

UNIVERSITY OF
LIVERPOOL
MATHS SCHOOL
EDUCATION FOR 16-19 YEAR OLDS

Headteacher's Report to Trustees' Education Committee

20th May 2021

Attendance

Student attendance by week from 30th August 20 - 5th May 21 (%)

T1W1	98.61	T1W10	93.56	T2W1	100	T2W10	93.90
T1W2	96.48	T1W11	93.51	T2W2	90.74	T2W11	94.84
T1W3	98.81	T1W12	93.68	T2W3	100		
T1W4	96.63	T1W13	93.46	T2W4	100		
T1W5	94.53	T1W14	86.97	T2W5	100	T3W1	94.96
T1W6	97.12	T1W15	95	T2W6	95.71	T3W2	93.24
T1W7	94.3			T2W7	100	T3W3	89.98
T1W8	98.7			T2W8	100	T3W4	90.32
T1W9	90.73			T2W9	92.81		
	Average T1	95.13	Average T2	97.09	Average T3	91.68	

Average attendance for the year to date: 93.23%

Behaviour

There have been no behaviour incidents so far this academic year other than occasional lateness or failure to complete homework properly.

We have had no reports of bullying.

Progress and attainment

Mathematics

All students have now completed the entirety of the A level Mathematics curriculum, along with much of the AS pure maths content from Further Maths. Having focused on the applied mathematics content for the last few months, students are now revising for their mock examinations and revisiting pure maths content covered during lockdown, both in supervisions and by seeing teachers in their free time. There has been a notable change in the student body which was clearly evident during the teacher recruitment process in April, with our students confident to tackle the problems presented to them, conversing impressively with the candidates, and challenging them with well thought out insights into the topics being discussed. In the Christmas mock examinations, which were based entirely on pure AS content, 92.5% of students (25/27) were working at grades A*-B and the aim is to at least maintain this during their full mock examinations. Students will then receive detailed feedback and have almost a year before they sit their full examinations, with the hope being that all achieve a grade A or A* in A level Mathematics. Year 13 lessons will focus upon the Further Maths content and we are confident that devoting this amount of time to the course will make it much more accessible to our students and allow them to make excellent progress with it.

Physics

All students have completed by now the full AS Physics curriculum. We have revisited the topics they learnt over lockdown, giving them the opportunity to do the practicals allocated to each topic (compulsory practicals included). We've worked hard to reinforce the practical criteria the board expects and we have the data used as evidence up to date, in case we get an advisory visit from AQA.

Up to the end of the year we plan on doing both revision to the mocks, and start the part of the A2 curriculum on Further Mechanics.

In terms of attainment, we have 61% are consistently working at A*-B . With the work we are doing both on revision and on improvement of exam technique, I would expect this number to improve after the mocks we're doing in Summer.

Computer Science

All Students have now completed the AS content for OCR Computer Science. Students have self appraised their confidence in topics taught and this data is being used to tailor our revision sessions which have commenced shortly after the Easter break. Students' confidence on topics has improved from formative assessment during revision sessions and summative assessments on past exam questions. In terms of attainment we have 78% consistently working at A*-A, 89% consistently working at A*-B, and the remaining 11% at grade C.

In addition to revision computer science sessions, one session per week has been utilised for launching the computer science programming project which is worth 20% of their A-level. To ensure good analysis and planning of the project strict deadlines have been set for the summer term for submission of their project initiation document and then the high level plan and analysis.

Staff Welfare

No further COVID infections or significant wellbeing concerns to report. We're all very relieved to be back at work in the SAP and in a normal routine, and looking forward to having a staff social event at some point this term.

Safeguarding

- Safeguarding 175 Audit completed. Thanks to staff as well as John Thompson and Gavin Brown for their inputs to submit this completed.
- RSE now has Sex Education being delivered after consultation with trustees, staff, students and parents. Themes like staying safe, sexual harassment, street harassment, rape, online safety have been covered, all linked and delivered using current news as needed to keep students informed.

Return from Remote Learning

Supervisions

We introduced small group teaching during the online learning period in Jan/ Feb and then responded to positive student feedback by maintaining small group sessions in the timetable. The school timetable now has this structure. This is not sustainable in the long term; but we have some ideas around that.

