



**RADLEY**

Academic Scholarship 2020

(A series of detailed reports to provide feedback for Preparatory Schools)



# Subject reports

## ENGLISH

### Section A

Most candidates were able to 'decode' this challenging poem (A Bone Flute, by Judith Willson) and provide a clear surface reading of the text. Many boys commented sensibly on some of the more obvious imagery, correctly identifying poetic devices such as simile, personification and metaphor. The strongest candidates offered developed, sensitive interpretations of figurative language and linked this to the tone and atmosphere of the poem as a whole, rather than breaking the piece into discrete chunks. Very impressive responses drew on boys' wider cultural knowledge to develop their understanding – some referred to Biblical allusion, others to Greek Myth; this approach was, when handled sensibly, very effective. Surprisingly few candidates dug into the poet's appeal to the senses and fewer still drew together different moments in the poem to spot and analyse patterns or contrasts.

Perhaps the aspect of these responses which differentiated most acutely was form and structure. Only a small number of boys linked their observations of enjambment, caesura and stanza structure to the meaning and language of the poem.

The best responses identified the effects of structure and language on the reader. Many boys spent a good deal of time identifying structural and formal aspects, but then offered only very general ideas as to their effect. It

## Introduction



*It is always a challenge trying to prepare boys for scholarship exams. Supervisors, mentors, parents and, of course, the candidates themselves, all approach the process with understandable trepidation. Boys wonder: What will they ask me? What will the other boys be like? Am I good enough? Have I read enough? Will it be possible to write and say all I need to in the time available? Once again, we are delighted that this year's round went so well, with many candidates performing tremendously well and giving a fine account of themselves - at every turn. We thank you for providing them with stimulating reading, and with supervisors who challenge them to think beyond the predictable and the safe. We also thank you for pointing them at Radley and for believing us to be a school which can cope with clever boys - because we certainly can! We relish the chance to encourage talented young men to attain at the highest academic levels and, in the process of doing so, help them to enjoy the rich bounty of culture, discussion, exploration and community which we call an 'education'. I do hope you find the advice enclosed in these reports to be meaningful feedback - which will help you to be even more targeted in preparing boys for our academic scholarship exams. Do please thank those who prepared the boys for the exams.*

*Warm wishes*  
Stephen Rathbone  
Academic Director MA, MA



was too vague to simply claim enjambement creates ‘flow’ or that caesura ‘breaks up the poem’. While identification of techniques is rewarded, an understanding of the interaction between form, structure, language and meaning is required for a top mark on this section.

## **Section B**

Responses to the questions varied in style and quality, but most answers were engaging and perceptive. The most important consideration is thoughtful and relevant use of the question. Some students drifted too far from the question in essays that showed writerly skill, but which did not fit the title. Another potential weakness is in essays which are far too ambitious in terms of narrative structure. For such a short piece, narrating only one or two events connected is safer, rather than elaborate plots which stretch plausibility. Quite a few students wrote best from a germ of personal experience and were able to use the senses and emotions convincingly. Others were excellent in devising extended metaphors and imaginative work. Key would be for the students to work to their strengths. The best responses showed a perceptive eye for observation and close description. While some students did use imagery, this was not always executed satisfactorily. An accurate and subtle use of vocabulary trumps a forced figure of speech. Overall, the standard of SPaG was good. There were noticeable weaknesses in using commas for control and with punctuation of dialogue. A variety of punctuation marks for effect is encouraged. There was a noticeable and pleasing use of different sentence lengths for effect.

## **Section C**

The best responses were from those who considered the question thoughtfully and focused on the topic. These had an individual stamp, were ambitious in their ideas and in their expression, and structured their arguments logically. These candidates demonstrated their wide vocabulary and wrote with clarity and style, using specific examples to detail and develop their ideas. Some rhetorical techniques were successfully employed. Sensible and informed reference was made to topical news stories. Dystopian novels and films were discussed by a few.

Weaker responses tended to fall into two categories. Some were vague, made little use of examples and tended to be repetitive, circuitous and limited to general statements. Others – perhaps the majority – showed good geographical and scientific knowledge but had little other merit; these did not really answer the question and were predictably lacking in interest. The weakest responses were superficial and undeveloped; these also showed poor command of vocabulary and little care taken with structure.

