

## Context

The Department offers AS and A2 Physics using the OCR Physics A Specification. We have 3 groups at A2 and 5 at AS.

89 (24 female 65 male) students completed AS with an average GCSE point score of 6.4 (up 0.1 on the year before). The cohort had fewer students with GCSE <5.8 than the national average.

37 (3 female and 34 male) students completed A2 with an average GCSE point score of 6.5 (equal to the year before). This cohort also had fewer students with GCSE point score <5.8 than the national average.

The department consists of two teachers and one technician.

We believe the poor progression from AS starters to A2 completers (40%), and particularly the poor uptake of A2 Physics by Girls (3 last year) is due to the poor experience they had in the AS year with temporary staff. The situation is improved this year with 8 girls on the current A2 course and currently 43% of the AS starters on track to complete.

Specification details: OCR Physics A. The A2 consisted of a 30% externally examined unit taken in January and a 50% externally examined unit taken in June alongside a 20% practical assessment entered in June. The AS took all external exams (totalling 80%) in the June series for the first time and also had 20% practical assessment. We are concerned that 36% of the 11 remarks we requested saw an upgrade. There are three assessment objectives. AO1 Knowledge and Understanding, AO2 Application of Knowledge and understanding and AO3 How Science Works. The first two are predominantly assessed in the externally examined units and the third predominantly in the Assessed Practicals. AO1 and AO2 are nearly evenly matched at AS while the emphasis moves to AO2 in the A2 units.

Entry Criteria: Grade B in Additional Science or Physics and grade C (recommended B) in Maths. These are long standing requirements designed to maximise success on the course. There is now a recommendation of average GCSE point of 6.0 or above although about a third of the present cohort do not meet that criteria.

**Self-assessment Grade:**

2

**Moderated Grade:**

## Quality Improvement Plan 2012/2013 Updated

Area for improvement	Action required	Outcome expected	Progress Review/Key milestones	Responsibility	Outcome
AS Success Rate	<ol style="list-style-type: none"> <li>1. Review of AS SOW to improve variety and increase AFL activities</li> <li>2. Consistent application of departmental interventions for ensuring all set work and all corrections are completed.</li> </ol>	AS Success at 77%	<ol style="list-style-type: none"> <li>1. Monthly assessments and particularly Mock exam</li> <li>2. Half termly monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Kath in consultation with Ned</li> <li>2. Ned</li> </ol>	AS Success 88.8%, 10. % above latest bench
AS High Grades	<ol style="list-style-type: none"> <li>1. As above</li> <li>2. Review of difficult questions using active results and examiners reports</li> <li>3. Additional extension practicals available to students.</li> </ol>	AS High Grades to 35%	<ol style="list-style-type: none"> <li>1. As above</li> <li>2. Completion of review by Jan 2013</li> <li>3. Activities happening before Christmas 2012, feedback from these.</li> </ol>	<ol style="list-style-type: none"> <li>1. As above</li> <li>2. Ned</li> <li>3. Andrew Chaffer</li> </ol>	AS High Grade 41.9%, 4.9% above bench

Recruitment of girls	Study Institute of Physics report  Consider joint recruitment activity with Maths	Increased recruitment of Girls to AS Physics	Event happens if judged useful	Ned	Event took place and may have impact in future years. Poor attendance: local schools keen to attend but our date was not possible. Will look to repeat this year but setting date in consultation with schools.
Relative underperformance of Boys at A2 High grades	Introduce league tables at A2 to increase competitive element	Closing of gap.	Monthly assessment, mock exam, Jan exam	Ned and class teachers	Males outperformed Females at A2 HG by 24%. However there were only 3 females so it is hard to draw conclusions.
Consistent quality of student experience and integration of new member of staff.	1. Weekly meetings to discuss upcoming content and any concerns to be raised by HoD or new member of staff.  2. New Member of staff to undertake specification specific training.	Similarity between results of students from the two teachers' groups.	Monthly assessment, mock exam, Jan exam		Outcomes good for new member of staff. SPOC data shows similar responses for both teachers.  Training was undertaken in November 2012 and contributed to success