- Lessons are in groups of 13/15
- Supervisions are in groups of 5 or 6
- Every student has a 1-1 with their tutor over the course of a fortnight

	Monday	Tuesday	Wednesday	Thursday	Friday
09:30 - 10:25	Teacher CPD	Lesson 1	Lesson 1	Lesson 1	Lesson 1
10:25 - 11:20	Lesson 2				
11:20 - 11:35	Break				
11:35 - 12:05	Tutor time	Supervision	Supervision	Supervision	Supervision
12:05 - 13:00	Lesson 3				
13:00 - 14:00	Lunch				
14:00 - 14:55	Lesson 4				
14:55 - 15:25	Supervision	One to one	Supervision	One to one	Sport
15:25 - 15:35	Break				
15:35 - 16:30	Lesson 5	Lesson 5	Lesson 5	Lesson 5	

Homework

We are currently conducting the first of our school self evaluation action research projects (see Appendix 1) focused on homework and feedback. All students have been invited to complete a survey on homework and feedback, and we followed up with a focus group discussion with four students. The next stage is a staff discussion and an agreed adjustment to our approach. Homework is a strategic priority because there is currently a variety of student and staff behaviour in this area and we're trying to establish an approach which is both highly effective and efficient for students and staff.

Revision for exams

Students are currently preparing for June school exams and we have provided further guidance about effective revision approaches, self assessment to guide study strategies and also reduced the homework being set to allow more discretionary study time for exam preparation. Students have responded positively to this (see Homework and Feedback Survey; Appendix 2). Following the detailed feedback students were given for their December exams we have seen a marked improvement in students making evidence-informed choices about effective exam preparation, which should result in improved performance.

Parental Feedback

We have not requested feedback from parents since the last report. No complaints have been received.

Student Feedback

Please see [Appendix 2](#) below.

Appendix 1: White Paper on School Self Evaluation

Self Evaluation: How are we performing? A research-based approach

Are students learning the curriculum, doing well in assessments and heading for good exam results?

Are students developing the ability to study effectively without close teacher supervision? Are they organising their notes, managing their time well and adopting efficient strategies?

Are students developing well as mathematical and scientific thinkers? How can we compare this to students in a “typical” school? (Could we ask teachers from other schools to compare their students to ours?)

What do students think about how they are taught?

What do students think about the way their learning is assessed and the feedback they get on their work?

Do they feel like their hard work is rewarded, and do they feel like we will care if they do not do the work we set?

Do students feel like their form tutor cares about them and their personal development?

Do students see their teachers as academic authorities who encourage them to behave “academically” - i.e. we’re not just founts of knowledge but role models in learning ?

How can we answer these questions?

Rather than a generic series of lesson observations I’m thinking about a research based approach on a theme. We pick a question like one of those above and then arrange:

- 1) A survey and or a focus group of students (and parents? staff? trustees?) to gather some initial hypotheses
- 2) Devise a plan of observations/ work scrutiny/ interviews/ other things to gather evidence
- 3) A meeting of leadership/ staff (?no more than 3 staff - not everyone in one go) to review the evidence and put together a brief report for trustees, and identify suitable responses to develop the school’s effectiveness further (ideally linked to evidence based research and CPD).
- 4) A meeting/ series of CPD events of all staff to brief them on the findings and respond to the CPD needs
- 5) We do one of these every half term, so 6 in a year, and they link to the school development plan. We plan a year in advance what the lines of enquiry will be.

Each mini research project may be coordinated/ led by a different member of the school’s Leadership Team. The Headteacher and Assistant Headteacher will play a central role in all the projects.

Each project will be sponsored by a trustee, who will present the findings to a Board or Committee meeting.