There were significant weaknesses in punctuation and syntax in a number of responses. Quite a few did not produce an overall standard which was appropriate for scholarship consideration.



## MATHS

The remit of the two papers remains the same. Paper 1 aims to test techniques. Paper 2 aims to see if candidates can apply those techniques, and think for themselves. Given the high mean mark on Paper 1 last year, and the difficulty in deciding the cut-off for candidates to shortlist for Paper 2, we just lifted the level of difficulty again this year. I get the feeling that we are now about where we want to be.

### Paper 1

The mean mark on the paper for those candidates who were selected for part 2 was 67%, with a spread from a lowest mark of 27% up to a highest mark of 98%. The paper did what I wanted it to do. Unlike in 2019, there was no boy who wasn't selected for Paper 2, who then went on to score an A grade on Paper 2. This paper examined the same topics as in previous years, but lifted the level of difficulty on some of the questions. It didn't sort out the top end, but it did the job in helping us to decide who to invite for part 2. My hunch is that we have now hit the right level of difficulty for this paper, and we will try to set a paper that achieves a similar standard in 2021.

### Paper 2

This year I delayed setting Paper 2 until we had marked Paper 1. There were three very high marks in Paper 1, and I wanted to sort out these candidates. At the same time I wanted to make the paper accessible to the reasonable Mathematician. The aim was that each question should start with a straightforward bit, and then push on to something more demanding as the question progressed. This time the mean mark was 54%, with a spread from a lowest mark of 25% up to a highest mark of 92%. The good news was that only one of the candidates who scored in the high 90s on Paper 1 was able to get into the 90s on Paper 2. So I did feel that I had a rank order at the end of the whole process. The bits that proved most challenging were:

- in qu 1 using the fact that the area was positive to prove that  $\pi^2 < 12$ ,
- in qu 2 writing  $25^{x+50}$  as  $5^{2x+100}$ ,
- in qu 3 forming an equation for x rather than just guessing the answer.

In general there were more completely correct answers to qus 4-6 than to qus 1-3. If anything, the first three questions were a touch too difficult, and the last three questions were a touch too easy, but the overall standard was about where I wanted it to be. This was a surprise. I thought qu 4 was going to prove tough, but there were lots of very good answers here.

As a general comment, much of the presentation was a lot better than in previous years, and there were a few really beautiful scripts. With these longer questions, it does help the candidate a lot if he takes the trouble to set out clearly what he is trying to do. It also makes my job much more enjoyable.



## PHYSICS

The paper was tough; as such, it succeeded in challenging the most able candidates and in separating out the very good from the fairly good. The top score was 60%, with a mean score of 33% and a standard deviation of 13%. A score of over 50% was very impressive, placing the candidate in the top 25% of candidates.

The paper was designed to test aptitude rather than assess prior learning and knowledge, and the habits of thought which might be described as "thinking like a physicist". It was hoped to give opportunities to think about unfamiliar contexts, and to explore everyday physics situations afresh. Each question tested a different skill - maths, physical intuition, problem-solving, using an unfamiliar equation etc.

As with all previous papers, successful candidates were able to express large numbers in standard form and convert awkward units. The ability to make sensible estimates also proved useful, particularly on question 5 about estimating the population density of the UK; blind guesses were not credited.

### A few pieces of general advice

1) Think beyond what you have been taught.

The paper was designed to identify candidates who would be willing not just to write down the standard answer, for example on question 1, regurgitating information about chemical and kinetic energy, but to identify those who have thought beyond this into why that might be the case.

2) Be bold.

Candidates needed to make sensible approximations to simplify the numbers. For example, in question 6,  $1.989E30$  kg could have been rounded to  $2E30$  kg. Encouragingly, more candidates were willing to do that this year (but very few candidates read the question carefully and clocked that this value needed to be multiplied by 12 to find Betelgeuse's mass, or had the mathematical facility to divide by 10 to find the 10% of the mass remaining); some candidates embarked on endless long division, and not only was this unnecessarily time-consuming, it was rarely mistake-free.

3) Keep going!

Successful candidates had the resilience and determination to carry on, even in difficult and unfamiliar situations, keeping a cool head and using what they knew: some with significant aplomb.



