



minibrum

Nine top tips for co-production

Co-producing Minibrum with children, for children

Birmingham Museums Trust (BMT) broke new ground in developing MiniBrum, becoming the first UK Science Centre to create a STEM-learning gallery and programme for Early Years children (0-8 years old) ‘through co-production with families, children, specialists and educators, alongside expert advisory panels...’

In 2017 BMT received a grant to produce Minibrum from the Inspiring Science Fund, a partnership between UK Research and Innovation (UKRI) and Wellcome. Over 5 years, 16 nurseries and primary schools, 6 community organisations and 3 universities took part in MiniBrum co-production activity

The co-production team was led by an Early Years Specialist and supported by an Advisory Board and Working Group that included both external stakeholders and staff from across BMT’s Learning and Engagement, Curatorial, Conservation, Operations and Commercial teams.

The children, their families, education and community organisations were involved in all aspects of design from the developing the content and layout of the toilets, café and gallery zones, to the focus of the learning and events programming. The project team also drew on expertise from academics, STEM providers, teachers, parents, health and community workers.

The MiniBrum gallery opened to the public in May 2019 and was an immediate hit with families, schools and children’s groups. Throughout lockdown BMT continued co-production work online, on and offsite with children, schools and community groups to develop further elements including the Jewellery Factory exhibition, early years planetarium show and multi-sensory family activities.

In this document, we aim to pass on our Nine Top Co-Production Tips to you. We hope it gives you pointers to start you on your own co-production journey.



Why use co-production?

By using the inclusive principles of co-production to develop collections, processes, programming or displays, you are more likely to establish more meaningful relationships with and services for diverse communities.

What's co-production all about?

The museum is committed to deep partnerships with target communities, particularly those whose goals match their own. It wants to make changes in response to these partners' needs and interests. It is prepared to commit time, staff, money, equipment or space to make this work.

AND SO the museum sets the project concept and development plan, and then staff members from across the organisation work closely with participants to make it happen. They will retain some control and work with partners to set boundaries based on their goals and capacity. Participants' actions will steer the direction and content of the final product.

What are the benefits of co-production?

- Many organisations work together to make the decisions
- In sharing control over the process, the museum understands that participants' goals, knowledge and preferred working styles are just as important as those of the staff.
- The museum team respects the value of participants' own expertise and lived experience and provides participants with tools and external expertise to develop the project.
- By supporting participants to collaborate on their own terms, some for a short period and others for as long as it takes, the process encourages shared ownership
- Participants gain skills throughout and may report that taking part has a positive effect on their own wellbeing

In the short term, changes made by co-production help visitors see the institution as a place dedicated to supporting and connecting with community. Co-produced galleries and programmes will bring in new audiences connected to the participants.

In the longer term, as the co-production processes are used in other organisational contexts, the museum will be viewed as a community-driven place.

Because they co-produced MiniBrum, Early Years children are happy and playful within the gallery and use it instinctively to learn about STEM with confidence



'Through play they show us.'

Co-production: the nine top tips

#1 Do the groundwork

Take time to establish co-production means to you and agree your shared ethos. Look at how others have done it and pick the approach that suits you best.

#2. Build your team

Forming your team will depend on the project but working across departments and including external partners is essential. The minimum team size is two, the maximum up to you!

#3. Work with experts

This important stage is often omitted but working with experts helps you get things right more efficiently and quickly than trying to work it out yourself.

#4. Identify and connect with your target audience

Take time to connect with suitable partner groups to help you tackle the job and get the best results. Be determined to get the right partner – not someone almost right because it feels easier.

#5. Create the best enabling environment

Choosing the setting for your co-production sessions will help you get the best results. Think about accessibility and listen to your partners when they tell you how to make sure they feel safe.

#6. Communication doesn't need words!

'Through play they show us.' Traditional consultation approaches can be overly dependent on written communication but MiniBrum proved that there are other ways to get the message over.

#7. Record, reflect, review, revise

Regularly take time together to review the information you are collecting, reflect on what you find out, how it supports the project ethos, and revise your approach where necessary.

