



GCSE Outcomes: An Impact Analysis

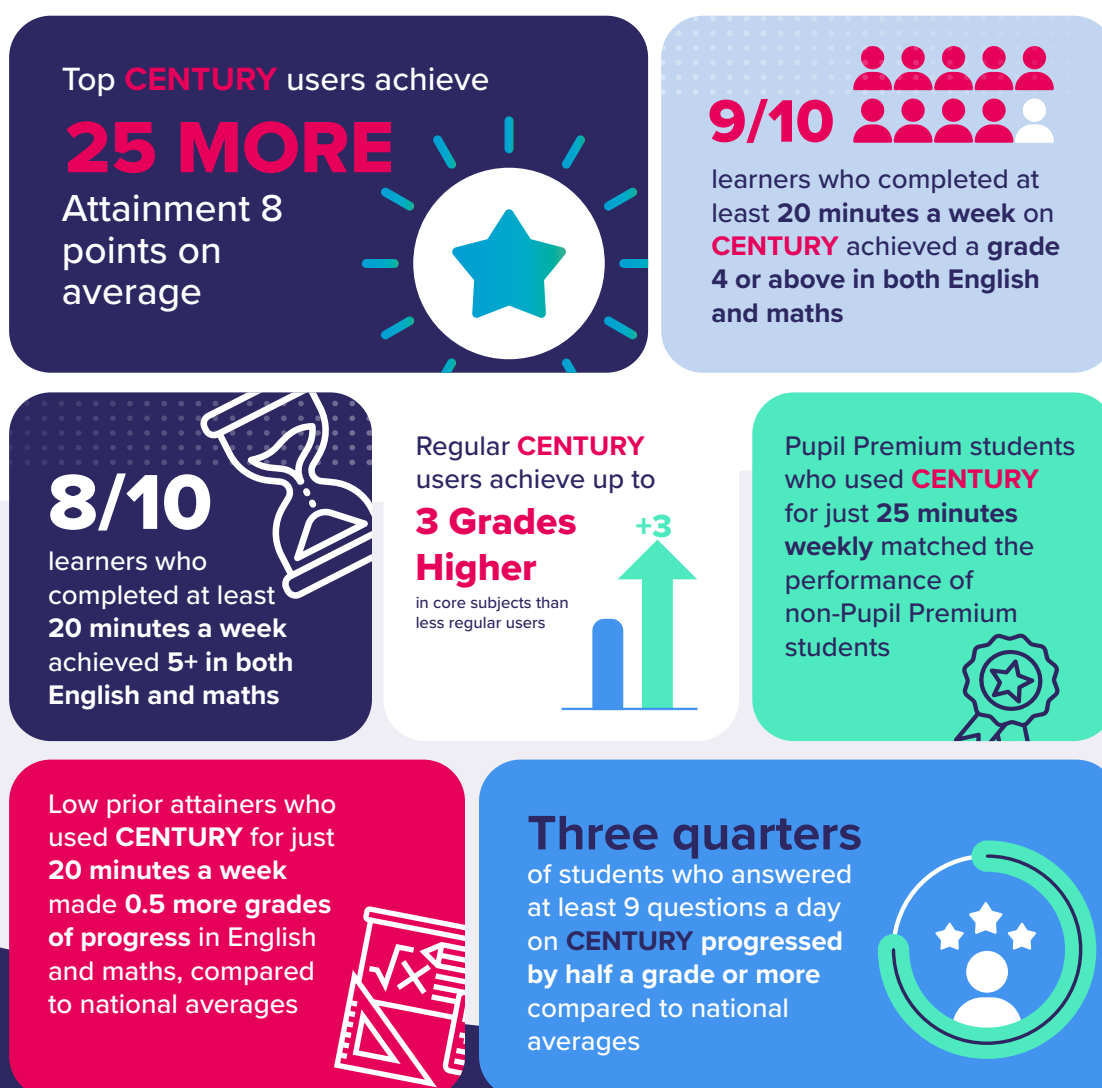


**Brighton Hill
Community
School**
Making success inevitable

CENTURY creates constantly adapting personalised learning paths for every student, whilst providing teachers with real-time data insights to make effective and targeted interventions. The platform is used by schools for homework, classwork and revision to help reduce teacher workload and improve student learning.

