



Pilot Study: Reception Pupil Survey and Screening Test Instructions

Thank you for taking part in this pilot study. These are the instructions for conducting the pupil survey and numeracy screening test with the children. The survey and screening test should be conducted at the same time with each child individually and should take up to around 15 minutes with each child. After reading these instructions, if you have any questions about what to do then contact us:

Helpline: 0115 9514426 8:30am-4pm Email: mathsobservatory@nottingham.ac.uk

Before you begin, check on the pack label that you have the correct pack for the class of children that you are supporting with the survey and test.

Pack contents:

- These instructions
- Surveys with pupil names
- Spare surveys
- Response sheets
- Screening test papers with pupil names
- Spare screening test papers
- List of non-participating pupils
- Plastic envelope

The pupil survey aims to find out what children think about maths. The numeracy screening test aims to find out children's current understanding in number.

Please help them to understand the questions but do not suggest a particular answer which you think they should choose.

1. Preparing yourself

Familiarise yourself with the materials in the pack and read the following instructions before administering the survey and tests.

In the class pack, there are response sheets for the child to indicate their answer to the survey questions. Cut along the two lines so that the sheet is cut into thirds. This gives you the three response sheets to use for the survey. The child will place a small object on the response sheet. Please create a collection of small toys (e.g. wooden/plastic cube, plastic animal, small teddy, plastic counter, coin, action figure) for the children to choose from. You will also need a black pen to record the child's response, a pencil or black pen for the child to use, and a timer (e.g. mobile phone, sand timer or stopwatch).

Read the survey so you know the questions you will be asking the children. There are three sections, A, B and C. Each section has a different response sheet:



- Section A uses the 'ticks' response sheet.
- Section B uses the 'thumbs' response sheet.
- Section C uses the 'faces' response sheet.

Each section begins with a practice question. These are easy questions with predictable answers. The practice questions are designed to help the child understand how to use the toy on the response sheet and to understand the choice of answers. If they do not seem to understand the practice question, they may not be able to answer the questions in that section.

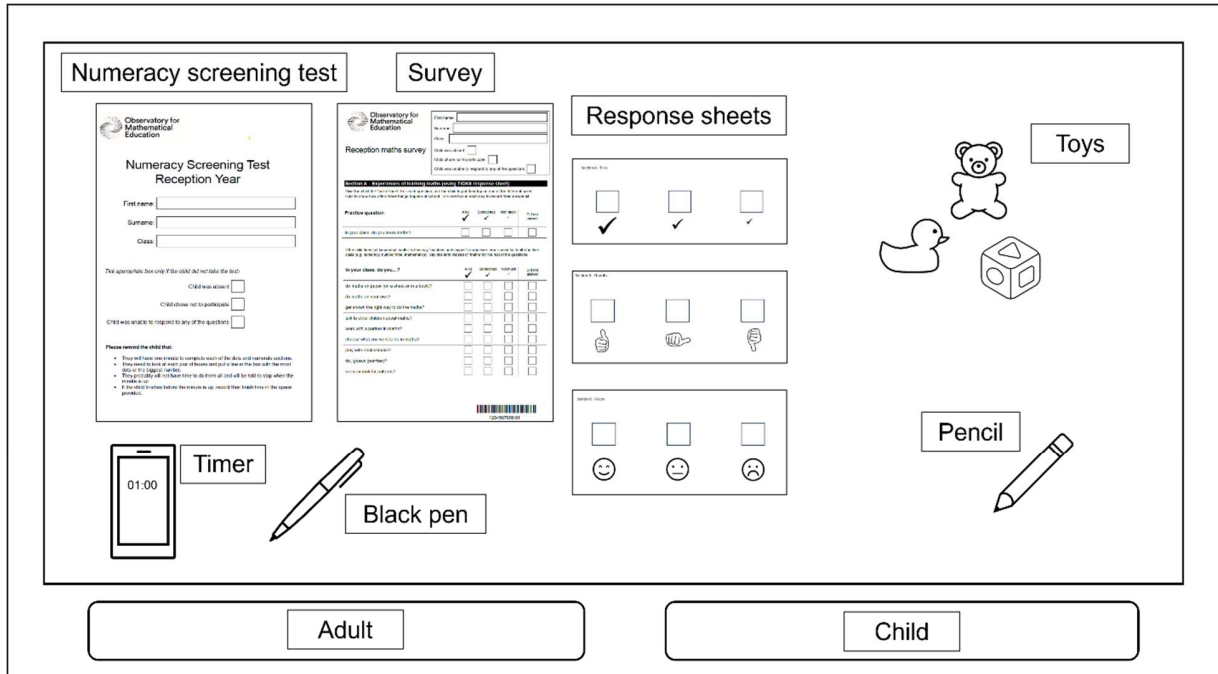
Check the non-participating pupils list. It lists pupils whose parent/guardian does not want them to take part. **All pupils on the non-participating pupils list should not do the survey and test.** If the child wants to complete the survey and test but their parent/guardian has decided that they will not, please explain this with sensitivity to the child. Please complete a survey and test with all of the other children in the class. If there is no survey for a pupil (and their name is not on the non-participating pupils list), then give them a spare survey and test paper (with no name) and write their name and the class name on the front page.

