



Confidence with Numbers Workshop Plan

Planning the workshop

Total time required for the workshop	1 hour
In-person requirements	<ul style="list-style-type: none"> Computer/laptop and projector Wifi/internet connectivity Room layout to facilitate group discussions
Online requirements	Set up virtual meeting with functionality to share your screen
Other resources you'll need	<ul style="list-style-type: none"> Powerpoint slides Link to the National Numeracy Challenge Feedback form link Frequently Asked Questions document Thermometer poster (optional) Post-it notes (optional)

Running the workshop

The one-hour workshop is made up of six key parts:

1. Introduction
2. Activity: How do you feel about maths?
3. Maths anxiety
4. Introducing the National Numeracy approach (videos)
5. Activity: the myth buster
6. The National Numeracy Challenge

1. Introduction

Relevant slide(s) on PowerPoint

1

Timing

<5 minutes

Materials needed

None

- Open the session by explaining clearly that the purpose of the session is to explore how we think and feel about maths
- As some people may be feeling anxious about the session itself, explain that there will be no actual maths involved – no tests, quick fire times tables or worksheets!
- Take the opportunity to encourage people to participate by telling the group that you hope the session will be interactive.

2. Activity: How do you feel about maths?

Relevant slide(s) on PowerPoint

2 - 3

Timing

15 minutes

Materials needed

**Thermometer poster (optional)
Post-it notes (optional)**

- Set up the activity by asking the group, “How do you feel about maths?”
- You may wish to ask them to think of a time where they've been faced with maths, or how they would feel if they were suddenly asked to do a calculation in front of the group. This will help participants understand what you are asking.
- Ask participants to:
 - Think of/write down one word they would use to describe this emotion. This could be on a post-it note or in the chat in a virtual meeting.
 - Discuss their chosen word with the people around them. If running virtually, you could put participants into smaller breakout rooms to discuss their words.
 - Talk in groups about why they have chosen this word. Where might this word have come from?
- Give the group at least 5 minutes to discuss this amongst themselves.
- After 5 minutes, bring the group back together and facilitate a whole group discussion. Ask people to volunteer to share their word and why they feel that way.
- If using the thermometer poster and post-it notes, ask everyone to add their word to the appropriate space on the poster according to how they feel. This will give a visual representation of the group's feelings about maths.

Further guidance

In this activity, you will usually find that people say they feel anxious, nervous, stressed, panicked or similarly negative emotions around maths. It's important to recognise, and for learners to know, that this is not unusual.

You may come across people who have had more positive experiences and say that they are good at maths. It can be useful to reflect the differences in their past experiences that have fed into this, showing that it's not simply 'natural' ability that shapes their view.

As people share their experiences, respond by linking their stories to the core messages of this section:

- There is no 'maths gene' – our abilities come from nurture, not nature. This includes our school experiences, parental engagement and cultural factors.
- Ability is not fixed: everyone can improve.
- The maths we use in the real world is different from the maths we learned at school.
- It doesn't mean you're bad at maths if you don't have a GCSE.
- We still use maths after school and our school performance is not an accurate reflection of our ability. Even if we were in the bottom set at school or were told we couldn't do maths, we are disproving that every day as we use numbers in our day-to-day lives.
- It's not uncommon to feel anxious, stressed or exposed when faced with maths – if people are feeling that way about numeracy, they are not alone.

Remember that the goal of the activity, is to give people space to speak about their experiences, to ease anxieties and to deconstruct their pre-conceived notions about their own maths ability.

3. Maths anxiety

Relevant slide(s) on PowerPoint

4 - 7

Timing

5 minutes

Materials needed

None

Explain that many people feel anxious about maths and that the next part of the session will be looking more in-depth about maths anxiety, including what it is, what causes it and how to overcome it.

- Read out the definition (slide 4) and explain that there have been numerous studies into maths anxiety concluding that many adults and children can experience maths anxiety but it does not mean that they are bad at maths.
- Explain that there are many causes of maths anxiety and this slide (5) are the most common reasons people have talked to National Numeracy about:
 - **Negative experiences at school:** Many people can remember their maths teacher and often have negative memories of learning maths at primary or secondary school.
 - **Feeling under pressure:** People often speak about feeling under pressure when answering a maths question. Sometimes this is a pressure to answer the question quickly and sometimes this is feeling pressure from other people watching you.

- **Fear of failure:** Many people are afraid of making mistakes when it comes to maths and that they will be 'found out' if they struggle with a question
 - **Being told you're not a maths person:** Many people have been told that they're not a maths person and that they're stronger at literacy/sports/art. This message can stick with people into adulthood and can make them feel unable to improve their skills with numbers.
 - **Lack of support:** Many adults struggling with maths anxiety feel like they don't know where to turn for support and help
 - **Dyscalculia:** Dyscalculia is a learning difficulty, which affects people's ability to learn, understand and use basic arithmetic. Support is available through the Dyscalculia Network and British Dyslexia Association. Although dyscalculia is not the same as maths anxiety, it can contribute to increased anxiety around using and understanding numbers.
- Maths anxiety looks different for different people, such as feeling panic, stress, frustration, their mind shutting down or avoiding situations involving numbers. Some experience physical symptoms such as a rapid heart rate, sweaty palms or a knot in their stomach.
 - These are some simple steps that adults can take to begin to overcome their maths anxiety, including talking about our feelings, challenging our own beliefs and reducing any time or social pressure.