This report focuses on CENTURY's impact in the secondary classroom by analysing the GCSE results of a Brighton Hill Community School in England that uses the platform in core subjects in Years 7 to 11.

The analysis shows a strong correlation between regular platform use and improved academic outcomes:



“As a school, we’ve relied on CENTURY for over five years now, and we’ve genuinely seen the difference it makes to our students’ GCSE results, as demonstrated in the data analysis. It’s become a core part of how we approach teaching and learning”

DAVID WATKINS, DEPUTY HEAD, BRIGHTON HILL

Impact on Overall Attainment

Top CENTURY users achieve 25 more Attainment 8 points on average

CENTURY usage¹ was compared with Attainment 8 scores. **The most regular CENTURY users achieved, on average, 25 points higher than the least regular users.**

The bar chart also shows the national average for Attainment 8². **The most regular CENTURY users exceeded the national average by more than 14 points.**

Further analysis showed that a large part of the Attainment 8 increase was due to the **average grade across English, maths and science subjects being 2.35 grades higher for the most regular users than the least regular users.**

FIGURE ONE

Attainment 8 scores for those studying on CENTURY, compared to the national average of 45.9



¹ See Appendix 2 for definition of usage groups

² [Explore Education Statistics](#)

Impact on Attainment in both English and Maths at Grades 4+ and 5+

9 out of 10 learners who studied at least 20 minutes a week on average achieved a grade 4 or above in both English and maths.

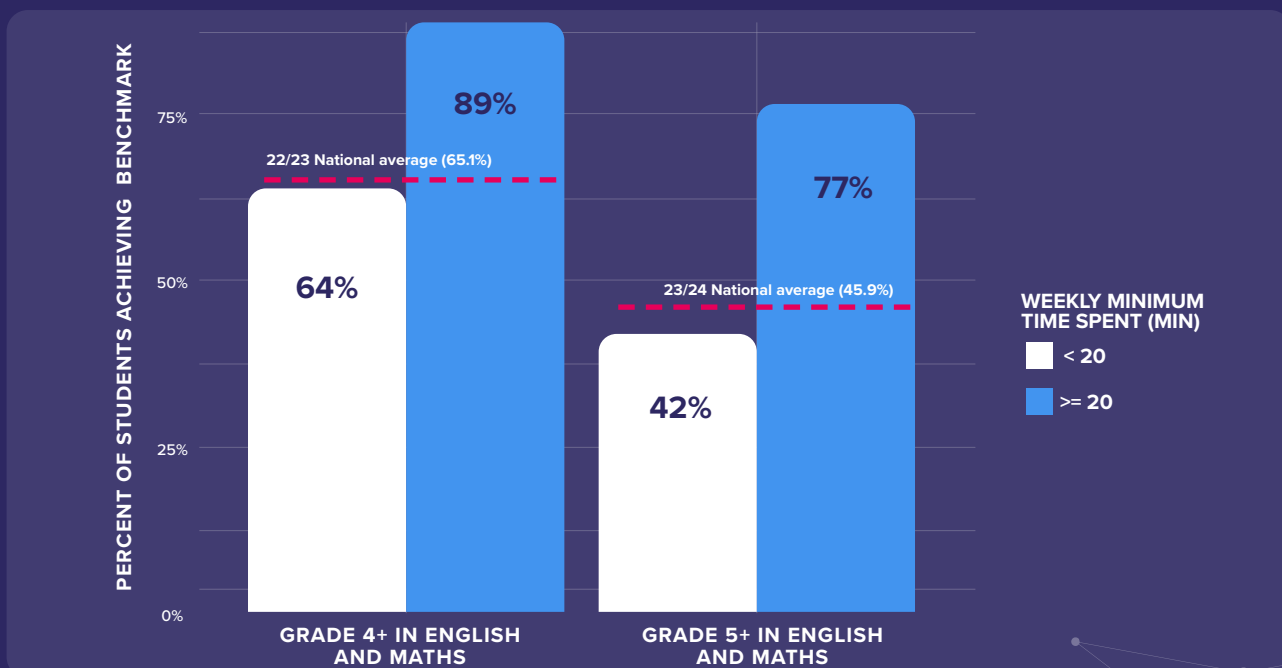
8 out of 10 learners who studied at least 20 minutes a week on average achieved 5+ in both English and maths

