



**RADLEY**

Academic Scholarship 2024

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



# Subject Reports

## ENGLISH

### Section A

Most candidates understood and engaged very well with the poem. They showed an understanding of its basic situation and setting. Only a few confused the metaphorical for the literal and made the mistake of interpreting the house as a ship. Overall, the ability of candidates to spot poetic techniques was sound. The best responses were able to identify a wider range of techniques, beyond the common metaphors and sound devices. Students were less successful in the analysis. The tendency to comment on valid poetic techniques with very general analysis was a weakness throughout. The analysis of structure is also an area for improvement.

In general, candidates were able to structure a response coherently. Most, bar the weakest, follow a sound point, evidence, explanation paragraph structure. One area requiring improvement concerns concision and efficiency, especially more accurate use of embedding and commenting on quotation.

### Section B

This year's scripts were generally higher in standard. The best essays were imaginative and spontaneous, with a freshness and originality of voice. Those which showed a clear element of pre-preparation had a forced quality and contained too many adjectives in an attempt to be descriptive. There was evidence of good planning in most; structured responses which were focused on the topic and built up to specific effects were the most successful. The vocabulary was generally appropriate and, in

## Introduction



*Meeting the Scholarship candidates has been one of the highlights of my first year in post as the new Deputy Head Academic. I found the candidates to be thoughtful, intellectually curious and demonstrating just the sort of academic character that we value at Radley. Our desire is that these reports will give boys specific and actionable advice for how they can improve in the future, as well as an overall analysis of their performance in 2024.*

*We hope that the comments contained here are supportive. Mindful of the pressures facing Prep Schools in the current climate, we're keen that the comments of the examiners are useful and constructive. I am also keen to reflect on what we can do better. The dons at Radley are already sick of hearing me say that 'feedback is a gift' but I really mean it! Do contact us with suggestions for how we can improve.*

*A final comment: one of the things that struck me interviewing candidates was the abiding importance of knowledge. Regardless of which graph, poem, or moral quandary I discussed with the candidates, their general knowledge so often determined the quality of their analysis and evaluation. My strong advice for future candidates is to read regularly and widely, and to develop the broad knowledge base that they will draw on when they encounter challenging unseen questions.*

*Thank you for everything you've done to nurture such engaging and stimulating boys. They are a credit to you.*

*Best wishes*

*Jonathan Porter MA (Cantab.)*



many cases, sophisticated and adventurous. The strongest responses were closely detailed and made use of imagery; in these, sentence structure was varied, and deliberate use of sophisticated punctuation to guide the reader was effectively deployed.

### **Section C**

The general standard of accuracy and organisation was high this year, which made engaging with candidates' ideas much more straightforward. Almost all scripts were set out well, with paragraphing used to manage the responses.

The very best essays avoided a simplistic binary approach by setting out the candidate's opinion clearly and then sustaining a persuasive direction to the writing. Where students simply set out both sides of the debate, without really nailing their colours to the mast, answers felt a little empty. Some of the most impressive pieces drew on what the students had been reading, watching, and experiencing to draw conclusions. There were references to the Bible, Harry Potter and Shakespeare, as well as current affairs. Evidence of this type of engagement with the wider world is to be encouraged.

The only persistent issues with accuracy were comma splices and run-on sentences, where students needed to accurately introduce clauses or end sentences altogether. Responses benefitted from time spent planning and thinking, particularly when it came to developing a line of argument. Scripts where boys had made a real effort to use a rich, varied vocabulary, including imagery, were the most rewarding to read. Those which combined these traits with deliberate punctuation and sentence structure were rewarded with the highest marks.

### **MATHS**

The 2024 cohort seemed slightly less strong than in 2023, and there were some very weak candidates at the bottom end. Presentation varied significantly between scripts, and we still have the issue of some candidates trying to write Paper 2 on the question paper (Paper 2 should be answered on lined paper. Only Paper 1 is answered on the question paper).

#### **Paper 1**

The mean mark on the paper, for those candidates who were selected for part 2, was slightly down on 2023 - 67% compared with 70% - and had a spread from a lowest mark of 43% to a highest mark of 100%.

This provided a slight problem when setting Paper 2. We wanted to add a couple of questions to challenge the candidate who scored full marks in Paper 1, while providing enough accessible tasks for the middle-of-the-road candidate.

#### **Paper 2**

Again this year, I delayed the setting of Paper 2 until we had marked Paper 1. The mean mark in 2024 was 3% lower than in 2023 at 55%, with a top mark of 93%. So, again, I am happy that we pitched it at about the right level.



Q1 was intended as a gentle start on percentages but was less well done than expected. Bringing some simple algebra into the question seemed to cause a lot of problems, with parts (c) and (d) being particularly badly done.

Q2 was intended as three fairly easy parts on areas of squares and sectors, with part (d) aiming to challenge the stronger candidates. Parts (a) to (c) proved good discriminators. Part (d) was too hard.

