CENTURY for Secondary Maths

Introduction

The beauty of CENTURY is that it is powered by students. If your students are using it, they are learning. If your students are learning, they are producing insightful data for you and your team to analyse and act upon. The only thing you need to do is to ensure the relevant maths courses have been assigned to your classes.

The following document has been created to assist you when you are ready to take more control of the platform and to guide you on how to embed CENTURY into your department.

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Year 7 Catch Up

Assessing the gaps in knowledge of your new cohort is now more important than ever. Once you've assigned the *Mathematics - Secondary - Foundation+* course, you could decide to take one of these approaches:

1. Set all three diagnostics through the Planner (*Essential Four Operations, Catch Up* or *Secondary Ready*) to gain an overview of learners' gaps in knowledge.
2. Set the *Secondary Ready* diagnostic through the Planner to identify whether students need to be set the, more accessible, *Essential Four Operations* and *Catch Up* diagnostics.
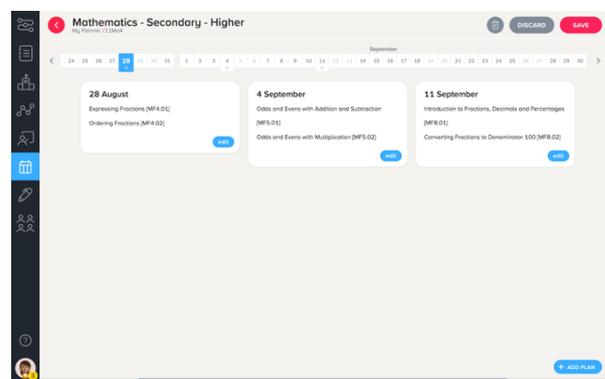
[The attached document provides a question breakdown of the above diagnostics in this course.](#)

Schemes of work

Setting Diagnostics (using the Planner)

CENTURY's Secondary - Higher Maths course has almost 1000 nuggets. Teachers may want to direct their students to appropriate areas of the course by using the Planner to set a diagnostic. This is especially relevant to students who are joining CENTURY later in KS3 or in KS4.

Once a particular diagnostic has been set, CENTURY will be able to make personalised suggestions on topics that are relevant to the work students will be doing in class.

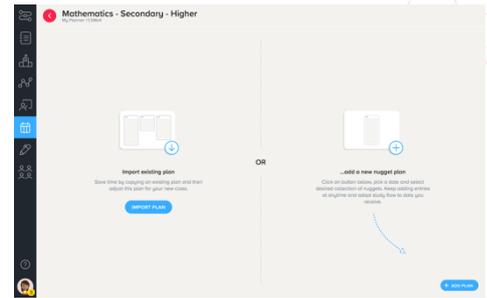[The attached document gives the question level breakdown of each diagnostic.](#)

Setting Nuggets (using the Planner)

Another way to ensure students are recommended nuggets on CENTURY which are relevant to their classwork is by setting individual nuggets. All of CENTURY's learning material is linked to pre-requisites and nuggets to extend their learning. When setting nuggets to align to a scheme of work we suggest setting no more than three nuggets at a time. This is because they take priority in the path. By setting no more than three nuggets, students can still access nuggets set by the recommendation engine.

For example, if students are set the nugget *Algebraic Fractions 1: Simplify [MH54.01]*, any mistakes will be recognised by the system. Students will then be recommended nuggets based on their gaps in knowledge, such as *Factorising 2 [MF18.08]*, *Multiplying Fractions 2 [MF4.24]*. Additionally, if a student completes a nugget and shows they have a good understanding, they will be recommended more complex nuggets within that topic to provide stretch and challenge.

CENTURY

Department-wide Consistency (using the Planner)
By appointing a CENTURY champion in your Mathematics department, you can ensure consistency throughout each year group. Using diagnostics and/or nuggets to map out the curriculum, these plans can then be imported by other teachers to their classes. This saves teacher time and ensures all students will be recommended CENTURY content related to your scheme of work.