## CHEMISTRY

The scholarship exam seeks to find those boys who can extract information from a given text, think critically and apply their general knowledge. It is a skill to be able to extract relevant information from a few paragraphs and then apply the newly gained knowledge. In essence this paper tried to teach boys a completely new topic and it was interesting to see how they coped.

### Breakdown by question

1. This involved reading off the periodic table. The text described how this is done. Surprisingly this provided a challenge to many.
2. As above for 1.
3. This question was answered well for the most part, realising that elements within groups have similar chemical properties.
4. This was probably the hardest question and required some lateral thinking.
5. Again, reading the text carefully would have provided the answer.
6. Not as well answered as hoped. Boys found it tricky to translate a short narrative into a mathematical sentence or expression.
7. Quite well answered, although, again, some boys failed to see important information in the text.
- 8-9. Apart from 9a, these questions made more mathematically-thinking boys stand out.

## BIOLOGY

The Biology exam followed the usual format of being a comprehension exercise and this worked well, producing a range of marks in a roughly normal distribution. This clearly benefited some boys at the top end who also got high English scores, but there was much here that enabled the strong scientist to give of their best also. The topic was broadly ecological, though with less of a specific focus on the latter this year, the questions being more wide-ranging. Some boys had clearly benefited from detailed learning of ecological definitions and, to a lesser extent, classification ones too, though it must be said these areas won't necessarily be topics of focus in future years. It was interesting that in the "essay" question about Deforestation, many students wrote about "Climate Change" by default, demonstrating knowledge but without attracting any marks. However, there is clearly a lot of good work being done in our feeder schools and much of what the students wrote was a joy to read, especially in those cases where a couple of them could have given an A-level student a run for their money! The world needs bright Biologists - please keep sending them to Radley!



## FRENCH

We continue to include a dictée paper in our French scholarship because it remains a challenging and discriminating exercise for all candidates. The highest dictée mark this year was 17/25 and there were a few 4/25 and 5/25. Many boys coped well with challenging vocabulary, made sensible choices under pressure and were able to distinguish between homophones like “ mère / maire”. A surprising number of candidates could not spell La Tour Eiffel. It is clear that some boys arrive better prepared than others, but the general standard was encouraging and we awarded 4 A (very good) grades and 6 B (above average) grades. We would advise all preparatory schools to give their candidates every possible advantage and make use of the specimen dictées, available on our website, when preparing their boys.

The reading paper is designed to test the candidates’ ability to process a French article and show that they have understood the key points. Alongside this, there are questions that require a sound understanding of the vocabulary of grammar and an ability to spot occurrences of grammatical units in context. It was obvious that many candidates had been well rehearsed in these important skills and that they could confidently identify and transcribe possessive adjectives, direct object pronouns, prepositions etc.

The writing paper required the boys to translate set sentences and to deliver approximately 110 words of a freer nature. Many candidates showed considerable ability to write authentically and accurately in a range of tenses without the underlying feeling of pre-learnt material, regurgitated unthinkingly. One or two boys struggled to deliver accurate verbs in any tense and looked, on paper, more like beginners than scholarship candidates; if you have any scholarship candidates who have learnt French for less than 18 months then do let us know as they can sit our Language Aptitude Test instead (see Latin and Greek section).



## **HISTORY**

### **Marks**

For the shortlisted candidates, who sat their papers at Radley, the mean average was 28 and marks ranged from 11-40 out of a maximum possible score of 50. For non-shortlisted candidates, the mean average was 23 with marks ranging from 16-32. Overall the mean average was 26.

### **Summary**

We again felt that the answers to this new format of paper allowed us to clearly identify those boys who were keen to think on their feet, present balanced discussion and show historical imagination. Aside from one case where a boy answered both essay questions, there were no rubric errors, although many candidates did not analyse the questions sufficiently clearly before answering. The top candidates were able to produce thorough responses to all questions, even if some weaker candidates clearly struggled with the time pressure.

### **Feedback by question**

The first section dealt with a short piece of contemporary source material from China in 1945.

The first question asked candidates to select a short excerpt that they found interesting and to explain why they found it interesting. Some selections were made based on content, others on language or style. Stronger candidates were able to explain both concisely and precisely why their interest had been piqued. In some instances, the interest resulted from comparisons with their own knowledge and understanding of the world. This was rewardable but not essential for full marks. Weaker answers did not explore beneath a surface reading or drifted into talking about a second selection which was not rewardable.