Q3 was different from anything previously set. Those who wrote down three obvious equations scored half marks. Only five candidates managed the manipulation of the equations to obtain the final ratio. This showed who the best candidates were.

Q4 was another question where it was expected all candidates would manage parts (a) and (b) with part (c) discriminating. In reality, part (b) proved more challenging than expected, and only four candidates managed part (c). Two methods were used. Two candidates divided by  $xy$  to get equations in  $(1/x)$  and  $(1/y)$  and used part (a). Two candidates just balanced the equations and eliminated to get equations in 'x' and 'xy', which they cancelled down.

Q5 showed how well candidates could explain their process. Even if they missed a case or two, they got marks by embarking on a clear and logical process. A correct answer to part (d) was not necessarily expected, but it was hoped that an attempt at a sensible strategy would be seen.

Q6 was intended as a nice straightforward question, with an option to "show off" in the final part. Surprisingly, many candidates would miss the fact that the height to radius ratio was 3:1, so the radius of the top cone was  $h/3$ . The clever approach, only spotted by one candidate, was to notice that the multiple of  $7/8$  for the base frustrum left a ratio of  $1/8$  for the volume of the smaller cone, so the smaller cone was half the height of the main cone.

To conclude, the papers did what we wanted them to do. We will try to set papers of a similar standard in 2025.

## PHYSICS

The 2024 paper was challenging and it succeeded in testing the most able candidates, separating out the exceptional from the very good. The top score was 91%, with a mean score of 58% and a standard deviation of 26%. A score of over 80% was very impressive.

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.

As with all previous papers, successful candidates were able to express large numbers in standard form. The ability to make sensible estimates also proved useful.

### A few pieces of general advice:

*Think beyond what you have been taught*

The paper was designed to identify candidates who would be willing not just to write down what they could





see, but to identify those who have thought beyond this.

In Q7, most candidates were able to get the right answer (although some, disappointingly incorrectly, rearranged the formula), but many could not muster the deeper understanding to explain that when wave speed is constant, wavelength and frequency are reciprocally related.

*Use information in the question to reason*

Candidates who were able to show that they could use information to think about what was actually going on, were generously rewarded. There were some excellent answers to whether the mystery radio source was in the solar system, and as to why the orbit of Pluto on the graph was so unusual, but also some very poor answers. Thinking imaginatively to explain situations is important in Physics!

*Be bold*

Making sensible approximations to simplify the numbers is often a good idea in Physics. Endless longhand arithmetic is rarely the right path and, for candidates who embarked upon it, not only was this unnecessarily time-consuming, it was rarely mistake-free.

*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 - a few with significant aplomb. When the going gets tough, the tough lower their standards a bit and at least do something!

You are encouraged to comment on the paper ([physics@radley.org.uk](mailto:physics@radley.org.uk)). Whilst we may not respond directly, all comments are taken seriously and used to refine future papers.

## **CHEMISTRY**

The paper was notionally divided into two parts. Part one was mainly built around the states of matter, a topic familiar from the Common Entrance specification. Part two required more mathematical skills for the balancing of some equations. The basic method on how to balance a chemical equation was set out in the paper.

Q1 This question started with a deduction exercise where boys had to assign elements as either metals, non-metals or metalloids based on the periodic table. Guidance was provided and all candidates achieved at least half the marks. The deductive classification of a molecule was less straightforward and few identified correctly the requirement for non-metal atoms only. The question continued with elements and compounds and it was surprising to note that a considerable number of candidates lacked precision in their definitions (compounds are made up of elements...). A significant number of boys were unsure about the arrangement of particles and movement at various states of matter. A number of misconceptions were presented, such as “liquids have spaces between particles”, “particles are dense”, and some answers involved a variation of “taking the shape of the container”, “melting creates spaces between particles”. Generally, little mention was made about the movement and arrangement of particles in matter (instead more abstract terms such as density and compressibility were used). This was despite questions giving hints, “explain the change of the arrangement and movement of the particles...”.

Q2 This question introduced the concepts of chemical formulae and balancing chemical equations. Many boys showed a good understanding of the writing of formulae and had a decent try at balancing at least



some of the example equations. It was pleasing to see that a few solved the last and most challenging question correctly.

While some of the questions in this paper were challenging by their very nature, others/most required solid Common Entrance knowledge. All required precision in answering. It was, therefore, important to read carefully the instructions and guidance provided.

## **BIOLOGY**

This year's Biology paper followed our established format of a piece of scientific comprehension; roughly an A4 page with illustrations, followed by a series of questions worth 33 marks in total. As ever, the format was accessible to candidates with an average score of 62% and a range from 24% all the way up to 88%, the pattern being a normal distribution.

This year the topic was the discovery and naming of the first dinosaur, *Megalosaurus*, by Professor William Buckland, which took place 200 years ago to the day before our Scholarship exam. (The evening before, a group of current Radleians had actually visited Oxford University Museum of Natural History to see the precious original specimens of what had previously been called The Stonesfield Beast).