The time spent studying English or maths on CENTURY was compared to the percentage of students achieving a grade 4 or above in both English and maths, and achieving a grade 5 or above in both English³ and maths. **89% of students who studied for at least 20 minutes per week on average achieved at least a grade 4 in both subjects, and 77% achieved at least a grade 5 in both subjects.**

Also shown on the bar chart are the national averages for achieving at least a grade 4 and at least a grade 5 in English and maths. **Students who studied on CENTURY for more than 20 minutes a week on average significantly exceeded the national average rate for both 4+ and 5+ in English and maths.**

FIGURE TWO

Proportion of students (%) who studied on CENTURY in different usage categories who secured a grade 4 or above or a grade 5 or above in GCSE English and maths, against national averages of 65.1% and 45.9% respectively



³ See Appendix 2 for information on how English GCSEs were analysed

Impact on Attainment in Individual Core Subjects

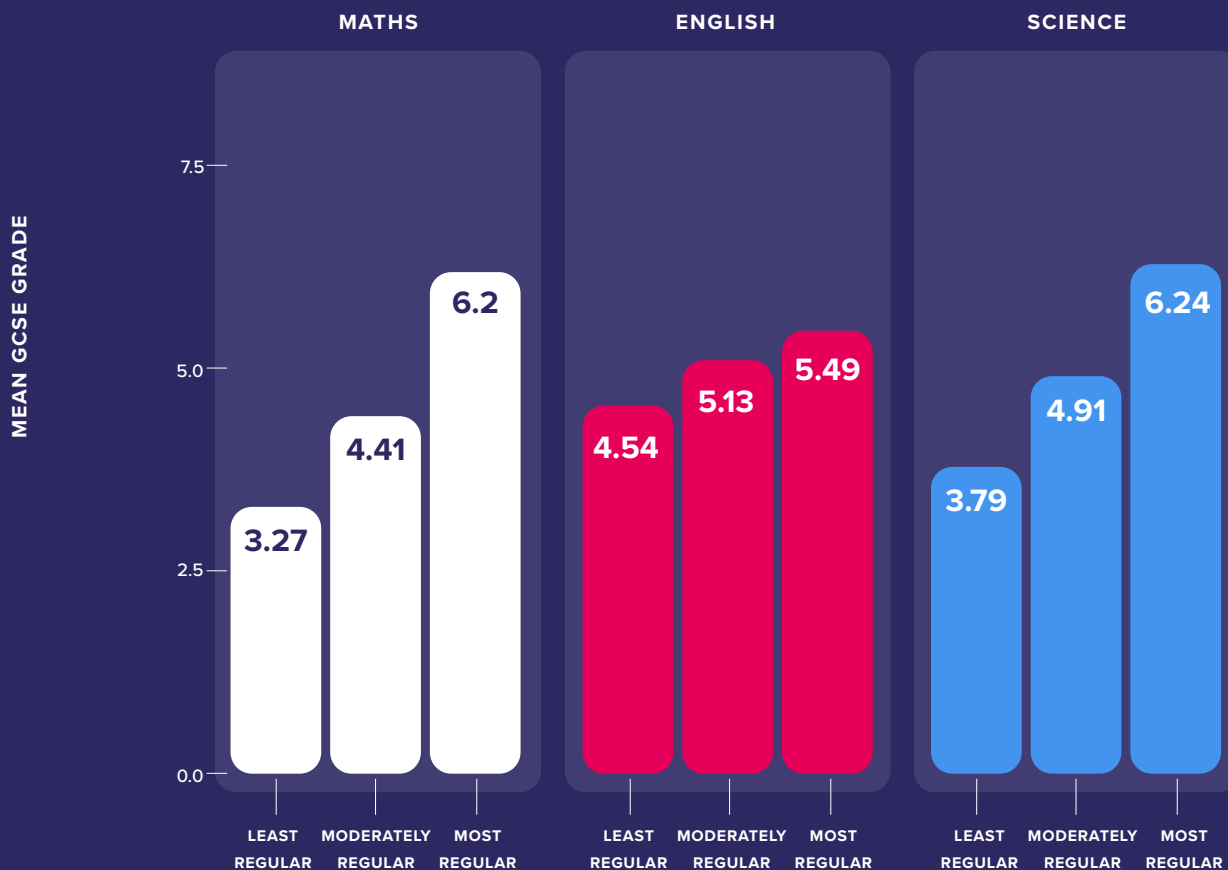
Regular CENTURY users achieve up to 3 grades higher in core subjects