#8. Celebrate and share success!

Co-production requires of all partners trust, commitment and hard work. It's important for your ongoing relationships to celebrate achievements and share successes as you go.

#9. It's an ongoing process

If your service is fully committed to co-production as a way of improving relationships with diverse local communities, don't stop once the new gallery is open or the activity programme delivered. There's so much more to be gained...



#1. Do the groundwork

Take time to establish co-production means to you and agree your shared ethos. Look at how others have done it and pick the approach that suits you best.

Co-production is a valuable way to work but you will find that there is no single co-production model. The process you use and the conversations you have will differ depending on the age, interests, culture, knowledge and abilities of the people involved: this is why it's so exciting!

Everyone involved will need to understand and share this ethos to make the process work.

WHAT'S YOUR ETHOS?

**Our Minibrum ethos was
'by children, with children,
for children'**

**If any action or decision didn't
support this, we didn't do it.**

Be open: spend time at the outset to communicate honestly

Be brave: positive change requires a risk

Do your research: what have you learned from previous projects? Who else has done this? Ask around and look at what works.

Questions to ask yourselves

- What do we mean by co-production?
- How do we want the process to influence designs, content, programming? Are we tied to a particular output?
- Who is/are the primary target audience(s)?
- What are we prepared to commit to this process?
- Are there any boundaries we absolutely have to set? These might be to do with safety, legal compliance, space, staffing or resource
- Will this process of co-production be meaningful?

#2. Build your team

Forming your team will depend on the project but working across departments and including external partners is essential. The minimum team size is two, the maximum up to you!

A family-friendly venue isn't just the job of the Learning Team. The Commercial team were essential in introducing the early years friendly party hires, the Technical team made sure the interactives were robust and the Visitor Services team worked on the front of house welcome.

Partners to the process can include staff from any or all departments or volunteers as well as external contractors, community groups, schools, academics and other experts.

- **Take time to agree what co-production means to everyone involved:** your own organisation, your community partners, experts and any external contractors. Listen, learn, adjust where needed.
- Make sure that you all agree what you value about the process, what you want to achieve together, what everyone can commit, and how to share ideas safely and confidently.
- Check back against your project ethos – is the vision still intact?
- The partners will change depending on the co-production activity you have in mind.

Some members of the team might only come along for part of the journey. Others might need to commit to the long haul.

A little digression about working with external contractors

Ensure that your external contractors (including designers, exhibition and interactive builders and other technicians) understand and are willing to adopt the co-production process with you.

- Be clear with external contractors at the tendering stage that co-production is an essential part of the process
- Make sure the external design team attend co-production sessions to see first-hand the project ethos and style of working in action
- Schedule extra time with contractors to feedback co-production ideas
- Explore with designers how to integrate co-produced ideas in the gallery and turn them into real-life working exhibits

Questions to ask yourselves

- Who are the best partners for this particular project?
- How can you work confidently and safely together to establish and share the co-production values with everyone involved?
- Do your in-house team and your external contractors understand the process and are they fully signed up?
- Who needs to be active when?
- Who is managing the process and keeping track of decisions and actions?

THE MINIBRUM TEAM:

Minibrum was a huge project which introduced a new, dedicated early years offer to BMT. It needed a big team to make it happen which included in-house and external staff, contractors and community partners.

THE CORE TEAM included staff from across the learning, collections, front of house, operations and commercial teams. Some were managers, some were operational staff with greater insight into the daily life of the museum.

The **PROJECT BOARD** included the project manager and senior managers, and the **ADVISORY BOARD** included representatives from a STEM-learning charity and the early years sector.

Be persuasive: some parties may need encouragement to adopt this collaborative way of working

Be patient: Take your time to get to know each other and to make sure you can keep all partners in the loop.

Be organised: deploy a notetaker and find ways to record people's thoughts and ideas so that you can all reflect on them as you progress

Be practical: not every team member needs to be present at every meeting, or to be part of the whole process.

