed approaches



- What science capital approach can mean for your practice and what opportunities it can bring
- Training materials and support to disseminate ideas within your organisation.

### Who should you send to the Training Academy?

The Training Academy is for 30 science centre staff from the 15 selected science centres and museums across the UK to enable them to use ‘Science Capital in Practice’ at each centre, and to share what you are already doing in this area.

The two-day Training Academy should be attended by the following two types of staff, although the job titles will vary between centres:

1. A senior member of your staff who can embed the new approaches across your programmes with communities, families and schools. They also are senior enough to arrange training with staff within your institution and liaise with other departments/ teams. This might be an education director or learning manager.
2. A senior public engagement professional relevant to your proposal who will be more ‘on the ground’, for example delivering this programme day to day and arranging events and writing the programme copy. This might be a community outreach specialist, a project manager or someone mid-level in your learning or education team, with a reason for becoming an expert across the ‘Science Capital in Practice’ Programme. They will need to be the main person training others and delivering the programme in your centre.

### The Grants

The grant may be used to contribute to staff time, marketing, community group involvement or other costs at your organisation's discretion. **The Grant Payment must be claimed from ASDC on the following dates:**

	Date	Amount	Milestone
Grant Payment 1	31 July 2019	£1,500	Initial Payment following two staff participating at the two-day national training academy
Grant Payment 2	14 November 2020	£1,500	On completion of the programme, and submission of the evaluation and final report.

Note: If your organisation wishes to charge VAT, this will need to be included within the £3,000.

In your application please specify how you plan to use the grant, as well as detailing your organisation's in-kind contributions.

## Key Dates and Delivery Timescales

Delivery begins from **31 July 2019** and must be completed by **31 October 2020**, with you project report sent to ASDC by **14 November 2020**.

<b>2019</b>	
16 January 2019	Applications open
13 February 2019	Bidders conference call
4 March 2019	Applications close
18 March 2019	Notification of successful applicants
May 2019	Contracts will be agreed with successful applicants
Tuesday 18 June - Wednesday 19 June 2019	Science Capital in Practice Training Academy, London (Two-days)
20 June – 10 July 2019	Science centres are able to discuss and reshape their proposals if they wish.
10 July 2019	Science Centres to submit a one-page summary of any changes to proposed delivery following the training academy. These will be treated as amendments to contracts.
31 July 2019	Centres to invoice ASDC for Grant Payment 1 of £1,500
31 July 2019	Science Centres may begin delivery of activities
<b>2020</b>	
28 February 2020	Science centres submit a short Interim update report to ASDC.
31 October 2020	15 Science centres complete delivery
14 November 2020	Deadline for 15 Science Centres to submit final evaluation online. Deadline for 15 Science Centres final reports to ASDC
14 November 2020	Science Centres submit final £1,500 invoices to ASDC for Grant Payment 2, on submission of final report and evaluation.
30 November 2020	ASDC sends evaluation data to the science museum for their analysis
<b>2021</b>	
January 20 2021	Final report from ASDC to Science Museum Group
March 2021	Final overall project report by Science Museum Group
Spring 2021	National seminar for the Science Centres involved in Science Capital in Practice programme to share learning; and for others interested in the programme.

## Numbers of participants you commit to engage

Selected partners will need to detail the numbers of people that they will engage with (this includes the staff in your centre in terms of training; and visitors benefitting from the programme). PLEASE NOTE: there is not a fixed minimum reach set for these programmes but we would expect the numbers reached to adequately reflect the programme proposed.

We would expect as a minimum that any staff who will be involved in any delivery of your proposed programme will receive training in the practical application of the science capital concept. This number needs to be reported. Those proposals that include training a high proportion staff at your centre in the science capital approach as part of A Change Programme will be looked on favourably.

## Reporting data

To enable us to evaluate the impact of this programme, and who you have reached and how, we will be asking you to provide ASDC with some information as part of the reporting process.

We will collect data at the end of the project on the following:

1. What you have delivered relative to what you said you would deliver in your proposal.
2. The overall impact of the programme on your staff, organisation and your audiences.
3. Numbers of people participating in your programme overall.
4. Numbers of staff trained in the science capital approach.
5. Reflections and any lessons learned.
6. Details of the following for events and participants (where applicable):
  - Key stage of children taking part in curriculum-linked schools workshops and activities
  - Postcode of the schools for Science Museum Group to analyse regional dispersion and indices of multiple deprivation
  - Location and postcode of any community events
  - Approximate ages of families (eg families with children 5 - 12)
  - If they were badged groups eg brownies
  - Was the event free or paid
  - Date and weekend / holiday / school day
  - Male / female split for all events (if not approx. 50:50)
7. Approximate number of hours of interaction, for example if one person interacts for a day, vs 10 minutes this should be recorded, or if one person interacts 5 x for an hour this should be made clear. This will be discussed at the Training Academy.

We will also be providing simple surveys to you, for you to use with participants and then input the results online. The Science Museum Group would also like to conduct short telephone interviews with a senior member of staff in your centre who has participated in the programme. Further details regarding the evaluation will be covered at the Training Academy.