<p>2021 May</p> <p>Led by Assistant Head</p> <p>Linked trustee from Education Committee</p>	<p>Are students completing homework reliably? Homework and marking - is the approach consistent and effective?</p> <p>How do we expect staff to keep records of marking? Are they doing that? Are there differences between different subject teams?</p> <p>How are students submitting homework? Is the Google Classroom/ OneNote Class Notebook thing working for students and staff?</p> <p>Are students rewarded and held to account? What CPD is needed?</p>
<p>2021 June</p> <p>Led by Head</p>	<p>Pastoral care and the form tutor system: is the approach consistent?</p> <p>What should we change for next year?</p>

Linked trustee from Education Committee	<p>What CPD is needed?</p> <p>Are there differences between the experiences of students in different tutor groups or students with different needs?</p> <p>How are students with SEN or SEMH needs accommodated? Is this fit for purpose?</p>
2021 October	Review of Year 1: the student experience and how well we have met our Educational Plan so far.
2021 November	Quality of teaching in the classroom. What is the ULMaS approach? What could be better?
2022 January	Student learning behaviour: how effective is it?
2022 March	The UCAS and careers advice process: what was the first cohort's experience - is there anything we could improve?
2022 May	Student experience: super-curricular activity and the sense of belonging: does it feel special to be an ULMaS student?
2022 June	Academic performance: are our students excelling academically?

Each research project will follow this format:

Stage 1: Planning	Likely to be 1 meeting of 1 hour
Who is leading this project? Who is the trustee sponsor? What are the questions in this area? What evidence might we need to satisfy our trustees? What evidence might we need to satisfy Ofsted? Who are we going to talk to (suitable representative sample? / everyone? / students / parents / staff / stakeholders)	
Stage 2: initial exploration	Likely to be 1 meeting of 1 hour
Establish a focus group meeting of students and/ or stakeholders. Explore the questions set out in stage 1 (e.g. “is our teaching consistently requiring students to think carefully and articulate their reasoning?”) Conduct the meeting and then review with DMH, DSH. Establish the research hypotheses (e.g. “lessons often require students to think, but don’t often require students to explicitly articulate their reasoning”) and draw up a simple plan of lesson observations, work scrutiny, surveys, further student meetings etc.	
Stage 3: gather valid evidence as efficiently as possible	1 week and likely to include a survey, several learning walks spread across the week and 6-10 longer lesson observations (e.g. 25 minutes each)
Conduct the observations, surveys, meetings within 1 week and collate the evidence	
Stage 4: analyse and interpret	Likely to be 1 meeting of 1 hour
Stage 5: write up report	Should take no longer than 1 hour
Stage 6: present to trustees	

Planning for **Homework and Feedback Study** May, 2021

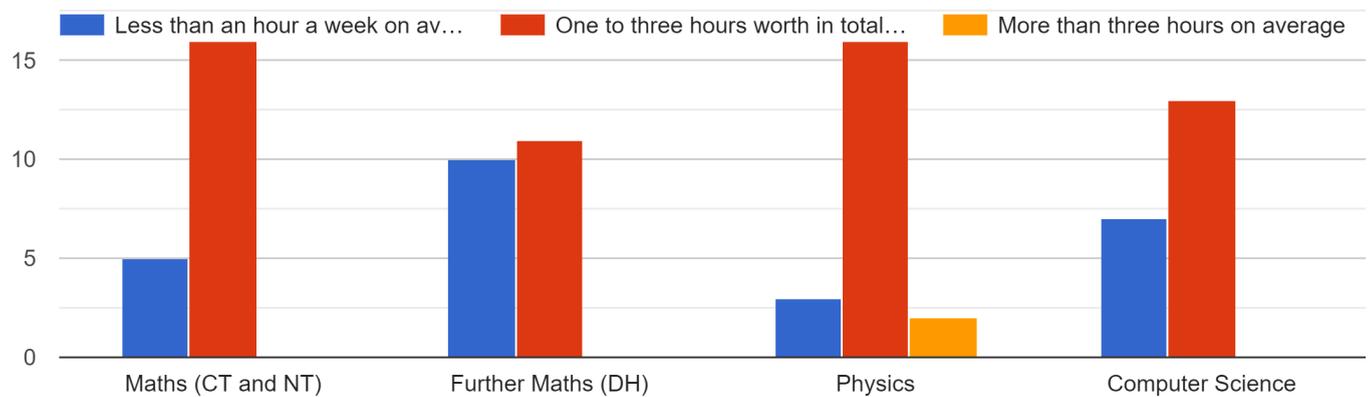
<p>Stage 1: Planning</p>	<p>Planning meeting Weds 5th May</p>
<p>Who is leading this project? Who is the link trustee/ sponsor?</p> <p>Who are we going to talk to (suitable representative sample? / everyone? / students / parents / staff / stakeholders)</p>	<p>Dave</p>
<p>What are the questions in this area? Brainstorm all possible questions</p>	<ul style="list-style-type: none"> ● Are students completing homework reliably? ● Homework and marking - is the approach consistent and effective? ● How do we expect staff to keep records of marking? Are they doing that? Are there differences between different subject teams? ● How are students submitting homework? Is the Google Classroom/ OneNote Class Notebook thing working for students and staff? ● Are students rewarded and held to account? ● How do students perceive homework and its value ● What CPD is needed?
<p>Evidence we might collect</p> <p>What evidence might we need to satisfy our trustees? What evidence might we need to satisfy Ofsted?</p>	<p>Student voice - initial survey and then focus group discussion which is recorded/ voice-typed.</p> <p>Student work & organisation methods (OneNote, paper etc.) - anonymous photographs/ screen shots of typical/ good/ poorer examples?</p> <p>Mark books/ records - discuss with staff, make anonymous notes.</p>
<p>Stage 2: initial exploration</p>	<p>A brief survey and a focus group meeting of no more than 1 hour with 6 students or fewer</p>
<p>Brief survey to all students and teachers. Establish a focus group meeting of students and/ or stakeholders, sampled to represent different views from the survey. Explore the questions set out in stage 1 above. Conduct the meeting and then review with DMH, DSH. Establish the research hypotheses (e.g. “lessons often require students to think, but don’t often require students to explicitly articulate their reasoning”) and draw up a simple plan of lesson observations, work scrutiny, surveys, further</p>	<p>Survey complete by Friday 7th May Focus group meeting to take place 12th May 1.30-2pm</p>