Communicate: establish effective ways of keeping team members up to date so they know when they need to get active!

#3. Work with experts

This important stage is often omitted but working with experts helps you get things right more efficiently and quickly than trying to work it out yourself.

In identifying 'experts' remember that they are the people whose knowledge and lived experience informs the work you are all doing together. Again, they might only contribute to one element, rather than the whole process.



MINIBRUM EXPERTS

In developing family-friendly, safe activities and environments, the Minibrum team found that **parents are among the best experts**.

They know what they and their children need to relax and be comfortable in the space – half the journey to promoting confident learning through play.

WHO ELSE DID WE ASK?

Teachers are experts in how children learn and the demands of curriculum.

Community workers understand the barriers families face in trying to access learning opportunities.

Academics researching STEM pedagogy or child development supported interactive and workshop design and continue to contribute.

Lived experience is a valuable form of expertise – listen and learn.

Questions to ask yourselves

- Who knows or understands your audience best?
- Who knows about the learning themes you are trying to promote?
- Who can best tell you if your planned resources are actually going to do the job required?
- When do you need the expert input and how can you root it in the co-production process so that decisions are made together?

#4. Identify and connect with your target audience

Take time to connect with suitable partner groups to help you tackle the job and get the best results. Be determined to get the right partner – not someone almost right because it feels easier.

MINIBRUM TARGET AUDIENCES

Minibrum chose to work with early years children and families since the gallery was intended to be their space. They approached and worked with partners who supported children with disabilities, or from a range of cultures, or lived in areas of low educational attainment and socio-economic status. These included

- Nursery & primary schools (EYFS and Yrs 1-3) including a Montessori School and James Brindley Hospital Schools
- Charities like Birmingham Children's Trust or KIDS charity
- Community organisations like St Paul's Community Development Trust and Nechells POD.

For Birmingham Children's Trust, who work to ensure that children's voices are clearly heard, the buy-in was easy: the co-production process would help them achieve their goal.

Before starting any co-production sessions, talk to the group involved to learn more about them and their interests and establish where your ambitions and theirs overlap.

- find out what they have experience of - are interested in the thing you are asking them to co-produce? It's hard to for people to help design something of which they have no experience or knowledge.
- What time commitment can they make? They may only be available for one session; others might commit to far more.

SHARING THE MINIBRUM LOAD

Don't expect one partner to take all the weight! The team had more than one partner on the go at any time working on different aspects of the project. Some contributed only an afternoon to help shape an activity, others worked on the project for up to a year.

Co-production elements included:

- The five gallery zones: Transport, Park, City, Home and Construction
- The facilities: toilets, café and buggy park
- The temporary exhibitions: the Mini-Museum and the Jewellery Factory
- Programming: multi-sensory sessions, planetarium show, activity packs etc
- Schools sessions
- Support for STEM learning in the immediate community (at Nechells POD)

Dedicate time to research and connect with the right partners.

Be worthy of trust – the partners believe their contribution has value. Don't let them down.

Be careful not to overload a partner.

Questions to ask yourselves

- What are our ambitions in common?
- What are the group most interested in and how could you explore this further?
- How do the group show interest?
- How much time can they commit?

Processes can vary depending on the situation.

Two schools created a temporary exhibition each and the processes were very different.

| HENLEY MONTESSORI SCHOOL Created the Mini-Museum over 6 months in 2018-2019 | RADDLE BARN PRIMARY SCHOOL Created the Jewellery Factory in 3 months during lockdown in early 2021 |
|---|---|
| <ul style="list-style-type: none"> • 2 visits to the school • 2 visits to the Museum Collections Centre • 1 site visit to Minibrum during construction • Teachers developed classroom resources and activities based on Minibrum to drive a term of related activity • 2 celebration visits including a meet in MiniBrum with the Duchess of Cambridge | <ul style="list-style-type: none"> • 2 x zoom classroom sessions with MiniBrum staff • Teachers received resources from MiniBrum for continued classroom activity • 2 sessions in the museum (one to select items, the other, a final celebration) • No visit to the Collections Centre – items selected in response to children's instruction, collated by teachers. |



#5. Create the best enabling environment

Choosing the setting for your co-production sessions will help you get the best results. Think about accessibility and listen to your partners when they tell you how to make sure they feel safe and comfortable.