	<p>3. Work on practical assessments, the main area of specification difference.</p> <p>4. Monitoring of results and attendance data</p> <p>5. Monitoring of mark book</p> <p>6. Implementation of College "NEW Starters" Process.</p>				<p>good Practical Task scores with no moderation adjustment</p> <p>Results stood up well to departmental average.</p> <p>Completed and continuing.</p> <p>Completed.</p>
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## Outcomes for Learners

Key Strengths	Evidence
<b>A2 Success is Good</b>	97.3%, 2.7% above benchmark, positive three year trend
<b>A2 Achievement is Outstanding</b>	100%, 3.6% above benchmark, positive three year trend
<b>A2 High Grades is Outstanding</b>	55.6%, 5.2% above benchmark, positive three year trend
<b>A2 Value Added is Good</b>	ALPS 4, top 25th percentile in Success, Achievement and High Grades dimensions of Nick Allen Report. Positive three year trend in ALPS score. <b>Awaiting recalculation following remarks.</b>
<b>A2 Attendance is Good</b>	93.7%, 3.6% above college target, slight negative three year trend (down from 94.3% in 2010-2011)
<b>AS Success is Outstanding</b>	88.8%, 10.9% above benchmark, positive three year trend.
<b>AS Retention is Good</b>	96.6%, 3.4% above benchmark, positive three year trend.
<b>AS Achievement is Outstanding</b>	9.19%, 8.3% above benchmark, positive three year trend.
<b>AS High Grades is Good</b>	55.6%, 5.2% above benchmark, positive three year trend.
<b>AS Value Added is Good</b>	ALPS 4, top 25th percentile in Success, Achievement, High Grades and QCA points dimensions of Nick Allen Report. Positive three year trend in ALPS grade. <b>Awaiting recalculation following remarks</b>
<b>AS Attendance is Good</b>	96%, 3% above college target, positive three year trend.

<p><b>AS and A2 SPOC are Good.</b></p> <p><b>Good Participation, behaviour in lessons</b></p> <p><b>Good Progression to related degrees that have great employment records.</b></p>	<p>All classes bar one have class SPOC responses better than college average.</p> <p>Lesson Observation e.g. “Good pace of lesson allows all learners to progress at their own rates”.  “Good use of mini-whiteboards to allow all learners to participate and learn”.  “Good classroom management.” “Good working atmosphere enables learning to take place.”  “Good learner engagement and enjoyment.” SPOCS suggest good enjoyment of lessons.</p> <p>Of the students completing A2 18, 49% progressed to Physics or Engineering Degrees (in equal numbers) both of which typically require Physics and have great employment records.</p>
<p><b>Issues/Areas for Development</b></p>	<p>Evidence</p>
<p><b>Maintain Success and High grade Rates and improve ALPS Value Added</b></p>	<p>ALPS Score currently at a 4.This, along with the lack of track record, prevents the self-assessment at grade 1</p>
<p><b>A2 Retention requires improvement</b></p>	<p>97.3%, 0.9% below benchmark. However this represents retention of all students except one student who left college in the autumn with apparent mental health issues and little if any home support.</p>
<p><b>A2 HG Females</b></p>	<p>Females underperformed males by 24.4%. However this is a very small group (Just 3 females) and is not part of a trend, females outperformed males on the same measure by 33.8% the previous year.</p>
<p><b>Progression from AS to A2</b></p>	<p>Although apparently typical for the subject not happy with about 45% progression from AS to A2</p>

## Quality of Teaching, Learning and Assessment

Key Strengths	Evidence
<b>Good Teaching to promote good learning.</b>	<p>Observed lessons were graded as good, noting:</p> <p>Good working atmosphere enables learning to take place. Good learner engagement and enjoyment. Good use of hot seat questions to differentiate and allow all learners to progress learning. Good use of practical work to embed learning. Good use repetition to emphasise key words and definitions. Good amount of variety. Good use of differentiated questions on resistivity to allow all students to progress. Good pace of lesson allows all learners to progress at their own rates. Good use of mini-whiteboards to allow all learners to participate and learn. Good, clear demonstrations, which allow students to discuss and explore ideas and learn effectively. Good pairing of students which allows discussions to take place and embed learning. Good use of layered tasks to differentiate and allow all students to learn. Good correction of student answers allows learners to identify key points.</p> <p>The consistency of this away from observed lessons is implied by the results.</p>
<b>Outstanding use of formal assessment points.</b>	<p>Results were a useful guide. e.g. Part way through the year we identified poor high grade results at AS in particular. We split our AS access periods to allow a specific AS High grade period. AS High grades finished the year within 0.1% of outstanding.</p>
<b>Good use of assessment on weekly homework and in lesson assessment</b>	<p>Assessment was regular and SPOC returns suggests the feedback left students knowing what they needed to do to improve. Initial assessment of maths skills allowed us to set up maths support group to boost maths skills of those that needed it.</p>
<b>Good Progress through the year at AS and A2</b>	<p>Results in the Summer are a marked improvement from those in September.</p>
<b>High expectations of all learners</b>	<p>e.g. Regular homework marked to grades and re-worked if below target.</p>
<b>Good encouragement of independent Learning</b>	<p>e.g. All sections of work self-assessed before and after teaching to direct independent study</p>
<b>Good Engagement with CPD</b>	<p>New member of staff attended specification specific CPD and used to tailor her teaching to what was a new spec to her. Her results were good.</p>