2. Preparing the class

It is important that the children know what they are being asked to do before you start to do the survey and test with any of the children. We have provided a video and a letter to explain the study to the children in a child-friendly way. You can choose to either play the video to the class (perhaps on a screen or interactive whiteboard) or to read them the letter (printed or shown on a screen or interactive whiteboard). You do not need to do both. The links to the video and letter will have been sent to you by your Maths Lead but are also on our [website](http://www.nottingham.ac.uk/observatory): www.nottingham.ac.uk/observatory.

3. Getting ready to work with one child

Find a suitable space to work with the child, away from distractions, but somewhere where the child feels comfortable. Get all the materials ready including a black pen or pencil for the child, the timer, the collection of small toys, the response sheets, and a black pen for you.



Find the survey and test paper for one child and invite the child to come and do their survey and test with you.

There are detailed instructions in the following pages. Instructions for the survey begin on page 5 and instructions for the screening test begin on page 8. When you are familiar with these, you may prefer to use the 'Quick Reference Guides' on pages 12 and 13 which are a one-page summary of what you need to do and are an easy point of reference to use when working with a child.



If the child is not going to complete the survey and test, then follow these instructions for what to do with their papers:

<p>If the child is absent</p> <p>If a child is absent, tick the absent box on the pupil's paper.</p> <div data-bbox="220 629 719 898"> <p>First name: <input type="text"/></p> <p>Surname: <input type="text"/></p> <p>Class: <input type="text"/></p> <p>Child was absent <input type="checkbox"/> ←</p> <p>Child chose not to participate <input type="checkbox"/></p> <p>Child was unable to respond to any of the questions <input type="checkbox"/></p> </div> <p>If you are conducting the survey and test with children over a period of a few days then the child can complete theirs if they return to school in this period and you have the time for this. The timeframe should not be extended to wait for an absent child to return to school.</p>	<p>If the child chooses not to participate</p> <p>If a child chooses not to participate (they say “no” or their body language or facial expression indicates their not wanting to participate), tick this box.</p> <div data-bbox="810 696 1369 994"> <p>First name: <input type="text"/></p> <p>Surname: <input type="text"/></p> <p>Class: <input type="text"/></p> <p>Child was absent <input type="checkbox"/></p> <p>Child chose not to participate <input type="checkbox"/> ←</p> <p>Child was unable to respond to any of the questions <input type="checkbox"/></p> </div> <p>If the child is busy with another activity and does not want to stop to do the survey and test at this moment then you could ask them again a little later. If they still decline then this should be taken as choosing not to participate.</p>
<p>If the child is unable to respond to questions</p> <p>If a child is unable to respond to any of the questions (from their teacher's knowledge of them or from the Section A practice question), tick this box.</p> <div data-bbox="212 1554 746 1839"> <p>First name: <input type="text"/></p> <p>Surname: <input type="text"/></p> <p>Class: <input type="text"/></p> <p>Child was absent <input type="checkbox"/></p> <p>Child chose not to participate <input type="checkbox"/></p> <p>Child was unable to respond to any of the questions <input type="checkbox"/> ←</p> </div>	<p>If a child stops part way through</p> <p>If a child chooses to stop at any point in the survey, then you should leave the remaining questions blank.</p> <p>If they stop because they have changed their mind and no longer wish to participate in the study then tick the 'Chose not to participate' box, as above.</p>



4. Administering the survey

Ask the child to choose which toy they would like to use to answer the survey questions. Put the Section A ‘ticks’ response sheet in front of the child (putting the Section B and Section C response sheets to one side, so the child is just looking at the Section A response sheet).