Choosing the best place to meet depends as much on your partners' confidence, access needs, or lived experience as it does on the consultation element you plan to work on. You might need to start off-site, in a venue chosen by your partners.

The MiniBrum team supported Birmingham Children's Trust by meeting 5 times offsite, before the families, some of whom had children with severe disabilities, visited Thinktank for the first time ever. On that day, team members met the families outside Millennium Point to welcome them and made sure everyone came in together.

Listen twice as much as you talk, be hands off and try not to impose your ideas: observe people's level of understanding as well as their interest, what they choose to do or say.

Balance - if you give too much choice in a session it can be over-stimulating, but too little choice shuts the conversation down.

Work in pairs so you can review the conversation afterward and see what themes recur.

THE CHILDREN'S NEEDS

Develop the sensory environment using sound, projections, textures and toys.

Have enough play resources and activities up your sleeve to mix it up, change the pace and keep the focus.

THE PARENTS' NEEDS

Parents need to feel comfortable.

Knowing their children are safely occupied takes the edge off any nerves and helps parents open up. You might even provide craft or play activities for the adults too!

Questions to ask yourselves

- Where and how are people most comfortable to begin their co-production journey?



#6. Communication doesn't need words!

Traditional consultation approaches can be overly dependent on verbal communication – written surveys, post-it notes, face to face conversations and so on. MiniBrum proved that there are other ways to communicate.

'Through play they show us.'

Children were encouraged to play and their responses to play prompts were observed by the MiniBrum team and other experts. This means that ideas truly came from the children. We could use these initial responses to inform the next session.

- At one school, the children took the MiniBrum Officer to visit their eco-park and gave her a tour, showing her what they liked. That tour became the Burrow with lots of hidey holes!
- A pre-school class were not interested in the gallery zone they were intended to work on. Instead they were given a microscope to handle, and the team watched how the children played with it and discovered its purpose. These reactions shaped gallery interactives.

MINIBRUM COMMUNICATES

Listen whilst children play.

Use toys, games, drawings, film or photos to collect data.

Drawings or collages of the children's ideas were used in the design process and today, staff can match the drawings to parts of the gallery!

This takes time: reflect on what you see and be prepared to test ideas a couple of times to see if the children are consistent in their responses.

Be prepared to be surprised! Children asked to choose curtains to decorate the Home zone made dens with them

Questions to ask yourselves

- What are the best ways to ask questions of the parents and children?
- How best can we record and communicate children's responses to the rest of the team?

#7. Record, review, reflect, revise

Regularly take time together to review the information you are collecting, reflect on what you find out, how it supports the project ethos, and revise your approach where necessary.

Co-production relies on the connection of ideas, especially when there are multiple strands under development. This means that it's important to maintain good communications between your team, your partners and your contractors.

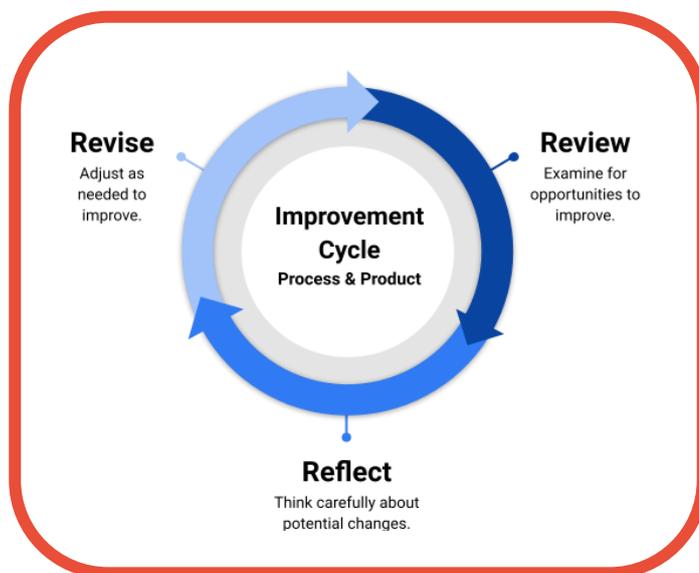
Questions to ask yourselves

- At each decision stage, check your progress - does it embody the project ethos?
- If not, how can you revise the process?