<p><b>Good Development of Literacy and Numeracy</b></p> <p><b>Good use of ICT</b></p> <p><b>Outstanding facilities and equipment</b></p> <p><b>Good response to learner voice</b></p>	<p>On the 8 Questions marked for QWC in the first attempts our students took at sitting the 4 examined units, our candidates outperformed the national average on seven and met it on the other. Without good development of numeracy skills our results would not be possible in our subject.</p> <p>All students regularly accessed Moodle page to access differentiated homework. All students had first-hand experience of Data logging.</p> <p>Fabulous labs and practical equipment allowed us to do all experiments students have to describe in the exams and prepare for practical tasks. The practical tasks were our best units at AS and A2. Positive comments in SPR learner voice.</p> <p>SPR learner voice asked for more enrichment. Trip to Manchester University and additional practical sessions.</p>
<p><b>Issues/Areas for Development</b></p>	<p><b>Evidence</b></p>
<p><b>We need further differentiation within the classroom</b></p>	<p>Much differentiation is in how we respond to homework, the homework we set and the individualised help we offer outside the classroom.</p>
<p><b>Further Synopticity needed in Monthly Assessments</b></p>	<p>Commented on in SPR learner voice panel.</p>

## Effectiveness of Leadership and Management

Key Strengths	Evidence
<b>Good Leadership</b>	Staff share clear vision of the department as a vehicle for student success. Monitoring of results and mark books ensure zero tolerance of underperformance. Teaching and learning discussed on a weekly basis Response uniform to underperformance of Students Students are responded to (SPOC and SPR Learner voice panel mentioned in previous two sections)

Issues/Areas for Development	Evidence
<b>Increased use of learning walks to share good practice.</b>	

## Quality Improvement Plan 2013/2014

Area for improvement	Action required	Outcome expected	Progress Review/Key milestones	Responsibility
<b>Improve value added scores</b>	<p>Extend interventions, used effectively last year with students at risk of not achieving targeted high grades or at risk of not passing to improve Success and High Grades, to all students below target grade.</p> <p>Work more systematically with students capable of outperforming target grade to ensure they meet their potential.</p>	Improved Value added scores	Monthly assessments, especially Mocks	Ned with support of class teachers.
<b>Improved differentiation within the classroom</b>	Investigate ways of differentiating lesson objectives more effectively	Improved differentiation in classroom.	Lesson Obs	Ned and class teachers support
<b>Improve progression from AS to A2</b>	Investigate what is typical progression to find give context to our values. Using JCQ data together with benchmark retention. (Anecdotally this is about 50%). Interrogate college	Better progression rate from AS to A2	Report written by Jan 2014	Ned

	<p>data of those starting AS intending to continue to A2 (not yet made available)</p> <p>Improved extra-curricular opportunities (and the above improvements)</p>		<p>Activities happening</p>	<p>Kath, within her Ogden Fellowship, with support from Ned and Mike.</p>
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## Capacity to Improve

Our improvement last year is largely due to a new and impressive member of staff bringing stability to the department. This has not only led to improvements for the students she teaches but has allowed the HoD to take a more strategic view now there is less “fire fighting” to do.

Despite losing an exceptional technician we were able to make a fantastic appointment to replace him, so have the committed and strong staffing along with the resources to consolidate and extend the improvements we have seen.

Link Managers Reflection on the Capacity to Improve