



Sumdog Math Diagnostic

Identify the needs of every child



Introduction	2	Sumdog was founded with a clear mission to help close the achievement gap. In order to support learners and provide teachers with the information they need to do just that, we offer a math diagnostic assessment for all users.
How it works	3	The Sumdog diagnostic assessment has two purposes: 1) To provide a starting point for Sumdog's advanced adaptive learning algorithm to present math questions when learners are playing games in 'training mode'.*
Results	4	2) To identify strengths and key areas for development by tracking and demonstrating progress.
Resetting the diagnostic	5-6	

"One of the major benefits of this tool is the fact that Sumdog automatically creates an individualized learning journey for every student based on their performance on the diagnostic task. I can easily set tasks for my class and know that the questions my students face are chosen specifically for their level."

Elementary Math Teacher



* For more information, see our document on Sumdog's adaptive practice function in the resource hub.

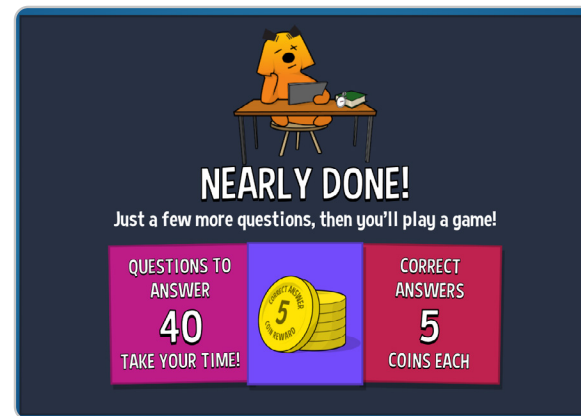
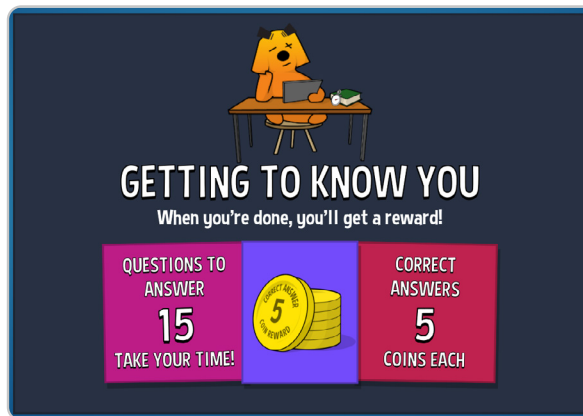
How it works



The Sumdog diagnostic is presented outside of our games to focus learners and is designed to be completed within one 30 minute class session. The multiple choice math questions in the diagnostic have been carefully chosen, reviewed and approved by teachers and educational consultants.

It is split into two parts:

- Part 1 – 15 questions focussed on numeracy. The result of this shorter test determines the level of questions that learners will receive in part 2.
- Part 2 – 40 questions from a range of math topics across the breadth of the standards. These are a mixture of 20 questions from the grade level of the result of part 1, and a further 20 questions from the grade level below that result.



Once both parts have been completed, each child is given a test score out of 40 and a diagnostic result. There are three possible results per level:

Starting:	They have demonstrated a secure knowledge of the previous grade's math level, and are beginning to grasp some of the current grade's math standards.
Mid:	They have a secure knowledge of parts of the current grade level's math standards.
End:	They have a secure knowledge of the majority of the current grade's math standards.

Results



Once the diagnostic has been completed, the results for each child will be presented to the teacher in three reports.

1) Whole class stranded report

This report shows the number of questions the children in your class were asked and the number of correct answers in each strand of the standards.