MINIBRUM REFLECTS

The team would have liked to have been able to review plans for the gallery with their co-production groups and to be able to show each group a design plan of their area and then to review and improve it with them. There was not enough time in the existing plan.

In future, these review elements need to be part of the timeline.



#8. Celebrate and share success!

Co-production requires of all partners trust, commitment and hard work. It's important for your ongoing relationships to celebrate achievements and share successes as you go.

Each celebration signifies shared ownership of the output and outcomes. It also provides opportunities for all parties to review the relationships formed and to make plans for the future.

MINIBRUM CELEBRATES

As a 3-year project with many strands, Minibrum has had regular celebrations – some, like the gallery launch or the visit of the Duchess of Cambridge, were high profile, others more intimate. All were significant to the children, parents and partner organisations involved.

Perhaps the most memorable was that for Raddlebarn Primary School and the launch of their Jewellery Factory. The children's visit to the gallery was the first school trip they had ever taken – all others had been cancelled by lockdown. They were the first group into MiniBrum before it re-opened to the public and their excitement levels were off the scale!



#9. It's an ongoing process

If your service is fully committed to co-production as a way of improving relationships with diverse local communities, don't stop once the new gallery is open or the activity programme delivered. There's so much more to be gained...

Having worked with primary audiences on the initial project, you might want to

- continue to test and develop the existing resources with secondary audiences (at MiniBrum, an important secondary audience has been older children and young people with learning disabilities)
- create new programming or fresh play or learning interventions onsite or online for your primary audience, so that the gallery continues to be lively and relevant to its intended audiences
- ask the partners to apply their expertise and creativity to other projects

Questions to ask yourselves

- What kind of collaborative or supportive relationships can we maintain with partners in future?
- How can we continue to support the work of those partners closest to us?
- How can we continue to work on reducing the barriers to access or learning experienced by some of the families we collaborated with?

Not all ongoing relationships need to be intense.

For example, Minibrum continues to support 3 community trusts by providing each with

- 3 Community Family Passes which can be loaned to families as part of the Toy Library scheme.
- simple resources to support STEM Clubs in local children's centres.

BIRMINGHAM MUSEUM TRUST CONTINUES TO CO-PRODUCE

The trust continues to apply co-production principles to new gallery and programme developments. The learning from the MiniBrum project will inform this new work, but who knows where the team will take it next?

Further resources

Co-production and human-centred design

Derby Museums, *Human Centred Design & Co-production Handbook* (version 4, 2016)

Available at URL: <https://www.derbymuseumsfromhome.com/hcd-handbook>

(accessed 09/03/2022)

Helen Graham, in *Science Museum Group Journal*, 'The 'co' in co-production: Museums, community participation and Science and Technology Studies' (Spring 2016),

Available at URL: <https://eprints.whiterose.ac.uk/97697/8/HGSMJFinal.pdf>

(accessed 09/03/2022)

Nina Simon, *The Participatory Museum* (2010)

This book is available to download for free at URL: <http://www.participatorymuseum.org/read/>

(accessed 09/03/2022)

STEM learning in Early Years

HM Govt, Department for Education, *Development Matters: Non-statutory curriculum guidance for the early years foundation stage* (23 July 2021)

Available at URL: <https://www.gov.uk/government/publications/development-matters--2>

(accessed 09/03/2022)

Science Museums Group Learning Team, *Our Approach And Science Capital*

available at URL: <https://learning.sciencemuseumgroup.org.uk/our-approach/>

(accessed 09/03/2022)

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