CENTURY usage⁴ was compared with the mean GCSE grades achieved in English, maths and science.

The most regular users on CENTURY achieved, on average, 1 GCSE grade higher in English, 2.5 grades higher in science and 3 grades higher in maths than the least regular users.

FIGURE THREE

Mean GCSE grades for maths, English and science by usage category



⁴ See Appendix 2 for definition of usage groups

Impact on Attainment for Pupil Premium Students

Pupil Premium students who used CENTURY for just 25 minutes weekly matched the performance of non-Pupil Premium students

Outcomes for consistently using Pupil Premium students were compared to that of all non-Pupil Premium students. **Pupil Premium students who studied on CENTURY for at least 25 minutes on average per week did as well as non-Pupil Premium students,** showing the power of CENTURY to help to bridge the attainment gap.

FIGURE FOUR

Attainment scores and GCSE grades for Pupil Premium and Non-Pupil Premium students by usage category



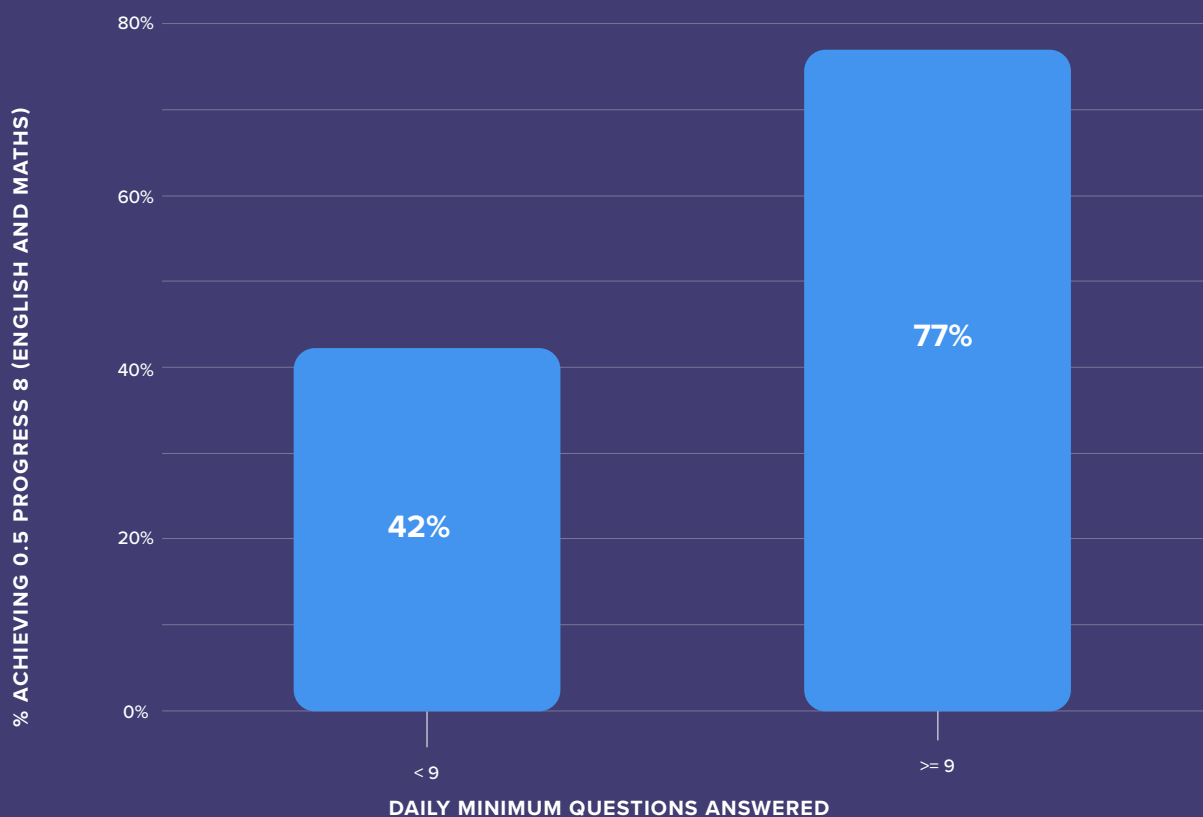
Impact on Overall Progress

Three quarters of students who answered at least 9 questions a day⁵ on average achieved at least a Progress 8 score of 0.5 across English and maths

CENTURY usage was compared with Progress 8 scores in English and maths⁶. **77% of regular users, answering 9 questions or more each day on average, achieved at least a P8 of 0.5.**

FIGURE FIVE

Proportion of students achieving a P8 score of at least 0.5 in English and maths compared to daily questions answered



⁵ Each micro-lesson or 'nugget' on CENTURY contains learning material in the form of slides and videos as well as between 6 and 10 formative assessment questions. 9 questions equates to roughly one nugget.

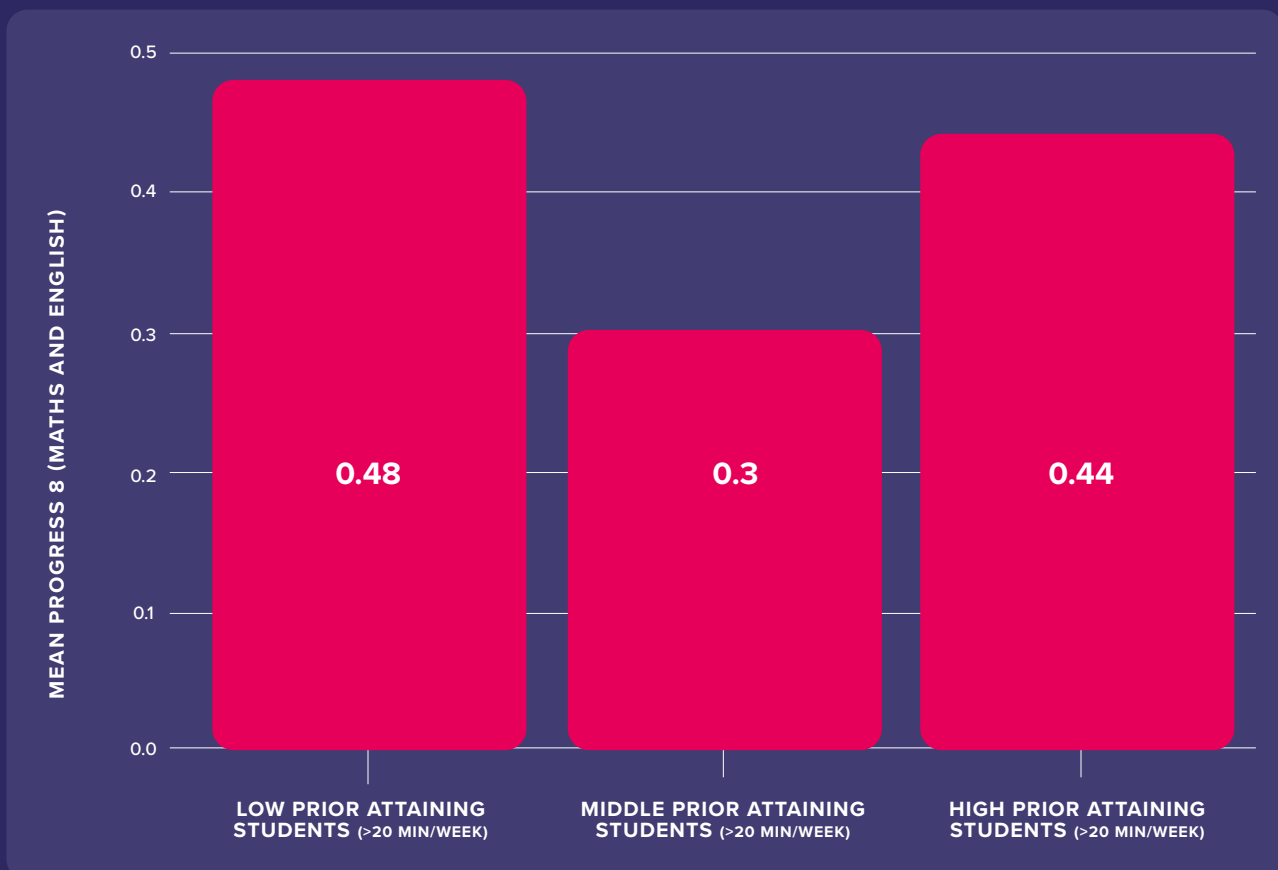
⁶ See appendix 2 for progress calculations