NEED	STUDENT	DIAGNOSTIC RESULT	QUESTIONS ASKED	QUESTIONS ATTEMPTED	NUMBER CORRECT	PERCENTAGE CORRECT	TEST MARKS
<input type="checkbox"/>	David Berry Grade 3	Mid 4th Grade	14/14	28/28	14/14	100%	Diagnostic 3.2 (15/08/2021)
<input type="checkbox"/>	Sean Murgin Grade 3	Mid 5th Grade	14/14	27/27	13/24	50%	Diagnostic 3.2 (15/08/2021)
<input type="checkbox"/>	Bobby Houghton Grade 4	Mid 4th Grade	14/14	17/24	8/14	57%	Diagnostic 4.2 (15/08/2021)
<input type="checkbox"/>	Sally O'Brien Grade 4	Starting 4th Grade	16/16	8/16	5/16	31%	Diagnostic 3.2 (15/08/2021)
<input type="checkbox"/>	Jenny Pears Grade 4	Mid 4th Grade	7/14	18/14	8/12	67%	Diagnostic 3.2 (15/08/2021)
<input type="checkbox"/>	Lara Smith Grade 5	Mid 5th Grade	16/16	28/28	4/16	25%	Diagnostic 5.2 (15/08/2021)
<input type="checkbox"/>	John Stevens Grade 5	Mid 3rd Grade	3/14	11/14	7/14	50%	Diagnostic 4.7 (15/08/2021)
<input type="checkbox"/>	Allison Walters Grade 5	Starting 4th Grade	5/14	22/14	13/14	93%	Diagnostic 4.2 (15/08/2021)

†† This student's diagnostic questions were started from outside their grade standards. [Find out more about how this decision was made.](#)

2) Individual report

This is similar to the whole class report in that it shows the results in a stranded report but focuses more acutely on individual students, including the specific questions they were asked and the answers they chose.

Jenny's Diagnostic Report

Sundog's new diagnostic was introduced on August 3. [Read about how it works.](#)

Jenny's diagnostic result

The diagnostic test was completed on 16 August 2021.

JENNY'S RESULT IS
Mid 4th Grade

Diagnostic report

We chose the level of Jenny's diagnostic questions based on the results of an initial numeracy test. [Find out more about how this decision was made.](#)

40 QUESTIONS IN TEST | 40 QUESTIONS ATTEMPTED | 15 CORRECT ANSWERS | 38% ACCURACY

Breakdown by strand

- Number and operations: 4
- Geometry: 1
- Measurement: 1
- Data, statistics and probability: 1
- Formal algebra: 1

Type of angle?

Acute | Obtuse | Right ✓ | Reflex

More than 3,680?

3,680 ✗ | 3,700 ✓ | 2,690

$\frac{1}{2}$ of 27

4 ✗ | 2 | 1 ✓ | 3

$\frac{1}{10}$ of 40?

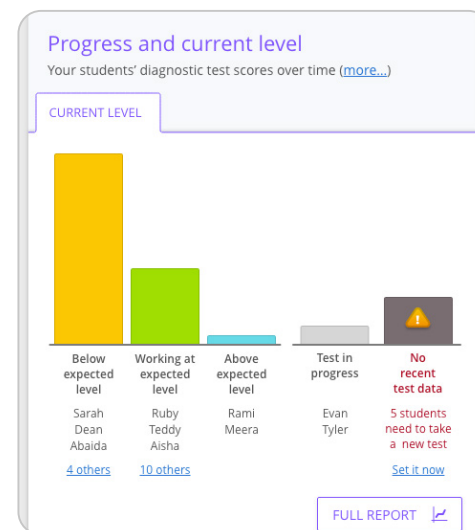
400 | 4 ✓ | 44 ✗ | 5

$\frac{1}{6}$ of 54?

63 | 324 ✗ | 10 | 9 ✓

3) Current level chart

The current level chart gives teachers an 'at a glance' way to view their students' current level based on their most recent diagnostic assessment results. Premium subscribers will also be able to track progress more closely using attainment charts based on previous diagnostic assessments.



