

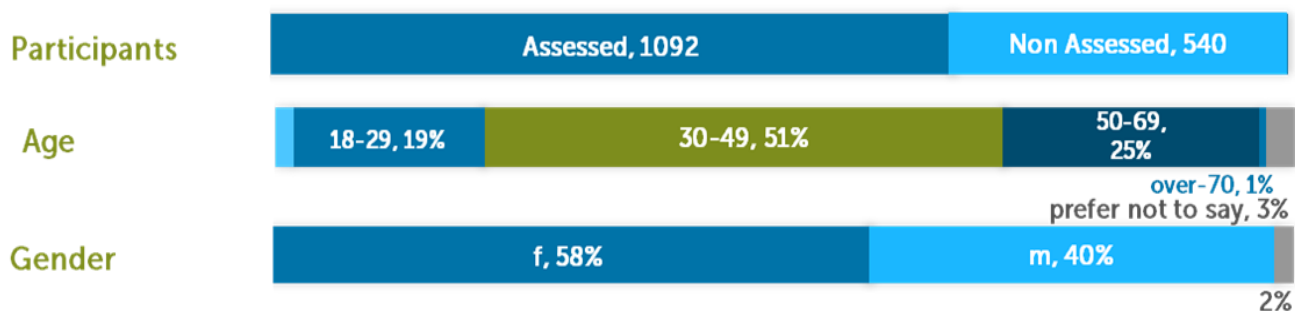
## The Challenge Pilot: a summary of results from all participants across all partner organisations

[National Numeracy](#) is an independent charity dedicated to improving levels of numeracy throughout the UK. We believe that with appropriate support and perseverance, everyone can develop the skills that they need for everyday life.

The [National Numeracy Challenge](#) is a nation wide drive designed to tackle the major issue of poor numeracy among adults in the UK. The aim is to challenge negative attitudes towards maths and to reduce the number of adults with low numeracy by over one million over the next five years. To achieve this, we are working with employers, colleges, community organisations and individuals directly.

Central to the Challenge is an interactive online learning platform which aims to improve participants' confidence and competence in using maths for everyday purposes. This report describes the results of the initial pilot phase of the Challenge and indicates some of the reporting metrics that can be made available to partner organisations in the future.

The Challenge pilot ran between 17 June and 16 August 2013. It followed pre-testing with a small group of experts from different areas. Altogether we worked with 54 partner organisations, and 1,554 adults registered anonymously to use the Challenge website during this period. This was felt to be a very good number, offering a wide spread of perspectives from different settings across the workplace, education and outreach strands. Two thirds of this overall total were employees and potentially represented 'real learners' (rather than intermediaries). However, many of these participants did not necessarily have the lower levels of numeracy of those that are our target audience. The demographic break down of the total cohort of participants was as follows:



Nearly a third of the pilot participants did not complete the assessment. One of the factors contributing to non-completion may have been the technical faults experienced throughout the pilot (described in more detail in a later part of this report). It is difficult at this stage to establish the exact degree to which non-completions are due to difficulty with the questions themselves or to technical issues. However, we will be able to provide metrics to account for people 'giving up' when we roll-out the Challenge.

The Challenge partner web links remain open to enable further testing and user engagement. Participants are still welcome to give the website a go, using existing web links, and they are invited to feedback to us.

Later this autumn, we will offer open access to the website for individuals, rather than the current restricted access via unique web links. Full launch of the Challenge initiative is planned for March 2014.

## Attitudinal Results

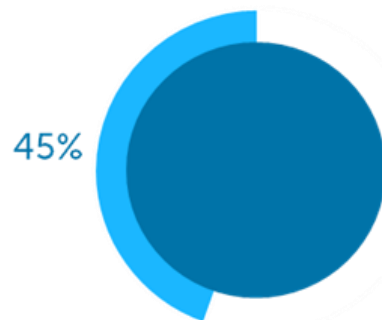
As well as assessing participants' skills levels, the Challenge website also – crucially – measures their attitudes towards maths and numeracy. This helps us understand how better to support people using the Challenge website. It also helps to monitor any changes in attitudes towards maths.