All prior attainment groups who used CENTURY for just 20 minutes a week on average achieved a positive mean Progress 8 score across English and maths

To see how CENTURY usage impacts students at different prior attainment levels⁷ the analysis compared outcomes of consistently using students for the three groups. **Regardless of the prior attainment of a student, studying on CENTURY for at least 20 minutes a week resulted in a P8 score across English and maths of at least 0.3.**

FIGURE SIX

Average progress in English and maths for different prior attainment groups



⁷ Low prior attainers are defined as those whose average Key Stage 2 scaled scores for reading, writing and maths assessments were below 100; middle prior attainers are those whose average scaled score was between 100 and 109, and high prior attainers are those whose average scaled score was 110 or above

Case Study

Our Experience with CENTURY at Brighton Hill

As a school, we've relied on CENTURY for over five years now, and we've genuinely seen the difference it makes to our students' GCSE results, as demonstrated in the data analysis. It's become a core part of how we approach teaching and learning.

For us, it's been a game-changer in terms of managing homework. CENTURY pulls together home learning across the core subjects, and the automated marking and central setting of content means we're spending less time on admin. This frees us up to do what we do best: really focus on individual students, identify where they're struggling, and provide targeted support.

Beyond the practicalities, CENTURY really helps our students get more involved in their own learning. Its personalised pathways, which adjust to each student's strengths and areas for development, mean they're getting content that's just right for them. This helps them grasp tricky topics and encourages them to take charge of their revision. We've seen students make significant progress, and the data in our reports backs that up. Ultimately, CENTURY is a valuable tool in helping our students achieve better exam outcomes and setting them up for future academic success.

David Watkins, Deputy Head Teacher

Using CENTURY in science teaching

The Science team at Brighton Hill uses CENTURY to support home learning. We set nuggets that help students with pre-learning as well as to assess their understanding of key concepts.

Since using CENTURY, our students have become more aware of their strengths and areas for development in topics, and they can use this information proactively to guide their revision.

One of our students, Nishad, was meticulous in his use of CENTURY - he completed every nugget to 100% for 5 years. He would ensure if he didn't get 100% on his first try, he would read over the information and use his notes to ensure he fully understood before attempting the nugget again. He went on to achieve straight 9s. He's now studying Medicine at the Brighton and Sussex Medical School.