## ASDC Development Fee

In early 2018, the Board of ASDC, made up of 15 CEOs and senior managers across the membership, agreed that for all further funded programmes, ASDC would ask successful centres to contribute 6% of the amount of the grant and equipment, to support ASDC's role in development and fundraising for these programmes, and to enable ASDC to continue running National Programmes.

This development fee is intended in place of each centre using their own fundraising staff to identify opportunities, develop proposals, approach funders and create and deliver the content. The Development fee for this programme is £180. This percentage is only levied on the grants and the equipment, rather than the full cost of the programme to create, train, deliver and provide all the resources for the centres.

Please note: This development fee cannot be part of your grant for this programme. Your grant for this programme is restricted for the delivery of the project. As such this £180 must come from another budget. Further information is on the ASDC website under 'About us'.

ASDC will invoice you for the Development fee following your selection.

## Note on Open Access and Intellectual Property

ASDC strives to ensure open access to all our project resources so that the field can share and benefit as a whole. All the project's resources are therefore licensed under creative commons. To help science centres and scientists to continue to innovate together, and to find ever more brilliant ways to engage school students and the public with the physical sciences, we ask that all participating centres follow this spirit of collaboration and share any new activities that evolve from the project under creative commons or share openly.

## How to apply

To apply, please fill in the application form. Re-save your application form in the following format:

**'The Science Capital in Practice application – name of your centre'**

**Please email your application to:**

**Dr Penny Fidler, CEO via [admin@sciencecentres.org.uk](mailto:admin@sciencecentres.org.uk)**

Please ensure you get an email response (phone us if you do not).

We hope you will join the bidders conference call. However if there anything you would like to discuss in addition to this call, please call Dr Penny Fidler direct on 0117 915 0186

**Deadline for Applications: 11pm on Monday 4 March 2019**

## Further Information on Science Capital

You can read more about research into science capital from the lead academic researchers here:

[ucl.ac.uk/ioe-sciencecapital](http://ucl.ac.uk/ioe-sciencecapital)

There are also some useful animations you may like to watch:

[Science capital and the informal science learning sector](#)

[A science capital approach to building engagement](#)

[A science capital teaching approach](#)

You can also read more about the work that that the Science Museum Group have been doing here:

[group.sciencemuseum.org.uk/sciencecapital](http://group.sciencemuseum.org.uk/sciencecapital)

ASDC, BP, and the Science Museum Group have also been working in partnership with BEIS through the National Forum for Public Engagement with STEM to produce an adult science capital tool for free use across the STEM engagement world. This is being trialled externally at the moment and is also available on [bp.com/sciencecapital](http://bp.com/sciencecapital).

## About the Science Museum Group

The Science Museum Group is an alliance of five museum across the UK which welcome over 5 million visitors each year to five sites: the Science Museum in London; the National Railway Museum in York; the Science and Industry Museum in Manchester; the National Science and Media Museum in Bradford; and Locomotion in Shildon.

We share the stories of innovations and people that shaped our world and are transforming the future, constantly reinterpreting our astonishingly diverse collection spanning science, technology, engineering, mathematics and medicine.

Our mission is to inspire futures - igniting curiosity among people of all ages and backgrounds.

More information can be found at [group.sciencemuseum.org.uk](http://group.sciencemuseum.org.uk).

## About the Science Museum Group Academy

The [Academy](#) is the home of the Science Museum Group's science engagement training. It delivers research-informed science engagement training and resources for teachers, museum and STEM professionals, and others involved in STEM communication and learning both nationally and internationally. There are two UK Academy hubs based in London and Manchester

## About BP, founding partner of the Science Museum Group Academy

BP is a global energy business with wide reach across the world's energy system. The energy we produce serves to power economic growth and lift people out of poverty. In the future, the way heat, light and mobility are delivered will change.

We aim to anchor their business in these changing patterns of demand, rather than in the quest for supply. We have a real contribution to make the world's ambition of a low carbon future. We operate in 70 countries worldwide and employ around 74,000 people.

In the UK, we supported around 141,000 jobs in 2017 – approximately 1 in every 226 across the whole of the UK economy. [www.bp.com/uk](http://www.bp.com/uk)

### About the ASDC Network

The UK Association for Science and Discovery Centres (ASDC) is a national organisation that brings together the UK's major science engagement organisations to play a strategic role in the nation's engagement with science. Within our network are over 60 of the nation's largest publicly accessible science centres, discovery centres, science museums and scientific bodies. Together, our vision is for a society where people of all backgrounds and in all parts of the UK are inspired and fully involved with the sciences.

Every year in the UK, 20 million people of all ages and backgrounds choose to engage with science at one of the UK's science and discovery centres or science museums. This equates to 385,000 people every week who come to our member centres to explore and discuss science in an involving and personal way. Over half (ten million) are girls and women. Over half, are school-age children.

This programme adds to ASDC's championing of the concept of science capital over the past many years, and enables a cohort of 30 professional engagement staff from 15 science centres and museums to be trained on the concepts of science capital, and how they can use this in their day to day practice.

ASDC's partnership in this programme also leverages this national infrastructure, expertise and practice. Science and discovery centres and science museums are already embedded in the heart of their communities in England, Ireland, Scotland and Wales. They all have long-term relationships with communities, schools and families as well as local institutions such as universities, industry, local government and local groups.