student meetings etc.	
Stage 3: gather valid evidence as efficiently as possible	<p>W/C 17th May Head and Assistant Head</p> <p>Pull a sample of students out of lessons and look at their homework and assessments in all 3 subjects. Estimate the proportion of students who are completing everything they should, which are not doing what they should etc.</p> <p>Learning walks to find out what feedback students are getting during lessons.</p>
Stage 4: analyse and interpret; present info back to teachers/ staff	<p>24th May Staff Meeting Likely to be a Monday morning meeting of 1 hour Review findings; link trustee can be invited but may not be able to attend. Agree policy/ protocol changes Agree CPD / monitoring plan Agree review of Homework and Feedback for 6 months time to see if we have successfully improved our approach.</p>
Stage 5: write up report	Should take no longer than 1 hour during week commencing 24th May.
Stage 6: present to trustees	Education committee meeting 20 May - could see findings from the survey and focus group.

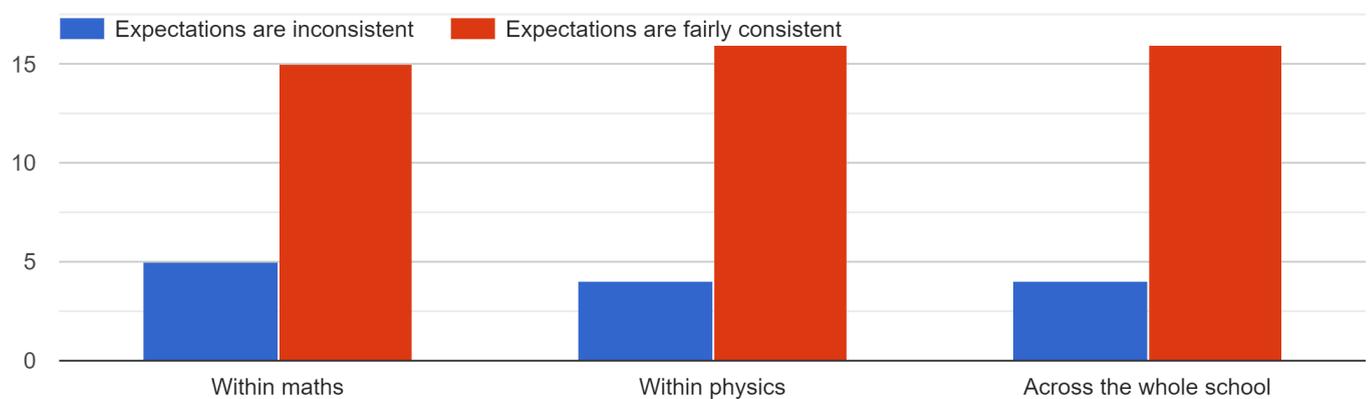
Appendix 2: Homework and Feedback Student Survey and Discussion

Students were recently (w/c 3/5/21) surveyed as part of our action research project on Homework, Marking and Feedback. Here are the initial results.