Stuart McCulley, Head of Science Faculty

APPENDIX 1

School Context

Brighton Hill Community School (known locally as BHCS) is a coeducational non-selective secondary school located in Brighton Hill, Basingstoke, in Hampshire, South East England.

Pupil population in 2023/2024⁸:

	SCHOOL	ENGLAND – MAINSTREAM SECONDARY SCHOOLS
TOTAL NUMBER OF PUPILS ON ROLL (ALL AGES)	1271	3,669,933
GIRLS ON ROLL	47.1%	49.7%
BOYS ON ROLL	52.9%	50.3%
PUPILS WITH AN SEN EDUCATION, HEALTH AND CARE PLAN	3.7%	2.7%
PUPILS WITH SEN SUPPORT	11.2%	12.9%
PUPILS WHOSE FIRST LANGUAGE IS NOT ENGLISH	6.9%	18.6%
PUPILS ELIGIBLE FOR FREE SCHOOL MEALS AT ANY TIME DURING THE PAST 6 YEARS	17.9%	27.3%

⁸ [Compare school and college performance in England](#)

APPENDIX 2

Methodology

Subject groupings

For the English analysis, the highest grade between English Literature and English Language was used.

For science, learners could sit double or triple science and an average grade was calculated from the two or three results. As two pupils did not have grades available for any science qualification, they were excluded from the science-specific figures.

Definitions

Usage categories

The usage category variable is determined by the percent of term weeks studied** in a given cohort. Usage in English, maths and science was variable across the school, thus different usage categories were used in different subjects. The specific boundaries of these categories varied depending on the cohort being analysed, and they were dynamically calculated based on the distribution of usage within that group. This was done using a method that ensured each category contains approximately the same number of users.

	LEAST REGULAR USERS	MODERATELY REGULAR USERS	MOST REGULAR USERS
ENGLISH ANALYSIS	$\leq 12\%$ weeks studied	$12\% < \text{weeks} \leq 21\%$	$> 21\%$ weeks studied
MATHS ANALYSIS	$\leq 26\%$ weeks studied	$26\% < \text{weeks} \leq 40\%$	$> 40\%$ weeks studied
SCIENCE ANALYSIS	$\leq 49\%$ weeks studied	$49\% < \text{weeks} \leq 70\%$	$> 70\%$ weeks studied
OVERALL ANALYSIS	$\leq 58\%$ weeks studied	$58\% < \text{weeks} \leq 78\%$	$> 78\%$ weeks studied

Estimated number of term weeks: We estimated that each academic year consisted of 39 active term weeks (there were five academic years analysed).

****Percent of term weeks studied** is the number of weeks studied on CENTURY per estimated number of term weeks.

*****Weekly minimum time spent** is the number of minutes spent on CENTURY per estimated number of term weeks.

******Daily minimum questions answered** is the number of questions answered per number of estimated term days (number of estimated term weeks multiplied by 7).

Progress Measures

The school provided the scaled scores for 215 students in either their KS2 GPVS, KS2 Reading, KS2 Mathematics exams, or in all three.

We used the national benchmark dataset⁹ to estimate each student's expected GCSE grade in each subject. This was done by calculating the average GCSE grades of students with similar KS2 scores in that subject. We then calculated the progress variable by subtracting the expected grade from the actual grade.

⁹National benchmark dataset

Additional Data Tables and Statistical Tests

For the analysis of group differences, appropriate statistical tests were chosen based on the nature of the data and the research question.

Top CENTURY users achieve 25 more Attainment 8 points on average

An ANOVA test revealed a significant difference in average grades ($F(2, 697) = 106.1, p < .001$) and Attainment 8 scores ($F(2, 697) = 143.7, p < .001$) across usage categories.