The Challenge website features a questionnaire entitled 'How do you feel about maths?' This is used to gather attitudinal data from the participants.

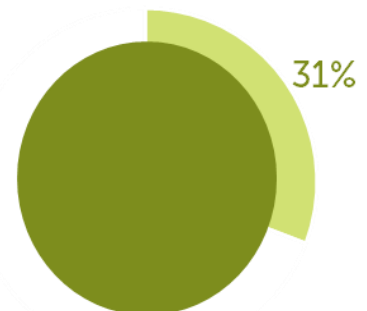
As shown to the right, some important findings emerged from this. Out of the total number of pilot participants, 1,450 took the attitudinal questionnaire. Almost half of these felt that 'some people just can't do maths'.

In the UK, it is a common belief that mathematical capability is genetically-based. Through the Challenge and other projects, National Numeracy aims to raise awareness that everyone can become confident and competent using the maths needed in everyday life.

*"Some People Just Can't Do Maths"*



*"Negative Memories of School Maths Affect Me"*





Registered users by Partner channel type

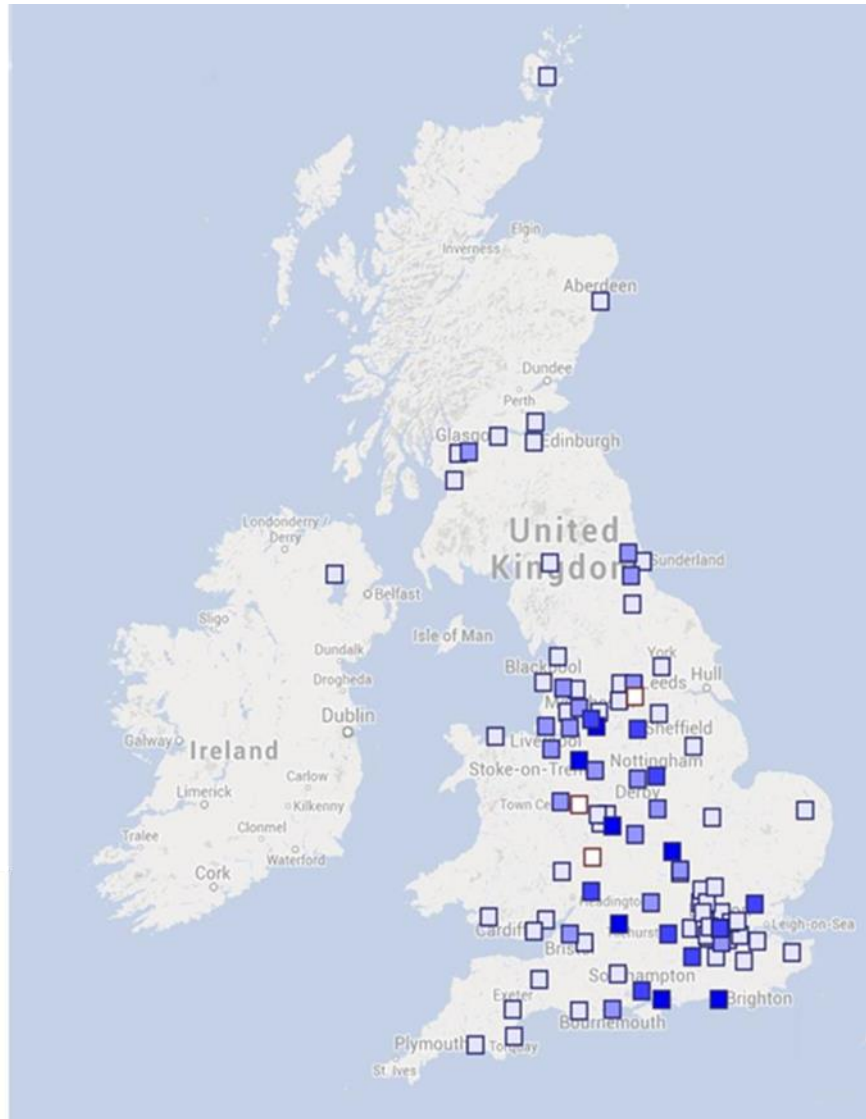
## Partner Organisations

We worked with 54 partners across workplaces, adult education and outreach for the pilot. Within the workplace strand, there was representation from financial services, IT and health, local authorities and school and college workforces. Union Learning Reps participated in various industry sectors, as did Workplace Learning Advocates in non-unionised organisations.