Making the most of data

Class Admin to see Year Group Data / Set classes
As well as seeing the results of an individual class, HODs may view the data of a whole year group. Using Class Admin, it is possible to assign a course to an entire year group and then use the Teacher Dashboard to see results across the year. Be mindful if students are on different tiers of the secondary maths course as assigning the course to the year group will grant all students access.
Once students are in the appropriate year/course class, HODs may decide to use the Nugget tab within the Teacher Dashboard to see a question level analysis of each diagnostic or nugget. This information will inform any adaptations to schemes of work according to the prior knowledge of each year group.

Using Diagnostics to evidence progress
Diagnostics can be used at the beginning of a topic within a scheme of work to highlight to HODs/teachers any gaps in knowledge within the group.
This data can be exported to an Excel spreadsheet and used as a 'pre-test'. CENTURY will only set each diagnostic once to find gaps in knowledge, however the teacher has the ability to reset the diagnostic using the Planner.
Setting this diagnostic at the end of the topic acts as a 'post-test' and can again be exported from the Markbook to evidence progress.
Note: When exporting data from the 'post-test', it is important to use the time stamp on the markbook to ensure the data collected is from the students' second attempt.
In order to know which diagnostic is most appropriate for upper KS3 and KS4 learners, take a look at our Maths Diagnostic Mapping.

Interventions

Intervention Groups

Using Class Admin, intervention teachers or learning support assistants can create classes for intervention groups to analyse data and evidence progress using the Markbook.

Note: It is important to create intervention classes based on the course students are assigned. Also make sure to assign the relevant course to the class in order to view the data.

Flipped Learning

Setting nuggets for flipped learning allows teachers to focus on the most important areas of improvement for their class. Being able to gain an understanding of students' levels of knowledge of coordinates by setting a CENTURY nugget in advance will enable teachers to plan a tailored lesson on graphs without wasting valuable lesson time checking prior knowledge.

Assessment for Learning

Using nuggets for AfL tasks in class provides students with immediate feedback and teachers with instant data on their progress. These data insights enable targeted interventions, whilst the data dashboard highlights the precise areas students need help with.

CENTURY's recommendation engine will set completely personalised homework for each student and track their engagement and performance through the Teacher Dashboard.

CENTURY Mathematics Courses

When you subscribe to CENTURY, you have access to all our courses, which are listed below. Any new maths courses published in the future will also be automatically added to your accounts.

Primary Courses

Course	Appropriate for	Notes
Primary Mathematics - Year 3	Year 3 in line with National Curriculum	Contains pre-requisite nuggets from Year 2
Primary Mathematics - Year 4	Year 4 in line with National Curriculum	Contains pre-requisite nuggets from Year 3
Primary Mathematics - Year 5	Year 5 in line with National Curriculum	Contains pre-requisite nuggets from Year 4
Primary Mathematics - Year 6	Year 6 in line with National Curriculum	Contains pre-requisite nuggets from Year 5
Primary Mathematics - Arithmetic	Year 6 KS3 Students with low arithmetic skills.	Arithmetic Practice
Primary Mathematics - Multiplication Tables	Year 6 KS3 Students with low times tables knowledge.	Multiplication Tables Practice

11+ Courses

Course	Exam Board	Appropriate for	Notes
11+ Mathematics	GL and CEM	Students sitting the 11+	Content extends beyond KS2
11+ Non-Verbal Reasoning	GL and CEM	Students sitting the 11+ KS3 critical thinking	Contains problem solving questions which promote critical thinking.