USAGE CATEGORY	NUMBER OF STUDENTS	MEAN GCSE GRADE	MEAN ATTAINMENT 8 POINTS
LEAST REGULAR	66	3.81	35.08
MODERATELY REGULAR	93	4.76	45.89
MOST REGULAR	75	6.16	60.29

9 out of 10 learners who completed at least an average of 20 minutes a week on CENTURY achieved a grade 4 or above in both English and maths, and 8 out of 10 learners who completed at least an average of 20 minutes a week achieved 5+ in both English and maths

A chi-squared test revealed a significant difference between students who studied 20+ minutes per week and those who studied less than 20 minutes, in the proportion achieving a grade 4 or higher in both subjects ($\chi^2(1) = 10.60, p = .001$).

A chi-squared test also revealed a significant difference between students who studied 20+ minutes per week and those who studied less than 20 minutes, in the proportion achieving a grade 5 or higher in both subjects ($\chi^2(1) = 19.12, p < .001$).

WEEKLY MINIMUM TIME SPENT (MIN)***	NUMBER OF STUDENTS	% ACHIEVING GRADE 4+	% ACHIEVING GRADE 5+
<20	181	64	42
<=20	53	89	77

Regular CENTURY users achieve up to 3 grades higher in core subjects

ANOVA revealed:

- a significant difference in average Maths grades ($F(2, 231) = 58.05$, $p < .001$) across usage categories
- a significant difference in average English grades ($F(2, 231) = 6.03$, $p = .0028$) across usage categories
- -a significant difference in average Science grades ($F(2, 229) = 34.98$, $p < .001$) across usage categories.

USAGE CATEGORY	MATHEMATICS		ENGLISH		SCIENCE	
	NUMBER OF STUDENTS	MEAN GCSE GRADE	NUMBER OF STUDENTS	MEAN GCSE GRADE	NUMBER OF STUDENTS	MEAN GCSE GRADE
LEAST REGULAR	52	3.27	112	4.54	62	3.79
MODERATELY REGULAR	90	4.41	79	5.13	91	4.91
MOST REGULAR	92	6.2	43	5.49	79	6.24

Pupil Premium students who used CENTURY for just 25 minutes weekly matched the performance of non-Pupil Premium students

A Welch Two-Sample t-test showed no significant difference in average grades between Pupil Premium students who studied for 25+ minutes a week and non-Pupil Premium students ($t(52.85) = 0.079$, $p = 0.937$), with both groups having similar mean grades (5.14 vs. 5.12).

It also showed no significant difference in average Attainment 8 scores between Pupil Premium students who studied for 25+ minutes a week and non-Pupil Premium students ($t(51.91) = 0.25$, $p = 0.802$), with both groups having similar mean scores (49.55 vs. 49.00).

CATEGORY	NUMBER OF STUDENTS	MEAN GCSE GRADE	MEAN ATTAINMENT 8 POINTS
PUPIL PREMIUM STUDENTS (<small>>25 MIN/WEEK</small>)	14	5.12	49.00
NON-PUPIL PREMIUM STUDENTS (<small>ANY AMOUNT OF WEEKLY USAGE</small>)	196	5.14	49.55

Three quarters of students who answered at least 9 questions a day on average achieved at least a Progress 8 score of 0.5 across English and maths

A chi-squared test revealed a significant difference between students who answered 9+ questions per day on average and those who answered less than 9 questions a day, in the proportion achieving an average grade progress of 0.5 ($\chi^2(1) = 10.99$, $p = .0009$) usage categories.

DAILY MINIMUM QUESTIONS ANSWERED****	TOTAL NUMBER OF STUDENTS	% ACHIEVING 0.5+ AVG GRADE PROGRESS
< 9	185	42
>=9	30	77

All prior attainment groups who used CENTURY for just 20 minutes a week on average achieved a positive mean Progress 8 score across English and maths

CATEGORY	NUMBER OF STUDENTS	MEAN PROGRESS 8 (MATHS AND ENGLISH)
LOW PRIOR ATTAINING STUDENTS (>20 MIN/WEEK)	20	0.48
MIDDLE PRIOR ATTAINING STUDENTS (>20 MIN/WEEK)	69	0.30
HIGH PRIOR ATTAINING STUDENTS (>20 MIN/WEEK)	52	0.44



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