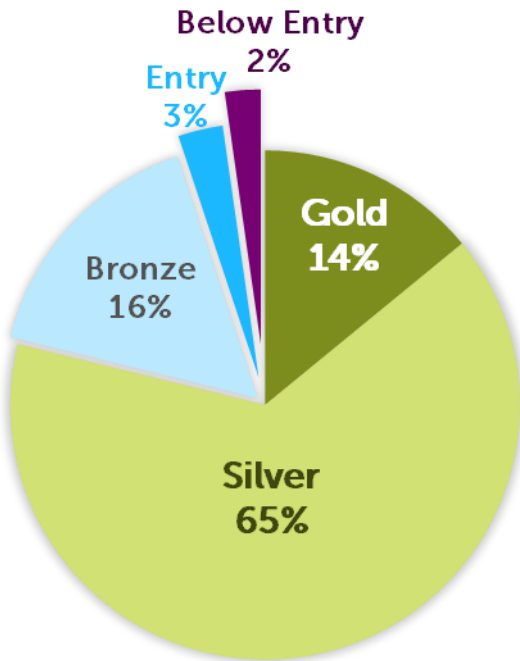
Throughout the pilot we achieved a good spread across England, with some coverage in Wales, Scotland and Northern Ireland. In the longer term, a map like this will be provided for partner organisations working on a local, regional or national basis to suit their needs.

### Styled by Number of Participants

- 3 - 10 (61)
- 11 - 20 (21)
- 21 - 37 (10)
- 38 - 155 (7)



## Participant Levels



Key	Label	Based on (Adult Skills Level/ GCSE/ age)
	Gold	Level 2, GCSE grades A*-C
	Silver	Level 1, GCSE grades D-G
	Bronze	Entry Level 3, age 9-11
	Entry	Entry Level 2, age 7-9
	Below Entry	Entry Level 1 and Pre-Entry, below age 7

For more information about what levels mean in assessing adult numeracy, see our [website](#).

Levels Achieved	Number of Participants
Gold	149
Silver	686
Bronze	170
Entry	30
Below Entry	24
<b>Grand Total</b>	<b>1059</b>

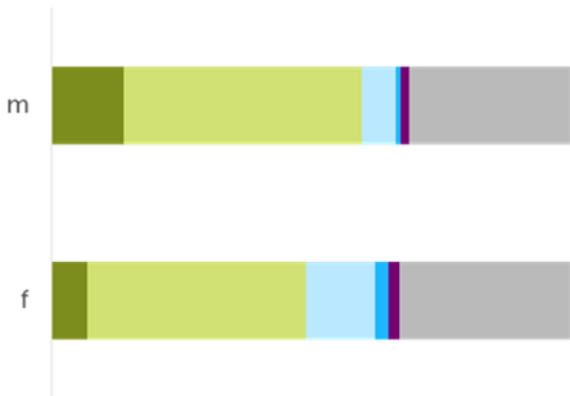
Most of the participants were awarded Bronze, Silver and Gold. This was in line with expectations, given that the profile of the pilot participants was not necessarily that of our target audience.

We encouraged some participants to give some incorrect answers in order to review the learning resources. As a consequence, some participants may have 'under-performed'. On the other hand, we noticed that there was a lot of pride involved; it seemed that most people tried to do as well as they could.