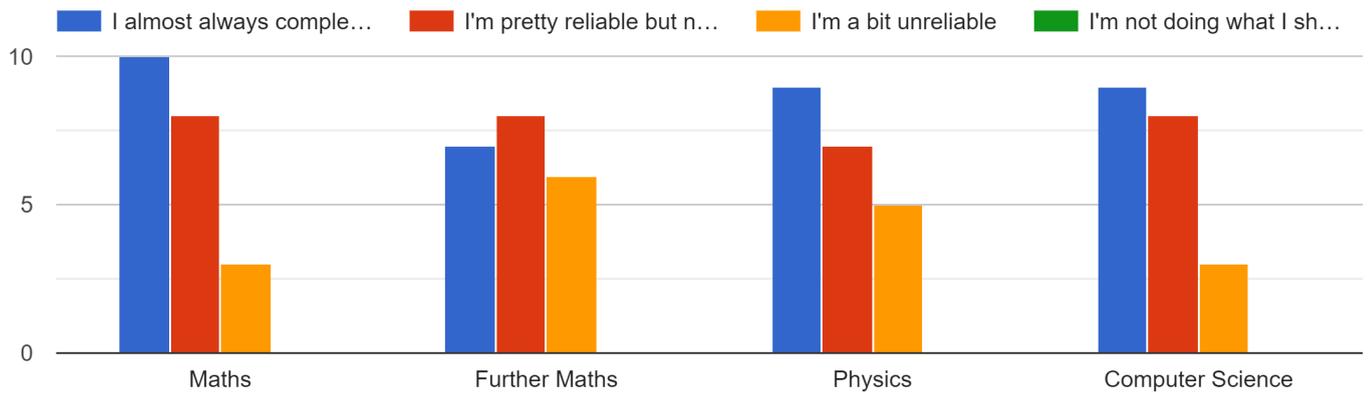
How much homework is set by teachers in the following subjects?



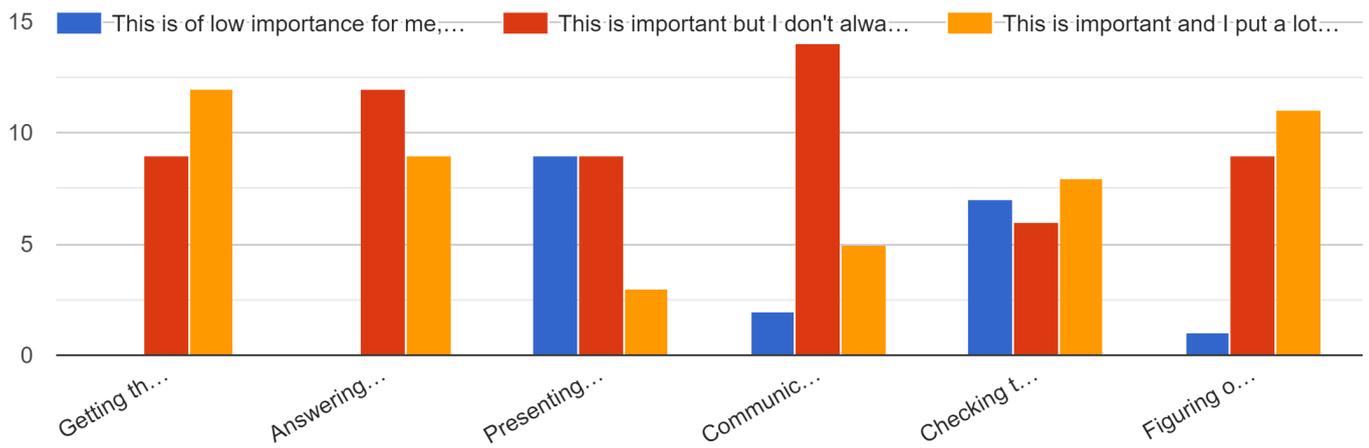
Is there variation in expectations about homework?