Secondary Courses

Course	Exam Board	Appropriate for	Notes
Secondary - Foundation+	All	Year 7s joining the school	Foundation course with additional diagnostics and prerequisites to ensure new Year 7s are ready for secondary mathematics. Foundation data will move with the student if moved to the Higher course.
Secondary - Foundation	All	KS3 Students and KS4 students sitting the Foundation GCSE paper	Subset of Higher course. Foundation data will move with the student if moved to the Higher course.
Secondary - Higher	All	Any student expected to sit the Higher GCSE paper.	Course contains the full Foundation course. Foundation data will move with the student if moved to the Higher course.

Bridge to A-level	All	Students who are working at a level 7-9 and need to be challenged. Essential grounding for students moving onto A-Level maths.	Covers key basic content of A-Level maths course at GCSE level, includes some content beyond the GCSE syllabus (e.g. differentiation).
FE GCSE - Foundation	All		Adapted from Secondary - Foundation course. Fewer diagnostics (calculator & non-calculator)

IGCSE Courses

Courses	Exam Board	Notes
IGCSE (Edexcel) - Core	Edexcel	Subset of Extended course. Core data will move with the student if moved to the Extended course.
IGCSE (Edexcel) - Extended	Edexcel	Course contains the full Core course. Core data will move with the student if moved between Core/ Extended courses.
IGCSE (Cambridge) - Core	Cambridge	Subset of Extended course. Core data will move with the student if moved to the Extended course.
IGCSE (Cambridge) - Extended	Cambridge	Course contains the full Core course. Core data will move with the student if moved between Core/ Extended courses.

Functional Skills Courses

Course	Exam Board	Notes
Functional Skills - Entry Level 1	C&G, Edexcel, OCR	May be helpful in terms of terminology for EAL students.
Functional Skills - Entry Level 2	C&G, Edexcel, OCR	May be helpful in terms of terminology for EAL students.
Functional Skills - Entry Level 3	C&G, Edexcel, OCR	May be helpful in terms of terminology for EAL students.
Functional Skills - Level 1	C&G, AQA, Edexcel, OCR	
Functional Skills - Level 2	C&G, AQA, Edexcel, OCR	

Tips for maximising use of CENTURY

Fast track your students
Students with a good mathematical understanding will quickly progress to the areas of the course that will challenge them. If you want to speed up this process, the attached document gives the question level breakdown of each diagnostic. Set the diagnostic(s) that align to the topics your students are working on. This allows CENTURY to make personalised suggestions on topics that are relevant to the work students will be doing in class.
Setting individual nuggets through the Planner that are aligned to your scheme of work enables CENTURY to make recommendations linked to the precise nuggets you choose. CENTURY will react to fill any gaps in prerequisite knowledge and stretch learners that already have a good understanding. Departments using this approach should aim to set around 3 nuggets per week as a maximum.

Data Insights for entire cohorts [*]
Using Class Admin to create a course class enables data insights across the year group and allows work to be set en masse for an entire cohort of learners. Using the tools in the Teacher Dashboard can provide detailed insights into engagement, attainment and specific areas of strength and weakness for an entire cohort.

Evidencing progress [†]
Student data can be time stamped and exported to Excel from the Teacher Dashboard Markbook. Setting diagnostics as an initial assessment and then as progress checks throughout the year can help highlight the progress students have made.

Interventions [‡]
Using class admin to create intervention groups equips teachers with all the tools to focus on key cohorts of learners of any size.

Using CENTURY for interventions
- Setting nuggets for flipped learning allows teachers to focus on the most important areas that they need to teach their class.
- Using nuggets for AfL tasks in class provides teachers with instant data.
- CENTURY's recommendation engine will set completely personalised homework for each student and track their engagement and performance through the Teacher Dashboard.

The data insights generated through the dashboard enable targeted intervention, highlighting the precise areas students need help with.

[*] *Create classes based on the course students are assigned. E.g. foundation tier learners in a foundation tier class, higher tier learners in a higher tier class.*
[†] *The Markbook shows the students' most recent attempts. See attempts at any point in time by time stamping the markbook.*
[‡] *Create intervention groups based on the course students are assigned.*