## Long Term Reporting

The relatively low numbers of participants completing the Initial Assessment means that we cannot derive statistically meaningful information about participants' performance in relation to age and gender. However, given these limitations, the chart below gives some indication of the performance of different demographic groups across all of the partners.

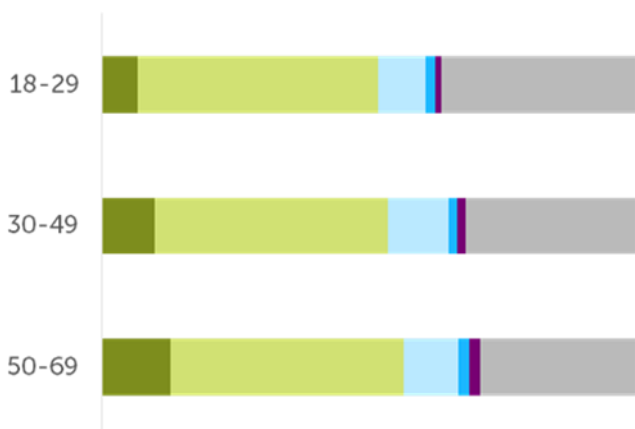
Performance by Gender (%)



In the overall cohort, men out-performed women at both the bottom and top end of the range. A larger proportion of them achieved Gold and a smaller proportion of them were assessed at or below an Entry Level Grade.

Segmentation by age also presents some interesting patterns. Older participants performed better at the top end of the spectrum and were more likely to complete the Initial Assessment. However, they were also marginally more likely to under-perform at the bottom end and be assessed at Entry or Below Entry Level.

Performance by Age (%)

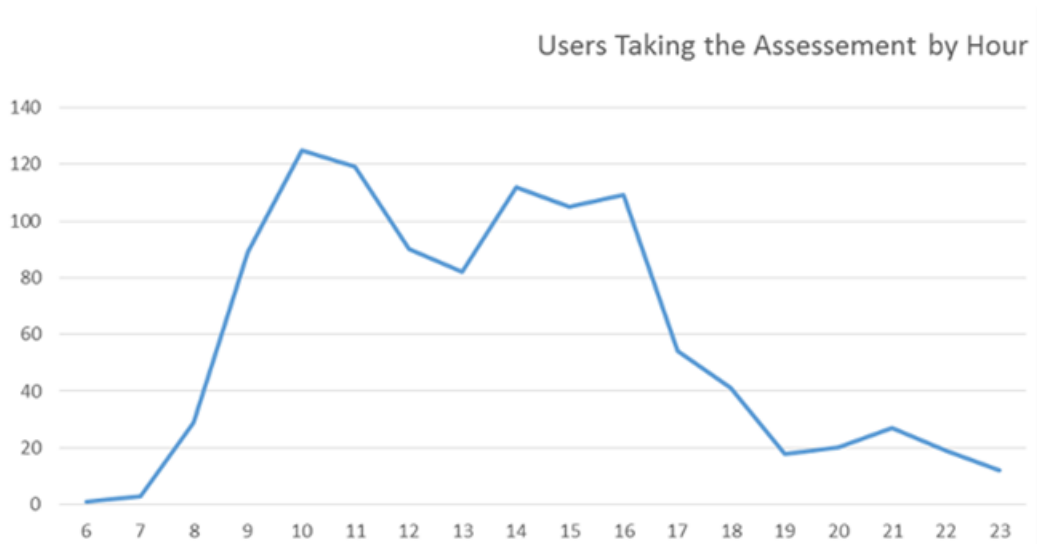


Alongside our technical partners, we are working towards reporting in greater detail on the areas of maths where learners are weakest. At present, these areas are evaluated after the Initial Assessment and the participants are given a level to work towards. However, during the pilot few participants continued beyond this point.

As we develop a raw score functionality and receive more data about users' scores. We will be able to report on the profile of learners' difficulties.