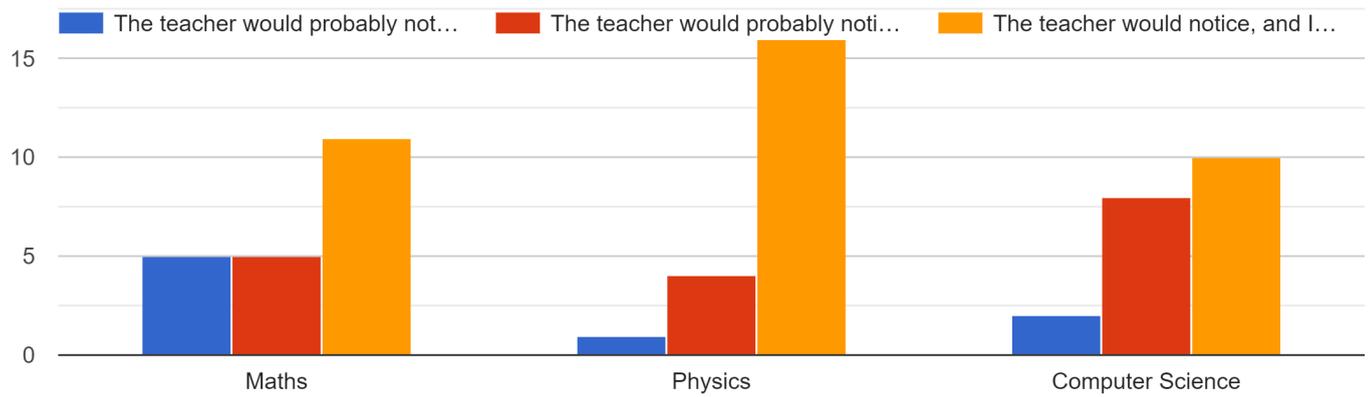
Do you always do the homework in these subjects?



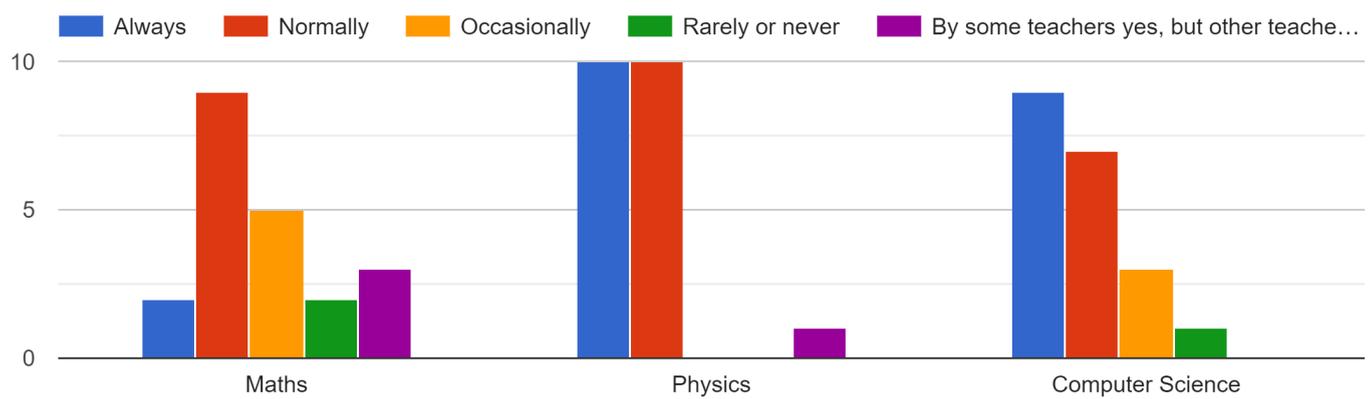
How much do you care about these things?



What do you think would happen if you did not do the homework?