Resetting the diagnostic



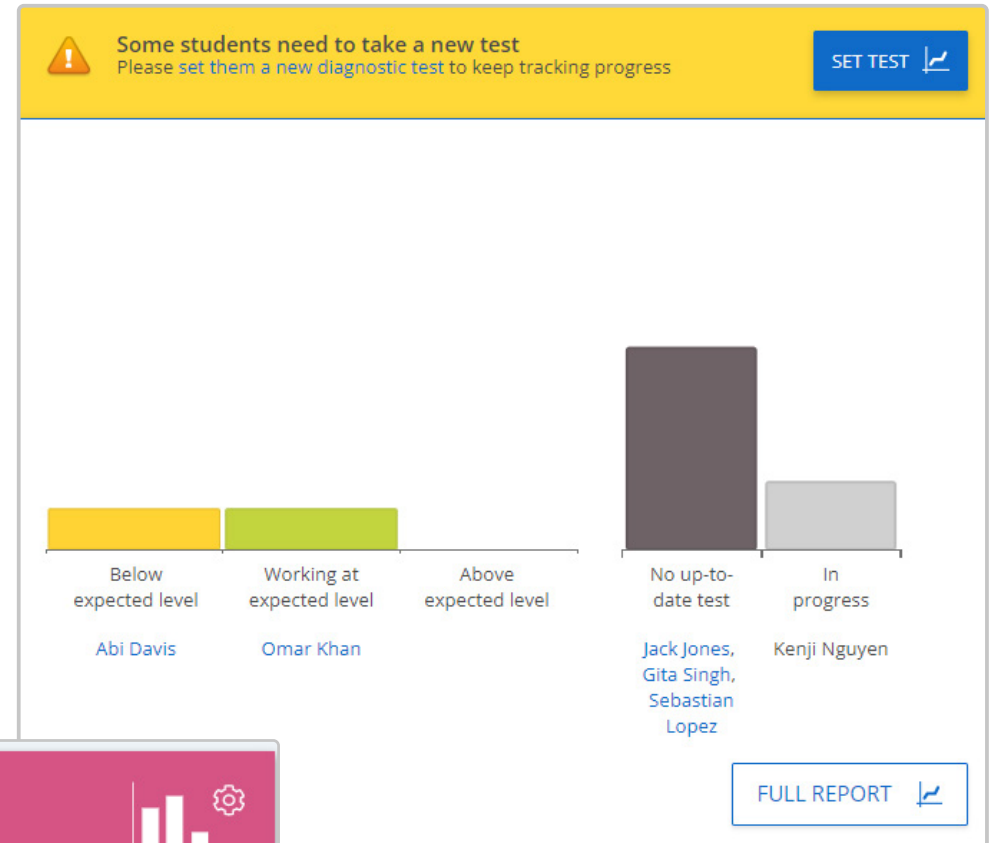
How and when to reset

We recommend resetting the Sumdog diagnostic termly as this will allow you to track and monitor the progress of learners as they practice on Sumdog throughout the school year. You will automatically be prompted on the Teacher dashboard when it is time to reset your diagnostic, but you can do this at any time you choose from the 'Diagnostic results page'.

You can either reset for your entire class, or for specific students to give you reliable data to demonstrate attainment and progress. When resetting the diagnostic, you can also choose the grade level which you would like the first 15 questions (Part 1) set to for each individual learner (which in turn will affect the accuracy of the level of the Part 2 test).

Top Tip

If you would like to assess the progress of one or more students already working at the expected level of their grade, you can choose to reset their diagnostic and start them on the test for the grade above to more accurately diagnose their working level.



NEW!

Diagnostic Results

See how your students were originally placed.

[CHECK](#)



Why reset?

Resetting the diagnostic frequently ensures that the tracking and monitoring reports are populated with the latest data, providing a quick and easy way to monitor progress over time of your students. Sumdog Premium subscribers will be able to quickly switch between current and previous attainment charts; allowing easy analysis of diagnostic results from different dates and overall trends to evaluate progress.

Not only this, but once a reset diagnostic has been completed, your students' personalized learning journeys will be adjusted automatically if necessary to reflect the progress that they have made since starting to work on Sumdog. You can then be confident that the questions your students are being set by our adaptive algorithm are pitched at the correct level.

By regularly resetting and analyzing the Sumdog diagnostic, you can make sure that both you and your students are getting the most out of Sumdog!

Some students need to take a new test
Please set them a new diagnostic test to keep tracking progress

[SET TEST](#)

Below expected level	Working at expected level	Above expected level	No up-to-date test	In progress
Abi Davis	Omar Khan		Jack Jones, Gita Singh, Sebastian Lopez	Kenji Nguyen

[FULL REPORT](#)

NEW!

Diagnostic Results

See how your students were originally placed.

[CHECK](#)



Have any questions about our diagnostic?
Visit www.sumdog.com to find out more.