National Numeracy Champions



Secondary Support Staff Workshop Plan

Planning the workshop

Total time required for the workshop	45 minutes
In-person requirements	Computer/laptop and projector Wifi/internet connectivity Room layout to facilitate group discussions
Online requirement	Set up virtual meeting with functionality to screenshare and set up breakout rooms (optional)
Other resources you'll need	Powerpoint slides Link for the National Numeracy Challenge Feedback form (online or paper)

Running the workshop

The 45 minute workshop is made up of five key parts:

- 5 mins: Intro- Housekeeping
- 10 mins: How do you feel about maths section and Culture around numeracy in the UK section
- 10 min: Axiom Maths Y7 research: The Year 7 school switch-off by spring — Axiom Maths and The year 7 moment — Axiom Maths
- 10 min: Approach- VBP section
- 5 mins: NNC/toolkits

This workshop plan gives guidance on how to run each section of the workshop.

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1. Introduction

Relevant slide(s) on PowerPoint	1-2
Timing	5 minutes
Materials needed	None

Slide 1: Welcome participants to National Numeracy's Support Staff training and thank them for attending.

Explain that the workshop is designed to build their confidence in maths for themselves and supporting young student. We are going to explore feelings and confidence around maths in a supportive and non-judgemental environment.

Slide 2: Objectives: Display the objectives slide and briefly outline the structure of the workshop.

2. How do you feel about Maths?

Relevant slide(s) on PowerPoint	3-5
Timing	5 minutes
Materials needed	None

Slide 3: Explain the objective of this section

Slide 4: Explain that you are going to show them watch a short video clip where students including secondary students were asked about how they feel about maths.

- Watch video – only first 34 seconds
- Ask- what feelings stood out in the video
- The video is from US, but similar responses have been recorded here in the UK

Slide 5: Share word cloud- asked 1500 participants to share their feeling about maths and explain that negative feeling towards maths is a widespread issue and highlight just how common it is for people to feel negatively about maths and knowing that those people are not alone.

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3. Culture of numeracy and gender

Relevant slide(s) on PowerPoint.	6-7
Timing	5 minutes
Materials needed	None

Slide 6: Gender stats
Introduce the research around gender and numeracy confidence. Explain that research consistently shows that women and girls often report:

- Lower confidence with maths
- Higher levels of maths anxiety
- More negative attitudes towards numeracy

Explain that international education rankings have consistently shown a gender gap in maths performance between boys and girls in the UK. Emphasise that:

- This gap is not caused by differences in natural ability
- Research points instead to social and cultural influences
- Stereotypes and expectations can shape confidence and participation in maths from an early age

Encourage participants to reflect on how messages about maths may influence confidence and attitudes over time.

Slide 7: Phone sock: Introduce the example as a way of exploring how cultural attitudes towards maths can still reinforce negative stereotypes.
Show the “I’m too pretty to do maths” example and explain that although phone socks themselves may feel outdated, similar messaging can still be found today on products such as: T-shirts, Stationery and Gifts

Explain that while these messages are sometimes presented as humour, they reinforce damaging stereotypes around maths ability and gender.
Reference earlier examples from popular culture, such as the talking Barbie doll from the 1990s that included phrases like:

- “Math class is tough”
- “Will we ever have enough clothes?”

Use this discussion to highlight that attitudes towards maths are influenced not only by school experiences, but also by wider social and cultural messages.

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4. Low confidence with Numbers

Relevant slide(s) on PowerPoint	**8-11**
Timing	**10 minutes**
Materials needed	**None**

Slide 8: Explain that the purpose of this section is to help participants:

- Understand where low confidence with numbers can come from
- Recognise signs of low confidence or maths anxiety
- Explore practical ways to begin overcoming these barriers

Causes
Introduce the following as the most common causes shared by adults working with National Numeracy. Similar trends are observed in students, especially those in secondary

Negative Experiences at School
Explain that many adults link their low confidence with maths to school experiences.
Examples may include:

- Being punished or criticised for getting answers wrong
- Being placed in lower sets or groups
- Feeling embarrassed answering questions publicly
- Feeling unsupported or left behind in lessons

Emphasise that school experiences can have a long-lasting impact on attitudes towards maths into adulthood.