## Long Term Reporting

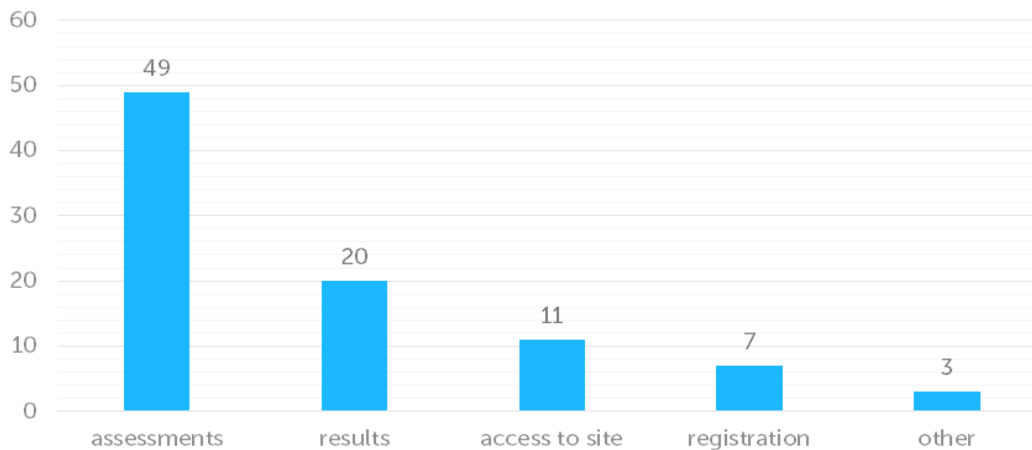
Future reporting could also include data showing the time of day that participants were most active in taking the assessment. The graph below shows this pattern during the pilot phase. The most common times were around 10am, 2pm and 4pm. This information could be provided to suit a partner organisation's needs.



## Technical Issues – All participants across all partner organisations

We experienced a number of technical issues across all partners during the pilot, mainly involving crashes at the end of the Initial Assessment. Another difficulty was the lack of a 'save progress' function in the main assessment at that stage. This meant that users had to start the assessment again – understandably this led to some frustration. However, these issues were resolved by the end of the initial pilot phase.

### Technical Issues Across all Partners



## Learner Surveys – From all participants across all partner organisations

We received 202 completed learner surveys in total from all partners during the initial pilot period, which provided the following responses:

- 51% felt the learner leaflet was useful (44% did not see it)
- 83% felt the language used was easy to understand
- 91% felt comfortable using the word 'numeracy'
- 49% did not look at the attitudinal tabs
- 82% found the assessments easy to use
- 21% found explanations of target levels too brief
- Only 48% used the learning resources
- 66% said the Challenge took the expected amount of time
- 24% felt the assessments were too long
- 75% found it easy or very easy to find the time to do the Challenge
- 87% said they would recommend the Challenge to friends and family