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4. Introducing the National Numeracy approach (videos)

Relevant slide(s) on PowerPoint	8 - 9
Timing	5 minutes
Materials needed	None

Play the two short videos, which explain the two key frameworks of National Numeracy's approach to adult maths learning: [The Essentials of Numeracy](#) and [Value, Belief and Persistence](#).

5. Activity: The myth buster

Relevant slide(s) on PowerPoint	10 - 16
Timing	15 minutes
Materials needed	None

- Explain to the group that a number of statements will appear one by one. The statements are things that people commonly think about maths, some of which are myths.
- Ask the group to stand up if they think the statement is true or remain seated if the statement is false. If delivering the session virtually, you could ask people to raise their hand if they agree, use the chat box or set up a poll ahead of the session.
- Read each statement as you display it and facilitate a discussion based on the group response, using the 'Further guidance' below.
- Move on to the next statement after each discussion.

Further guidance

Statement 1: Everybody uses maths every day whether they think about it or not. (TRUE)

We might not consciously recognise what we're doing as 'maths' - especially if we think of maths in terms of algebra and trigonometry and so on - but we do all use maths every day. The maths we use regularly is usually not the same as school maths. It's often more simple maths in complex real-life situations. Learners who said earlier that they can't do maths are actually doing it on a regular basis, such as planning journeys, budgeting, shopping and cooking.

Statement 2: Learning maths as an adult is just like going back to school. (FALSE)

As adults, we have a number of choices. We can choose what we learn around maths (compared to school, where there's a set curriculum of topics to study) and may choose to learn traditional maths or simply choose to study the things we really need to know. We can also choose how we learn. Classroom-based learning is not the only way to upskill. There are other options such as learning confidentially online in our own space.

The dynamics of adult learning are also different to school. There's less social pressure and the people supporting us have less of an authoritarian teacher-like presence.

Statement 3: Some people are maths people and others are not. (FALSE)

It's true that people reach adulthood with varying levels of ability, but this is not because they were born with or without the ability to do maths. The true reasons for people's differing abilities are environmental. Often this relates back to school and childhood. People who had bad school experiences may have been discouraged from engaging with maths, while those who had good teachers and/or strong parental input were encouraged to practise more and so improved.

It's also true that some people do have preferences for some skill sets over others - but this is also usually due to experiences that have led them to engage more with some things than others. The more they've practised the skill, the more highly skilled they've become.

Statement 4: Many people feel anxious about maths. (TRUE)

There's a scale of maths anxiety, on which most people find themselves somewhere. Many people experience the immediate fear of exposure or embarrassment and pressure from being put on the spot. For example, if someone is suddenly asked, "What is 17×24 ?" it is likely to cause at least momentary panic.

Maths anxiety affects people from all walks of life – not just those from particular backgrounds or working in particular roles.

Statement 5: You don't need maths if you have a calculator. (FALSE)

Calculators can take the pressure off, but even with a calculator you do still need some maths.

Without some numeracy skills, you wouldn't know what to key into your calculator or what functions to use. You need to know how to translate your real-world problem into something that the calculator can understand.

The skill of estimation is also critical in checking that the answer your calculator gives you is the correct one. It's easy to get a decimal point in the wrong place, add an extra zero or press the wrong button, so estimating helps you identify if there's been an error. For example, if you're expecting around 800 but the calculator gives you 8000 you know something's gone wrong!

It's also important to be able to work things out if you don't have a calculator available or if automated machinery breaks down.

Statement 6: Everybody can improve their maths with effort. (TRUE)

As explored in the other statements, ability is not fixed and there is no specific gene for maths ability. Not everyone will become a maths expert, but everyone can get better than they are now.

National Numeracy has worked with countless people who have thought they couldn't improve, but lots of them have managed to improve once they committed to giving it a go.

When we acknowledge that ability isn't fixed and that anyone can improve, it's important to recognise we are also saying, "I can improve." It's often more difficult to apply this to ourselves than to accept the idea that everyone can improve. But even if someone feels anxious or has found maths difficult in the past, it's true that everyone can improve, and everyone includes 'you.'

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6. The National Numeracy Challenge

Relevant slide(s) on PowerPoint

17 - 19

Timing

15 minutes

Materials needed

[Link to the National Numeracy Challenge](#)

- Share the video about the National Numeracy Challenge, which talks through the learner journey and the key features of the resource
- Communicate your organisation's own requirements for learners using the National Numeracy Challenge. For example, this could take the form of:
 - Register on the National Numeracy Challenge
 - Complete the initial assessment (quick check or check-up) within one week of the workshop, to understand their current numeracy level and access their bespoke learning resources
 - Work through the learning resources and retake the assessment when they feel ready
 - Achieve the Essentials of Numeracy (scoring 80+ on the check-up or 16+ on the quick check)
 - Print out/download their certificate
- End the session by giving people the chance to register on the National Numeracy Challenge. This ensures that people don't forget to sign up.

Further guidance

If IT equipment is not available, ask participants to register on their mobile phone. If people have difficulty registering in the session, this could be because:

- There is a space not displaying on the URL they have typed in
- There is an error in the URL they have typed
- They have typed the URL into Google search rather than the URL bar
- There is a space at the end of their email address, which will lead it to being rejected as invalid.

At the end of the session

- Share the link to the feedback form. National Numeracy is able to share anonymous feedback results with you if required. Alternatively, provide participants with printed copies of the feedback form, available in your Training Pack
- Please let National Numeracy know the date and total number of participants of the session using this form.