Pressure
Explain that pressure around maths commonly appears in two forms:
Time Pressure
The belief that maths must be completed quickly to be done well.
Social Pressure
Concerns about:

- Being judged by others
- Making mistakes publicly
- Going blank in front of colleagues or peers

Explain that both forms of pressure can contribute significantly to maths anxiety.

Fear of Failure
Explain that many people feel maths is a subject where mistakes are less acceptable than in other areas.
Discuss how expectations around “getting the right answer first time” can increase anxiety and reduce confidence.
Reinforce that mistakes are a normal and valuable part of learning.

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4. Low confidence with Numbers

Relevant slide(s) on PowerPoint	**8-11**
Timing	**10 minutes**
Materials needed	**None**

Being Told "You're Not a Maths Person"
Explain that many adults carry messages they received in childhood about their maths ability.
These messages may have been:

- Explicitly stated
- Implied by teachers, family members, or peers
- Reinforced through experiences at school

Explain that over time these beliefs can become fixed mindsets that discourage adults from engaging with learning opportunities.

Lack of Support
Explain that some adults:

- Do not know where to seek support
- Feel embarrassed asking for help
- Lack confidence speaking to managers, tutors, or colleagues about struggles with maths

Highlight the importance of supportive and non-judgemental conversations.

Dyscalculia
Explain that dyscalculia is a specific learning difficulty that affects understanding and using numbers.
Clarify that this will be explored in more detail later in the session.

Slide 9: What does it look like?
Explain that low confidence with maths can present differently for different individuals- across age- so for students and us adults. Introduce some common emotional and physical signs that adults have shared with National Numeracy, such as:

- Nervousness, Avoidance, Panic, Self-doubt, Feeling overwhelmed

Physical symptoms may include:

- Rapid heartbeat, Sweaty palms, Feeling sick or tense, "Knots" in the stomach

Emphasise that these reactions are common and experienced by many adults and students.

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4. Low confidence with Numbers

Relevant slide(s) on PowerPoint	**8-11**
Timing	**10 minutes**
Materials needed	**Post it notes/A3 paper/pens**

Slide 10: Maths anxiety
Explain that in some cases, low confidence with numbers may be described as maths anxiety.

Introduce maths anxiety as a recognised emotional response to maths and number-related situations.

Explain that:
- There are many definitions of maths anxiety
- Research consistently shows it affects a considerable proportion of both adults and children

Share that studies suggest:
- Around one-third of the population experience maths anxiety
- Children as young as six can experience maths anxiety

Reinforce that maths anxiety is common and does not reflect intelligence or potential.

Slide 11:
What is dyscalculia?
Explain that dyscalculia is a learning difficulty that affects: Understanding numbers, learning arithmetic, and working with mathematical concepts
Clarify that dyscalculia is different from simply lacking confidence or skills with numbers or having math anxiety. Explain that dyscalculia is often described as “dyslexia with numbers,” although it is: Less widely recognised and less researched than dyslexia

Share that:
- Dyscalculia is estimated to affect around 1 in 20 people
- Research into dyscalculia is thought to be approximately 30 years behind research into dyslexia

Dyscalculia network has done brilliant research for students and adults alike. Please refer to their website for further information.

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5. Explore the issues secondary students face during the transition from primary school

Relevant slide(s) on PowerPoint	**12-16**
Timing	**10 minutes**
Materials needed	**None**

Slide 12: Explain objective

Slide 13: Imagine you are a student starting your first week. What are some things you are typically worried about? Take responses and summarise in slide 14

Slide 14: Year 6 to Year 7 is an interesting year. Students shift from primary to secondary- full of feelings, while they are personally stepping into puberty. The transition period is full of changes- summarise few bullet points.