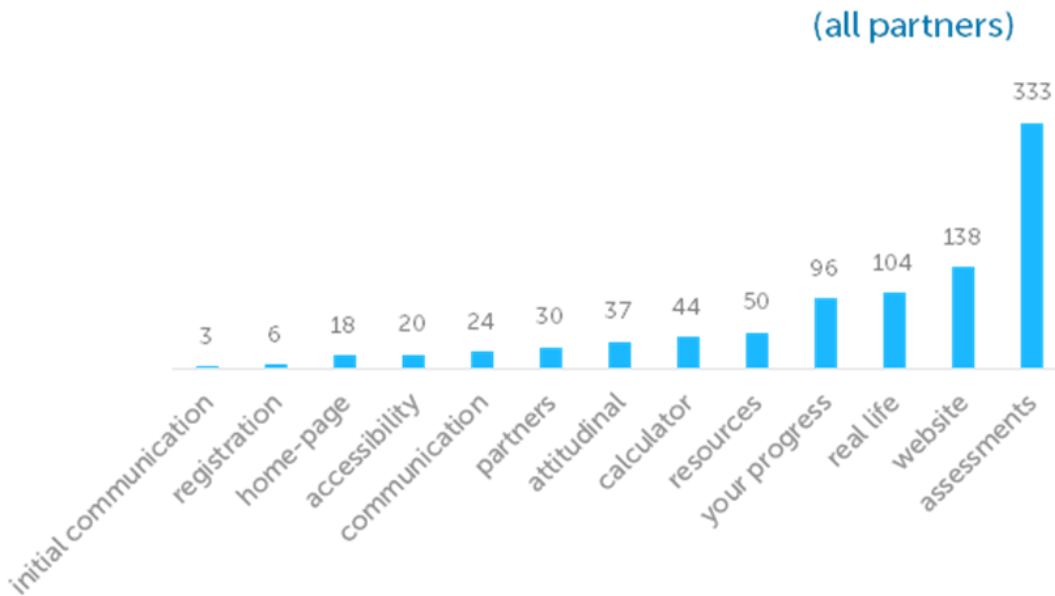
88%

CHALLENGE MET  
OR EXCEEDED  
EXPECTATION  
OF PARTNERS

87%

INDIVIDUALS  
WOULD  
RECOMMEND IT TO  
A FRIEND

## General feedback – From all participants across all partner organisations



We have received a total of 920 points of feedback so far from all partners. These included 10 conference calls with partners, other calls, visits, emails, and word of mouth.

Most feedback concerned the Initial Assessment and the overall feel of the website

Feedback comments include:

### Website

- “Fantastic way to understand where you are with Maths”
- “The site is laid out well and easy to navigate”
- “Clear, easy to read English throughout”
- “The way it is linked to real life is brilliant”
- “Would have been easier to do it on my tablet”

### Home-Page

- “Very welcoming and a site you want to spend time on”
- “Too much writing on the home-page”
- “Not sure about the woman on the home page “



### **Accessibility**

- “Must ensure site is suitable for dyslexics”
- “Has the site been tested for someone using voice recognition software?”
- “Some of the language used really needs to be simplified”
- “Learners with weak literacy skills but stronger numeracy skills could be penalised”

### **Attitudinal Questions**

- “Like these questions as a warm-up”
- “Appreciate the informal tone of the response”

### **Assessments**

- “Questions were well-worded and easily understood”
  - “Like the interactivity of the questions”
  - “The audio is helpful”
  - “Would be good to bring branding of questions more in line with the rest of the site”
  - “A lot of thought has been given to the range and applicability to real life”
  - “Even though I sat at home, I instantly felt under pressure”
  - “Would like indication of progress”
  - “Don't Know button should be more obvious”
  - “No instructions how to 'drag and drop'”
  - “It wasn't clear whether to put in £ signs or not”
  - “Not too sure there was a need for a curve ball with the butter question”
  - “Calculator doesn't clear between questions”
  - “Calculator got in the way of the text”
- 
- “Not clear you can drag calculator”
  - “Could only click on the numbers rather than use laptop keypad” “The calculator is fantastic”

### **Target Levels and Progress**

- “You finish the Initial Assessment, get a screen of text about target, then are thrown straight into more questions with no explanation.”
- “I would have liked to know which questions I got wrong and my overall score”
- “Expected to be able to go back to previous 'beaker' ... if you can't then this needs to be made clear”

## Learning Resources – Feedback from all participants across all partners

Each learning resource has a ‘thumbs up’ and a ‘thumbs down’ button with reasons such as ‘Really helpful’ next to it. Feedback from all participants across all partners is shown in the pie chart opposite:



We currently have over 700 learning resources available on the Challenge website. This bank of resources is still growing and we are reviewing the resources that were voted broken, childish or off-topic.

## Overall Summary of the Challenge Pilot

The pilot was very successful in:

- Testing people’s enthusiasm for the initiative
- Gathering a wealth of feedback on the usability of the website
- Identifying technical issues
- Testing and developing our internal processes for providing support and reporting

We learned that there is a real appetite for a website which is non-threatening and focuses on everyday maths skills, and we discovered tangible enthusiasm and support for what we are doing.

The attitudinal aspects of the site were warmly received, with users recognising that these are unique to the Challenge website. The assessments were felt to be easy to use and the bias towards everyday maths was seen to be crucial to engage learners.

