

## 20 key facts about the MTC – Multiplication Tables Check

#### 1. The times tables check is online and on-screen

It's been confirmed that test will be fully digital and take place on screen. It will be available to use on laptops,

desktops and tablets.

The STA published full guidance for your IT administrators in April 2019, but it is expected that most equipment that has access to a web-browser should work with the check.

#### 2. Schools will have access to a simulated version to practise on

The Department For Education is opening up a 'try it out area' to familiarise schools and pupils with the system. This is likely to be open for from the start of the summer term, or earlier. In 2022, it was available from 21st March.

During this time schools can apply any necessary accessibility features for pupils that may need them. Pupils should try these features out ahead of the check window to ensure they work for them.

#### 3: The MTC will only present children with multiplication statements not division

It's been confirmed that Year 4 children will only face multiplication statements in the check. This means that related division facts, whilst a key part of children's mathematical learning, will not be tested as part of the check.

Some maths experts are already saying that this removes much of the potential benefits of the check.

#### 4: The check will take place in June each year

The framework clarifies that there will be 2-week window in June for the administration of the check. There is no set test day, nor an expectation that all children will take the check at the same time.

#### 5: Children can practise before taking the check

Before the test window opens each year, there will be the opportunity for children to access a practice area to become familiar with the style of the KS2 times tables test.

It'll be important for schools to ensure they build in time for this familiarisation, so the check style is not 'new' when children take the actual check.

This practice area may not be a suite of full tests, and that the results from the practice area will not be reported on or available to schools, so this cannot be used as an ongoing tool for assessment before the actual check.

#### 6: It'll take less than 5 minutes per pupil



Under standard administration (i.e. without any access arrangements) the multiplication check will

take less than 5 minutes per pupil. There is no requirement for all children in a class to take the check all at once.

#### 7: Children will have 6 seconds to answer each question

Children will get 6 seconds from the time the question appears to input their answer. This means that children must be able to read, recall and enter their response within 6 seconds.

Children will enter their answer using a keyboard or by pressing digits using a mouse or touchscreen on an on-screen number pad.

This means that it is vital that schools are ensuring children are able to rapidly recall multiplication facts, and can do so 'out of sequence' (i.e. answer 6 x 7 without having to count in 6's from 0).

Whilst it may be tempting for schools to resort to 'rote learning' for the multiplication tables, it is important that this is avoided, as it leads to children simply being able to chant facts without any meaning, and reduces their ability to recall facts out of sequence.

#### 8: Whatever is in the answer box at the end of the 6 seconds will be counted as the answer

This means that if a child is mid-way into entering a two digit answer (e.g. they only enter the 7 out of 72 when answering 8 x 9) they will be recorded as having answered 8 x 9 as 7.

#### 9: Children will face 25 questions

The number of questions has been confirmed at 25. Children will be presented with 25 questions with a 3 second pause in-between each question, before the next one appears on screen.

It is therefore important that children have been used to answering (at least) 25 questions in quick succession before they face the test.

Each child will be randomly assigned a set of questions, which the STA refer to as a 'form'. This is the spread of questions.

There will be repeated questions across different sets of questions each year, but no more than 30% of the questions will be the same in any two sets of questions. This means if the test gets interrupted and children need to re-start it, they will only have a minimal advantage.

#### 10: There will not be an equal spread of each multiplication table within the check

The check has been designed to focus on times tables that fit within the KS2 national curriculum.



It is therefore important to ensure that your Year 4s and Year 3s develop fluency in

their multiplication facts. Remember, the curriculum suggests that by the end of Year 3,

children should be fluent in the 2, 3, 4, 5, 8, 10 times tables, and then by the end of Year 4 it's those tables plus the 6,

7, 9, 11, 12.

- The 6, 7, 8, 9 and 12 times tables are more likely to be asked than the 2, 3, 4, 5, 10 or 11 multiplication tables. The STA state that there is a focus on these as these are the 'most difficult' multiplication tables.
- There will always be questions from the 3, 4, 5, 6, 7, 8, 9, 11 and 12 multiplication tables in each test.
- There will be no questions from the 1 times table (i.e 1 x 8 or 8 x 1)
- There will only be a maximum of 7 questions from the 2, 5 and 10 times tables.

Multiplication Table	Minimum number of items in each form	Maximum number of items in each form
1	Not applicable	Not applicable
2	0	2
3	1	3
4	1	3
5	1	3
6	2	4
7	2	4
8	2	4
9	2	4
10	0	2
11	1	3
12	2	4

#### 5.2.1 Table 1 – Multiplication table limits in the MTC

Reversal of questions using the commutative law will not feature in the same check. This means that, for example, 8 x

3 and 3 x 8 won't be asked to the same pupil.

The full breakdown of questions can be found in the table below:

#### 11: 6 x 3 is '6, three times'

The STA state that they are classifying the multiplication tables by the first number in the question. For example, 8 x 3 would fall within the 8 times table.

This reflects what is now considered to be best practice - for example, that 8 x 3 should be thought of as 8, three

times rather than 8 lots of 3.