- School: Bigger, busier setting. There is new timetable, lots of different teachers instead of familiar teacher across the day.
- Friendship changes - new, unfamiliar people. Navigating challenges of being pre-teen/teenage.
- Mirror effect between pupil and parental attitudes: Parental feelings about subjects'/teacher skills have a direct impact on pupil's attitude
- Optimism and confidence dips - progress in primary seems irrelevant to students when they are struggling in secondary

Slide 15: At school, these charts show a good representation of how feelings toward school shifts rapidly. It looks different for different students. At school, the point of contact for students to improve maths confidence are the staff and professional. Their experience and feelings towards maths are interlined to how we feel about it and the kind of messaging we convey directly/indirectly.

Slide 16: Introduce this section by explaining that National Numeracy research helps demonstrate how widespread low confidence with maths is, including amongst professionals working in education. Explain that in 2023, National Numeracy carried out research focused on UK school staff and trainee teachers using the National Numeracy Challenge.
Share the following key statistics:

- Of 11,000 trainee teachers using the National Numeracy Challenge, 43% were identified as: Low in maths skills, Low in maths confidence or both
- Additionally, 31% of trainee teachers used negative words such as: Nervous, Anxious, Worried, Confused or Panic when describing how they feel about maths.

Highlight that among those reporting negative feelings about maths, around one-quarter had high maths skills and confidence.
Use this to reinforce the key message that:

- Attitudes towards maths are not always linked directly to ability or skill level. Irrespective there are things we can do to address the attitudes of professionals and students alike

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6. How NN addresses the issue

Relevant slide(s) on PowerPoint	**17-19**
Timing	**5 minutes**
Materials needed	**VBP Video**

Slide 17: Introduce objectives of this section. Explain that the remainder of the session will focus on:

- More positive and helpful ways of thinking about maths
- Practical strategies for improving confidence
- Tools and resources to support next steps in maths learning

Reassure participants that the focus is on everyday numeracy and confidence, rather than formal school maths.

Slide 18: Introduce the Value, Belief and Persistence (VBP) approach.
Explain that the model focuses on:

- Understanding why maths matters (Value)
- Challenging negative beliefs (Belief)
- Developing resilience and a growth mindset (Persistence)

Slide 19: Play the VBP video https://www.youtube.com/watch?v=4vwUqZ0gSrA

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7. Value

Relevant slide(s) on PowerPoint	**20**
Timing	**5 minutes**
Materials needed	**None**

Following the video, explain that numeracy supports people in practical, everyday ways.

Reinforce that the session is focused on:

- Everyday maths
- Real-life numeracy
- Practical confidence rather than traditional school maths.

Explain that "Value" refers to motivation and understanding why improving numeracy is useful.
People are more likely to engage with learning when they understand the benefits it can bring. This applies to both students and adults

Examples of the Value of Numeracy
Display the supporting slide and talk through examples such as:
Supporting Children
Improving confidence to help children or family members with maths-related tasks.

Getting Into Work
Many jobs require:

- Maths qualifications
- Numeracy assessments
- Confidence using numbers

Progressing at Work
Numeracy skills can support:

- Career progression
- Promotions
- Access to further training

Managing Money
Confidence with numbers supports:

- Budgeting, Understanding bills, Managing finances particularly during periods of financial pressure.

Confidence and Self-Esteem
Explain that because numbers appear in many aspects of life, improving numeracy can positively impact overall confidence and self-esteem.

Encourage participants to think about tasks they regularly complete at work and identify the numeracy skills involved.

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8. Belief

Relevant slide(s) on PowerPoint	**21-23**
Timing	**5 minutes**
Materials needed	**None**

Explain that participants will now complete a MythBusters activity designed to challenge common myths and fixed mindsets around maths.