Explain to the child (using this or similar language, as appropriate for the individual):

I am going to ask you some questions. There are no right or wrong answers, and I will not show your answers to your teacher or any of the other children. When I ask you a question, I would like you to put your toy on the space which shows your answer. If you want to answer ‘a lot’ then put your toy on the big tick [point to the big tick]. If you want to answer ‘sometimes’ then put your toy on the middle tick [point to the middle tick]. If you want to answer ‘not much’ then put your toy on the small tick [point to the small tick].

Begin with the practice question, ‘In your class, do you learn maths?’ This question is intended to tell you whether the child knows the word ‘maths’, as well as giving them practice using the toy on the response sheet.

If the child does not know the word ‘maths’ then say “numbers and shapes” instead, or whatever term is used for ‘maths’ in their class (e.g. ‘numeracy’, ‘number time’). If you need to do this then use the child’s preferred word instead of ‘maths’ for the rest of the survey questions.

If the child is unable to provide a response to the practice question, even with your help, then this suggests that they will not be able to complete the survey so you should move onto the screening test.

Ask the child all of the questions in section A and tick only one box in each row to record their answers. Ask them to **take the toy off** the response sheet each time they have answered a question, so that they are ready for the next one. If you need to re-word the questions so that the child understands them then you can do this. If they do not give an answer, then tick the ‘did not answer’ box.

After section A, move onto section B. Change the response sheet to the ‘thumbs’ response sheet. Begin with the practice question ‘how good are you at touching your nose?’. If the child is unable to give a response to the practice question, then this suggests that they do not understand the answers on the response sheet. Do not ask the questions in the section, if this is the case and tick ‘did not answer’ for each question in section B.

After section B, move onto section C. Change the response sheet to the ‘faces’ response sheet. Begin with the practice question ‘how much do you like playing?’. If the child is unable to give a response to the practice question, then this suggests that they do not



understand the answers on the response sheet. Do not ask the questions, in the section if this is the case and tick 'did not answer' for each question in section C.

Say a big 'well done' and 'thank you' to the child at the end of the survey, even if they do not complete it all.

What if...?

...the child does not want to complete the survey

If the child does not want to complete the survey (either telling you this or their expression or body language indicates this) then do not do the survey with them. Tick the box 'Child did not want to do the survey' at the top of the survey sheet.

...you make a mistake

If you make a mistake or the child changes their mind on their response, fully colour in that box and tick another box showing the answer that the child wants to give

... the child does not understand the question

You can re-word or explain the question to the child if you think this will help them to understand (but not tell them which answer to choose on the response sheet). If they still do not understand then tick the 'did not answer' box for that question.

... a child gets tired or distracted

If the child gets tired or distracted, then you could give them some encouragement to keep going or could give them a short break (e.g. for a drink or to share a short story book).

... the child gives their answer but does not use the toy

If the child gives their answer verbally or by pointing to the response sheet rather than using the toy, this is fine. Record their answers by ticking the box on the survey sheet.

... a child does not want to continue with the survey

If the child does not want to continue with the survey (either telling you this or their expression or body language indicates this) then stop the survey or test. You should tick the 'did not answer' box for all the remaining questions.

... a child does not want to complete the test but has completed the survey

It is fine if a child only wants to complete one of the survey and test but not both. Tick the 'chose not to participate' box at the top of the survey or front page of the screening test for the paper that they chose not to complete.

... a child is unable to fully complete the survey

If a child is unable to fully complete the survey, we would still like you to return their partially completed survey.



6. Administering the Numeracy screening test

Put the screening test paper in front of the child. Turn to page 2 (page with sample and practice items). Read all instructions written in bold aloud to the child.

Explain to the child (using this or similar language, as appropriate for the individual):

We are now going to look at some dots and numbers. Pick up your pencil/pen and I will show you what to do.

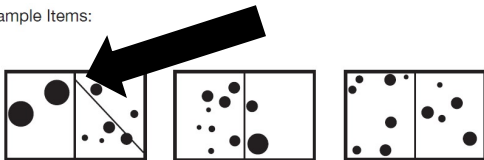
Dots section

I want you to look at some dots and decide which boxes have the most dots.

Sample items

Look at the first set of dots (point to the first sample item).