The pilot did not provide sufficient feedback on the detail of the latter parts of the user journey (diagnostic assessments, learning resources and final re-assessment). A lot of people stopped interacting with the site at the end of the Initial Assessment, suggesting that this stage was almost treated as the entire Challenge. We are continuing to seek feedback in all of these areas as we prepare for launch.

## Next Steps

Based on feedback from the pilot, we are continuing to refine and develop the website to ensure that it meets the needs of the people who will benefit the most from it and, indeed, from the Challenge overall. We are:

- Introducing a 'save progress' function into the main assessment
- Simplifying the language used wherever possible
- Checking the site for screen reader compatibility
- Increasing text size where possible
- Explaining the levels and targets more clearly
- Introducing a score as well as the levels
- Adding an indication of progress through the main assessment
- Allowing the learner to revisit previous resources
- Adding 'tips for learning'
- Developing a new 'dashboard' which summarises progress
- Moving the Challenge website to the Cloud
- Adding some Welsh language content
- Better explaining the user journey through the Challenge website
- Working to make the assessments operate on tablets
- Reviewing and expanding the bank of questions
- Making the assessments look more in line with the rest of the site
- Investigating access to 'questions you got wrong'
- Investigating reducing the length of the main assessment (without losing accuracy)
- Improving the onscreen calculator
- Increasing the scope of our reporting

After these editorial and technical improvements, we will offer open access on the web from late autumn 2013. As already described, this means that access to the website will be opened up to individuals online, rather than the current restricted access through unique web links. Full launch of the National Numeracy Challenge initiative is planned for March 2014 – this will be the UK-wide drive to 'take the Challenge'.

In the meantime, web links remain open and participants are still welcome to give the website a go and feed back to us on their experiences. We will continue to invite key user groups – and particularly more people in the target learning group - to test the resources and give us feedback.

We hope that you will continue on the Challenge journey with us. We look forward to working with you to roll out this initiative across the UK.

Presently, National Numeracy is scoping out two further initiatives:

1. The Parental Engagement project which will provide parents with advice and information around supporting their child's (and their own) learning.
2. The Firm Foundations for All project which will provide adults who have very low numeracy levels (Entry Level 2 or below) with the foundations of number understanding (which can then be built on through the National Numeracy Challenge).

If you would like to be involved in either of these projects, please contact us at:  
[sarah-jane@nationalnumeracy.org.uk](mailto:sarah-jane@nationalnumeracy.org.uk)

To find out more about the National Numeracy Challenge, contact us at:  
[info@nnchallenge.org.uk](mailto:info@nnchallenge.org.uk)

Finally, a very big thank you from the National Numeracy team to all of our participants, partners and other advisers for making the Challenge pilot a success!

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To receive regular updates on news, research and our projects, [please subscribe](#) to our e-newsletter. We know that you probably get bombarded with more information than you can handle already – so we're sensitive to that and will only look to get in touch a few times a year. You can view our July update [here](#).

Follow National Numeracy on [Twitter](#)

Like the Challenge [Facebook](#) page to be kept up to date.

Find National Numeracy on [Pinterest](#) and [YouTube](#)

National Numeracy is an independent organisation committed to transforming attitudes and achievement in numeracy across the age range. In particular it focuses on those with low levels of numeracy. At its launch in March 2012, it highlighted the 16.8 million adults of working age in England with numeracy equivalent to the levels expected at primary school. National Numeracy is a registered company (company no: 7886294) and charity (charity no: 1145669).

[www.nationalnumeracy.org.uk](http://www.nationalnumeracy.org.uk)

The National Numeracy Challenge aims to improve the numeracy skills of a million adults over the next five years through partnership with employers, colleges and training providers and outreach organisations. Details will be announced shortly of the full launch of this initiative which is planned for March 2014.

[www.nationalnumeracy.org.uk/nnchallenge](http://www.nationalnumeracy.org.uk/nnchallenge)