Explain that the activity is extensively used with beneficiaries to encourage more positive thinking about maths and confidence.

Ask participants to indicate whether they agree or disagree before discussing the responses as a group. Encourage honesty and discussion throughout the activity.

Slide 22: Some people are maths people; others are not
Explain that this statement is false.

Discuss: There is no "maths gene." Maths ability is influenced by experiences, confidence, environment, and support. School experiences often shape attitudes towards maths. Men and women are equally capable of succeeding in maths

If raised, explain that the "left-brain/right-brain" theory has been widely debunked and there is no evidence that people are naturally fixed as logical or creative thinkers.

Slide 23: You do not need maths if you have technology.
Explain that this statement is false.

Discuss how tools such as calculators, budgeting apps, and AI can support people, but basic numeracy skills are still needed to: Understand problems, Choose appropriate functions or calculations, interpret results, or estimate whether answers are reasonable

Explain that technology can reduce pressure but does not replace numeracy skills entirely.

Explain that National Numeracy has supported many individuals who initially believed they could not improve but made progress once they engaged with learning and support.

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9. Persistance

Relevant slide(s) on PowerPoint	24-25
Timing	5 minutes
Materials needed	None

Slide 24: Introduce Persistence as the part of the model focused on resilience and growth mindset.
Ask participants to reflect on:

- Something they have struggled with learning or achieving
- The steps they took to overcome challenges
- What helped them continue rather than give up

Slide 25: Growth Mindset
Explain that the purpose of the activity was to highlight that:

- Learning any new skill can feel difficult
- Struggle and mistakes are a normal part of learning
- Math learning is no different from learning other skills

Explain that recognising previous examples of persistence can help adults apply the same mindset to math.
Reinforce that:

- Difficulty does not mean inability
- Progress often takes time and repeated practice

10. Talk Positively

Relevant slide(s) on PowerPoint	**26**
Timing	**5 minutes**
Materials needed	**None needed**

Slide 26: So how do you use the VBP in your day-to-day role- for yourself and for the young students you work with?

Explain that the way we talk about maths can affect confidence, motivation, and willingness to learn. Studies have shown that the words adults and teachers use around young students, can have a direct impact on their attitudes towards maths.

Reinforce that:

- Negative attitudes towards maths are often passed through families, schools, and workplaces
- Language such as “I’m bad at maths” or “I hate maths” can reinforce anxiety and low confidence
- It is helpful to model more positive language, such as “I’m still learning” or “Maths takes practice”
- Positive self-talk and encouragement can help build confidence and resilience
- Changing the way, we talk about maths can positively influence both ourselves and others

11. Tips to build your confidence with Maths

Relevant slide(s) on PowerPoint	27-28
Timing	5 minutes
Materials needed	National Numeracy Challenge Link

Slide 27- Introduce the following strategies as practical ways adults can begin improving confidence and reducing maths anxiety**.** Explain the following points:

- National Numeracy Challenge helps anyone assess and improve their understanding of the Essentials of Numeracy.
- It helps adults identify and improve their understanding of the Essentials of Numeracy.
- It is free, Online, designed for adults, Focused on everyday math and Accessible via mobile devices

Reinforce that the Challenge supports: Independent learning, Workplace development, Further learning, Everyday confidence with numbers

Slide 28- Another way to build your confidence is to use the toolkit available freely on the website. There are resources specific to secondary schools, so feel free to browse them and tweak them for your context.

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12. Next Steps

Relevant slide(s) on PowerPoint	**29-30**
Timing	**5 minutes**
Materials needed	**National Numeracy Challenge Link**

Explain that the session has covered:

- Causes of low confidence with numbers
- Practical confidence-building strategies
- The Value, Belief and Persistence approach
- The National Numeracy Challenge and supporting resources

Invite participants to take a few quiet moments to reflect on Key takeaways from the session and take few responses.