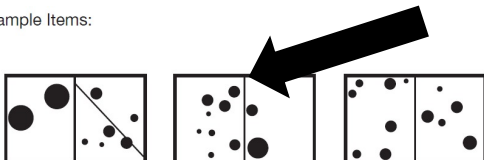
Sample Items:



Which box has the most dots? This box (*point to box on the left*) or this box (*point to box on the right*)? Because this box has the most dots (*point to the box on the right*), we put a line through it (*point to the line*).

Now look at the next one (point to the middle sample item).

Sample Items:

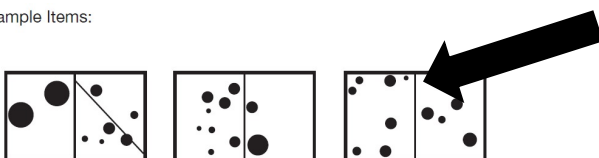


Which box has the most dots? This box (*point to box on the left*) or this box (*point to box on the right*)? Don't count the dots, just look. (*Pause for child's response*).

Because this box has the most dots, we put a line through it (put a line through the box on left, as an example of what to do).

Now look at the next one (point to the third sample item).

Sample Items:





Which box has the most dots? This box (point to box on the left) or this box (point to box on the right)? Don't count the dots, just look. (Pause for child's response).

Because this box has the most dots (point to box on left), we put a line through this box (put a line through the box on left as an example of what to do).

Practice items

Now we are going to practice. Look at the next set of boxes. I want you to put a line through the box that has the most dots just like I did up here (point to sample items).

Do not count the dots. Just guess which side has more dots.

If you make a mistake and want to change it, just cross out the line like this (demonstrate by making an 'X' on one of the sample items with a pencil) and put a line through the answer you do want. Make sure the line is easy to see, just like mine. Work as quickly as you can without making any mistakes. Go!

The child can make their line in any direction. It could be left to right or right to left diagonally, a vertical or a horizontal line and it does not need to be straight. Encourage them not to colour in the box or scribble as that will take them longer.

If child counts during practice items remind child not to count but to make their best guess. You might say "If you count it takes more time, so don't count but guess" or "Decide which one feels like it has the most dots".

The Test

Now we are going to see how many you can do in one minute. Remember, if you make a mistake and want to change it, just cross out the line to make a X and put a line through the answer you do want. Draw your lines quickly and make they are easy to see, just like mine (point to your lines on the sample items). When you complete all of the rows on the page then turn to the next page. Do not miss any. Remember to guess and not count.

I will tell you when to stop.

Turn page Go!

Begin timing for one minute. If the child counts remind them to guess and not count. The child can turn the pages on their own. Ensure they do not miss any pages.

If the child finishes before one minute then write their time in the space at the end of the dots section on the screening test.



Numbers section

Sample items

I want you to look at some numbers and decide which of the numbers is bigger. The bigger number is the one which means more things.

Look at these numbers (Point to box with sample item with number pair 1 and 7).

Sample Items:



We see the number 1 and the number 7. Which number is bigger?

Because 7 is bigger than 1, we put a line through the number 7 (point to the line through the 7).

Now look at the next one (point to box with number pair 8 and 2).

Sample Items:

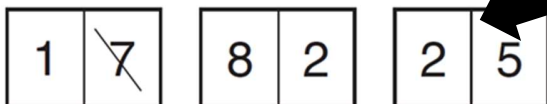


We see the number 8 and the number 2. Which number is bigger? (pause for child's response).

Because 8 is bigger than 2 we put a line through the number 8 (put a line through 8).

Now look at the next one (point to box with number pair 2 and 5).

Sample Items:



We see the number 2 and the number 5. Which number is bigger? (pause for child's response)

Because 5 is bigger than 2 we put a line through the number 5 (put a line through 5).

Practice items

Now we are going to practice (point to practice items). I want you to put a line through the bigger number just like we did up here (point to sample items).



If you make a mistake and want to change it, put another line through the answer you do not want, like this (*demonstrate by making an 'X' on one of the sample items with a pencil*). **Make sure the marks you make are easy to see, just like mine. Work as quickly as you can.**

Go!

Watch the child complete the practice items to check they are putting the line through the number which they think is the biggest.

The test

Now we are going to see how many you can do in one minute. Remember, if you make a **mistake and want to change it, just cross out the line to make a X and put a line through the answer you do want. Draw your lines quickly and make they are easy to see, just like mine** (*point to your lines on the sample items*). **When you complete all of the rows on the page then turn to the next page. Do not miss any.**

I will tell you when to stop.