The second question required candidates to draw inferences about China at the time. Stronger answers managed to draw out a wide range of sensible inferences and explain what had allowed them to deduce each. Weaker answers got caught up in the metaphor or came up with deductions which were too fanciful for the text to support. Some candidates tried to pass off simple comprehension of the provenance as their answer.

The third part of the source section asked candidates to discuss the strengths and weaknesses of the source as evidence in a historical enquiry about the period. The best answers focused on both the range and limitations of the evidence within the source and, also, its credibility, by considering, for instance, authorial position and purpose. Weaker answers tended to make stereotypical, trained judgements.

Both essays allowed candidates to use material they had studied - either two people, or an event - to answer a broader question. The questions were worded carefully but a number of candidates did not read them carefully enough - for example, reading "how important was it?" as "how was it important?" and producing descriptive rather than evaluative answers. Whilst candidates are expected to be able to support their answers with carefully chosen knowledge, we are keen to differentiate through their





ability to write in a critical manner, so candidates who merely recited their knowledge scored lower than those who analysed it, with the best evaluating alternatives and reaching a judgement in which their criteria were clearly presented. There were, again, too many answers of the sort sometimes found at Common Entrance - where the question is only addressed fleetingly in the first and last paragraphs, with the remainder focused on description. These would not score more than 11 out of 25 and are not expected of a potential scholar.

## **GEOGRAPHY**

The answers were wide-ranging. The two most popular questions looked at managing the challenges of climate change and the varying impacts of volcanic eruptions. In addition, a large number of candidates attempted the question on issues of migration and the sustainability of transport and urban developments. The least popular question was variation in rainfall, although when this was attempted answers were often encouraging.

On the whole, candidates used a wide range of geographical vocabulary and were keen to show off well learnt case studies. At times, however, answers became too narrative, with the case studies used to tell a story rather than to illustrate a specific aspect of an argument. Candidates should also be warned against using generalisations and over-simplification; these often distract from the quality of the writing.

The strongest responses identified the key geographical content and the main area of focus in the question, specifically tackling the core issues. In the very best answers there was an attempt to make an assessment of which factor was most influential. This level of evaluation is a high-level skill and was often used to differentiate between the candidates. It was good to see the use of contemporary examples in some scripts, supporting examples studied in lessons.

Overall, students wrote confidently with extended prose, an accurate use of punctuation and well applied paragraphs. It was good to see an enthusiasm for current topics and a real effort to engage in these issues. Well done to all geography teachers who are clearly enthusing about the subject.



## **THEOLOGY**

Most chose to answer the second question, responding to the claim that it is never correct to end a human life. The best answers were able to show two sides of the argument, but were clear in which side they agreed with. The stronger answers gave reasoned justification for their view. The best answers were able to call upon moral philosophies such as utilitarianism and divine command. These were not always used accurately, but it showed a good range of knowledge.

Many less good answers sought to address the question through a series of examples, such as war, euthanasia and abortion and asserted what they would do in each situation. This was not as effective because they did not draw comparisons between examples, and it became a report of how the candidate would act in a situation, rather than tying in similarities or overlapping themes.

## **LATIN and GREEK**

The Latin Scholarship saw 19 students sit the paper at Radley. Most of the scripts were of a decent standard, with five As being awarded and several of these being of a particularly good quality. There was a spread of marks below this, reflecting a range of experience and ability - several candidates found the paper very hard.

Most striking was the fact that only two candidates attempted the English to Latin sentences rather than the comprehension, and neither had enough time to do a decent job on them. Please do ask boys to do as thorough a job as possible on Section A, but to keep moving through it at a steady pace. If there are concerns about the amount of material to be covered in the time available, please do contact the school.

In addition, several candidates sat the new Language Aptitude Test, which involved using exemplars to make sense of a made-up language. A pattern emerged that reflected the trialling of this with Radley's new Shells this year: one boy got it all correct, and the rest struggled to get any of it correct. We feel it is a useful test of reasoning ability and pattern-spotting.

In the Greek paper, there were some pleasing efforts from the 7 candidates that sat it, although the two Cs awarded were well off the pace of the three As and two Bs. An area where easy marks were lost by some boys was the derivations question, and it is worth clarifying from past papers with future candidates what is required here. We always welcome boys sitting Greek.