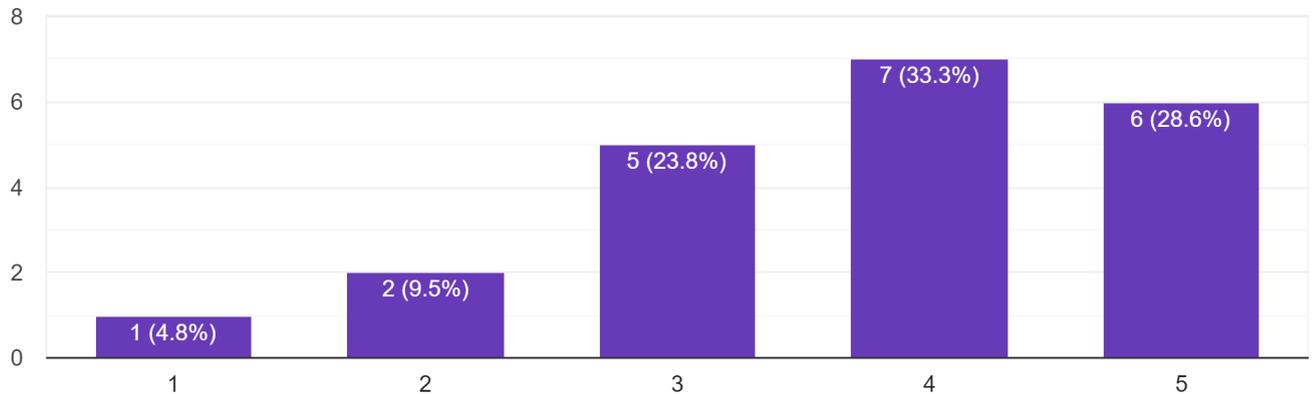


Does your compulsory homework get marked?



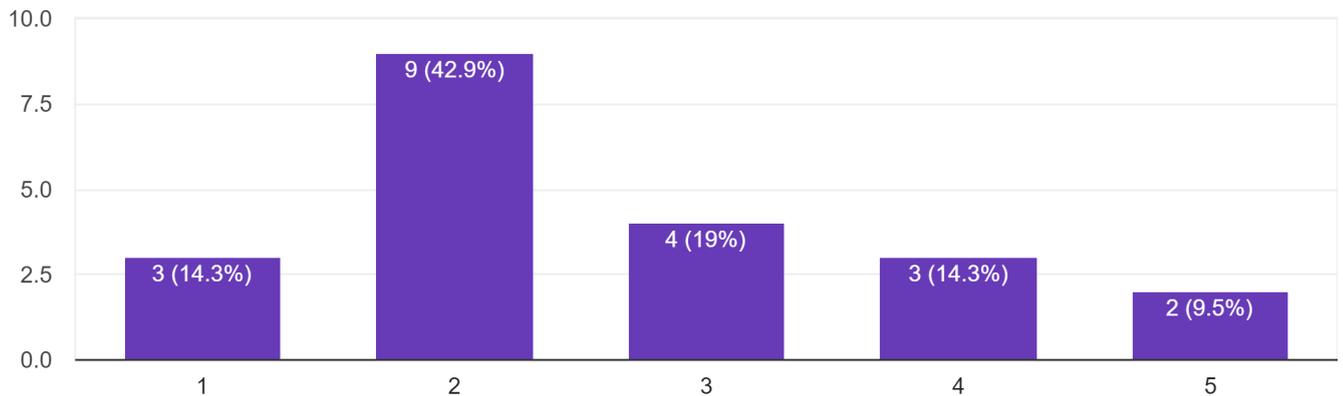
How much do you agree with the following statement? "Completing homework carefully has a direct impact on my learning and the grade I will achieve in my A-Levels."

21 responses



How much do you agree with the following statement? "Students who mostly understand the work in lessons probably don't need to complete much homework"

21 responses



Do you have any other comments to make about homework? Feel free to be honest. 11 responses

(STUDENT COMMENTS REMOVED FOR WEBSITE)

Key Outcomes from student focus group discussion following the survey

- Homework is currently effective, its importance is largely understood and students normally get useful feedback.
- Homework is set regularly and consistently.
- Some homework has been set without being marked, and without answers or worked solutions available - this is not helpful.
- Sometimes homework is "lumpy"; i.e. nothing for several lessons then a big chunk of difficult work - this is harder to deal with.
- Textbooks are very helpful for some students but the online version does not work for some devices/ students.

- Some teachers are much more thorough in their follow up of missing homework.

Students request that:

- We always provide worked solutions or answers when setting work
- We always give 7 days from setting to due date if possible
- If we need to set homework that needs completing in 1-2 days then keep it brief and simple
- We get OneNote fixed - it's great when it works.