Turn page Go!

Begin timing for one minute. Ensure they do not miss any pages.

If the child finishes before one minute then write their time in the space at the end of the dots section on the screening test.

Well done!

7. Returning the surveys and tests

When all children in the class (not on the non-participating pupils list) have completed their survey and test, place their papers into the plastic envelope. Seal the plastic envelope and hand it to the person collecting these as instructed by the Maths Lead for your school, who will ensure that these are collected by our courier. Please securely destroy the list of non-participating pupils in confidential waste.



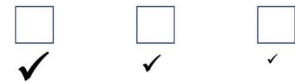
Survey - Quick reference guide

1. Ask the child to choose a toy and give them the Section A 'ticks' response sheet.
2. Explain to the child (using this or similar language so the child understands):

I am going to ask you some questions. There are no right or wrong answers and I will not show your answers to your teacher or any of the other children. When I ask you a question, I would like you to put your toy on the space which shows your answer. If you want to answer 'a lot' then put your toy on the big tick [point to the big tick]. If you want to answer 'sometimes' then put your toy on the middle tick [point to the middle tick]. If you want to answer 'not much' then put your toy on the small tick [point to the small tick].

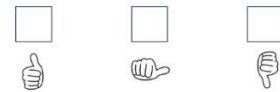
Section A – 'tick's response sheet'

3. Ask practice question. If they do not know the word 'maths' then say "numbers and shapes" or a words they use for maths (e.g. numeracy) for the rest of the survey questions.
4. Read each question, tick box to record response, ask them to take the toy off.



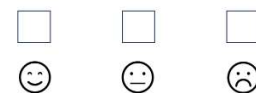
Section B – 'thumbs response sheet'

5. Give the child the Section B 'thumbs sheet'.
6. Ask practice question. If they are not able to answer then do not ask the Section B questions (tick 'did not answer' for Section B questions).
7. Read each question, tick box to record response, ask them to take the toy off.



Section C – 'faces' response sheet

8. Give the child the Section C 'faces' sheet.
9. Ask practice question. If they are not able to answer then do not ask the Section C questions (tick 'did not answer' for Section C questions).
10. Read each question, tick box to record response, ask them to take the toy off.
11. Survey complete. Thank child.



Remember

- Tick one box in each row. If they do not give an answer to a question, then tick the 'did not answer' box.
- You can re-word the questions.
- Children can take a short break.
- To change an answer, colour in the box with the mistake in ■ and tick the correct box .
- Use black pen.
- Children can stop at any time.



Numeracy Screening Test - Quick reference guide

1. Give the child the screening test, turning over the page so they have the dots section in front of them.

We are now going to look at some dots and numbers. Pick up your pencil/pen and I will show you what to do.

Dots Section (which has the most dots?)

2. Using the sample items, demonstrate how to put a line through which of the two boxes has the most dots (without counting).
3. Ask the child to do the same for the practice items (putting a line through the box with the most dots **without counting**).
4. Explain to the child that if they make a mistake, they should cross out the line by making the line into an X shape. Demonstrate how to do this on one of the sample items.
5. Go to the test questions. Set a timer for one minute and tell the child that they should answer as many questions as possible in one minute.
6. Tell the child to stop when the one minute is up. Write down the time if they finish before one minute.

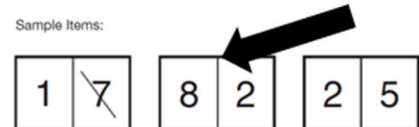
Sample Items:



Numbers Section (which is the biggest number?)

7. Using the sample items, demonstrate how to put a line through which of the two boxes is the bigger number.
8. Ask the child to do the same for the practice items (putting a line through the box with the bigger number).
9. Explain to the child that if they make a mistake, they should cross out the line by making it into an X shape. Demonstrate how to do this on one of the sample items.
10. Go to the test questions. Set a timer for one minute and tell the child that they should answer as many questions as possible in one minute.
11. Tell the child to stop when the one minute is up. Write down the time if they finish before one minute.

Sample Items:



Remember

- Use black pen or pencil
- Stop after one minute
- Do not help the child with their answers
- The child can choose to stop at any time
- Do not ask them to check or change answers if they have chosen the wrong number