#### 12: Remember, commutativity is really important



Of course, it is important that children understand the commutative property of multiplication, and that

8 x 3 (8, three times) is the same as 3 x 8 (3, eight times.)

Therefore, if children have made this conceptual connection, it effectively reduces the number of unique facts children need to remember, and helps children answer questions such as  $8 \times 4$ , which if taken as an 8 times table question may cause more panic than  $4 \times 8$ .

#### 13: Eleven facts are more likely to appear than others

The framework sets out that the second number in the multiplication will be monitored to ensure that the instances of each number is +/- 1 of the parameters discussed above.

This means that the following 11 multiplication questions (**and their commutative equivalents**) are more likely to be asked: –

- 6 x 6, 6 x 7, 6 x 8, 6 x 9, 6 x 12
- 7 x 8, 7 x 9, 7 x 12
- 8 x 9, 8 x 12
- 12 x 12

Of course, not each set of questions will feature all of these facts, and other questions will be asked, but it is likely that a good proportion of the above will be present in each set of questions.

Questions involving 2, 5 and 10 are least likely to be asked, with there only being a maximum of 8 (including the +/-1 parameter mentioned above) of these questions in each test.

#### 14: Some children can be withdrawn from the assessment

It will be possible to withdraw certain children from the assessment.

Full details about the grounds for withdrawing pupils are available in the 2019/20 Assessment and Reporting

Arrangements (ARA), published in October 2019.

However, expect the grounds for withdrawal to be stricter than grounds for withdrawing from the SATs tests.

#### 15: Strictly speaking, the check should not be used as a diagnostic tool

The STA are clear that the check has not been developed for schools to use a diagnostic tool. However, of course,

schools can use the check to help identify KS2 pupils who require additional support.

As it has not been designed as a diagnostic tool, it means that there may be gaps in children's understanding and knowledge of multiplication that is not picked up by the check.

#### 16: Results will only be available at the end of the 2-week window



You will only access the result for each pupil at the end of the 2-week window. The child (or teacher)

will not be shown the total score on screen. This means there will be a bit of a waiting game to find out how your children have done.

#### 17: There is no 'Pass' rate or threshold

The guidance is clear that there is no expected pass rate or threshold. This means that, unlike the KS1 Phonics Screening check, children will not be expected to re-sit the check if they do not meet a set threshold in this KS2 Times Tables Test.

#### BUT...

#### 18: National and Local Authority results will also be published

From 2020, the DfE will report on the performance of pupils in the check nationally and in each local authority. There is no guidance at this point as to what form these reports will take, but we can infer from the test framework that is likely to include the percentage of children who achieve full marks.

Through Analyse School Performance (ASP) schools are also likely to be able to see the percentage of children in their cohort who achieved each score compared to the percentage of children nationally.

The STA state that this national and local authority data will enable schools to benchmark the performance of their pupils, but it will not form a formal pass mark.

#### 19: Results of the multiplication tables check will not be published in performance tables

The document clarified that results of the check will not be published in the publicly accessible school performance tables. We also know from previous information released about the test that there are no current plans to use the results from the multiplication check in judging if schools meet the 'floor standard'.

BUT...

#### 20: Results of the MTC will be reported and analysed – including by Ofsted

From 2020, school and individual pupil-level reports will be made available to schools – in a similar way to the results from the KS1 Phonics Check are reported. This will mean that schools can target support and intervention where needed.

It is also important to note that the results will also be available to OfSTED and local authorities through ASP (analyse school performance), so it is likely that schools will face questions about the Multiplication check during an OfSTED inspection.

# Ways to help

#### **Multiplication Tables Check - Mathsframe**

This activity exactly mirrors the 'Multiplication Tables Check' that will be given to children at the end of Year 4. They are tested on their multiplication tables up to 12 x 12. There are twenty-five questions and children have six seconds to answer each question and three seconds between questions. The questions are generated randomly using the same rules as the 'Multiplication Tables Check

Schools - Times Tables Rock Stars (ttrockstars.com)

IT'S PEDAGOGICALLY SOUND

Our comprehensive programme cements the child's conceptual understanding of both multiplication and division and the relationships between each table, using sophisticated question sequencing, innovative adaptive gameplay and use of inverse operations.

TTRS takes all the worry out of MTC preparations. One of our game modes - "Soundcheck" - simulates the Multiplication Tables Check, which is the compulsory Government test for all Year 4 pupils in mainstream primary schools in England. This enables you to prepare your pupils for the MTC well in advance and helps you track and target the pupils that need extra support.

### Hit the Button - Quick fire maths practise for 6-11 year olds (topmarks.co.uk)

Hit the Button is an interactive maths game with quick fire questions on number bonds, times tables, doubling and halving, multiples, division facts and square numbers. The games, which are against the clock, challenge and develop mental maths skills.

Regular use of Hit the Button can help students to sharpen their recall of vital number facts in a fun way and learning multiplication tables need not be boring.

#### Times tables collection - BBC Teach

Every times table video for both KS1 and KS2, featuring all your favourite football mascots.