The first ten questions on the paper were a series of definitions taken from the text. In the past, we have found students commonly give answers from an English perspective rather than a scientific one. This trend seemed less prevalent this year, with quite precise definitions given for "Geology", "Paleontology" and so on. "Anatomy" caused confusion, and about half of candidates described "amphibians" in response to the word "amphibious", though at least they clearly knew something about frogs! Some answers to the words "fossilised", "dinosaur" and "bipedal" were a bit generic but, overall, students answered the first section well and it seems to have been a nice way in to the paper.

The next four questions were mainly observational/comparative. Describing adaptations of *Megalosaurus* seemed fine for most, though comparing naturalists and scientists was more tricky. Most candidates thought of naturalists as a type of biologists, with scientists covering other topics like Chemistry and Physics. A few of the stronger candidates also made the point that science is perhaps more analytical/experimental/data-driven. Thankfully, we had only one naturalist! Comparisons between different classes of vertebrate were generally well made, and showed some good prior understanding. This led into some good lateral thinking in a question where students were asked to compare different illustrations of what *Megalosaurus* might have looked like, one from the Victorian era and one from the present day. Most answers were sensible, and the better candidates went on to describe reasons/advantages for the various adaptations mentioned.

Most could pick out scientific names and present them within a food chain. Again, this demonstrated a bit of prior learning with a range of ability. Common mistakes were the drawing of a food web rather than a chain, reversal (or omission) of arrows and so on. The paper finished with some more open-ended questions about biodiversity and rewilding. This sort of question is usually attacked with enthusiasm though the answers this year seemed a little more sketchy than in the past - perhaps candidates were simply running out of time by this point.

Overall, there were some very pleasing results showing that there are many students out there who have been taught some excellent Biology, and a wider appreciation of the natural world, which is very encouraging.



## FRENCH

The results of this year's French examination exhibited a broad spectrum of performance. Those who approached the paper with confidence and had most success showcased their ability, not only to generate, but also to discern morphological/syntactic elements and distinguish similar structures within context. Conversely, many candidates encountered difficulties in identifying adverbs and in discerning plural and feminine adjectival agreements. This made the Grammar sub-section of the Reading section challenging for many.

The gap-fill exercise posed a challenge for many, despite its limited lexical content. In this exercise, the gender and number of items should provide guidance in the selection of the right answers, and candidates should try to rely on known grammar rules to select the right option. Some candidates struggled to categorise words and distinguish between nouns, verbs and singular/plural forms, hindering their ability to discriminate information contextually.

The Translation section once again produced a diverse range of outcomes, and was a significant differentiator in final results. Those demonstrating accurate adjectival agreement tended to fare better. While the responses to the Writing section generally met expectations, some were relatively stilted. Inaccuracies, particularly in the usage of common conjugated verbs, cost candidates marks. A more thorough review of these high-frequency verbal forms could enhance the overall quality of written submissions. Variety of vocabulary - adjectives and verbs - was rewarded.

Many candidates exhibited proficiency across a variety of tenses, showcasing strong knowledge of conjugation and usage. However, deficiencies in lexical diversity, over-reliance on certain adjectives (eg *intéressant, amusant, ennuyeux*), and infrequent use of reflexive verbs (and, more generally, of more complex structures) limited the scores of some scripts. Here, again, we would recommend broadening the semantic scope of students and encourage them to manipulate more varied lexical fields.

It was encouraging to observe meticulous adherence by many to instructions and to the letter format. The most outstanding submissions demonstrated ambitious structures. The most impressive responses included structures such as sequential constructions (*après avoir... , mais avant de...*), conjugated reflexive verbs (*je me suis régallé*) and subjunctives (*bien que ce soit très cher*). Congratulations to those who exhibited curiosity and produced original, ambitious pieces.

A minority of candidates struggled to employ accurate verbs across various tenses, more akin to beginners than Scholarship hopefuls. If any Scholarship candidates have studied French for less than 18 months, we encourage you to inform us, as they may be better suited to our Language Aptitude Test.

## GERMAN

The paper assessed reading comprehension skills through “true or false” questions featuring a range of synonyms, antonyms and red herrings with reference to the two texts, both of which were pitched at the A1 level (CEFR). The overall accuracy of responses was good. Given the low number of candidates who sat the German paper, it is not possible to comment on trends.



In the second part of the paper, candidates were required to translate short phrases into German. These sentences tested basic vocabulary and word order as well as case usage. A knowledge of regular verbs was sufficient in most cases, although there were also examples of strong, separable and intransitive verbs, which discriminated well.

The third part of the paper allowed candidates to demonstrate their knowledge of the target language through a directed writing task. On the whole, there was good interaction with the prompts, which were in English, although the order of paragraphs should ideally match the bullet points in the question. A model response would include development of ideas and a range of opinions. It was encouraging to see largely accurate usage of three tenses.

## SPANISH

The assessment focused on evaluating candidates' language proficiency, specifically in the areas of reading, translation and extended writing. Most candidates demonstrated excellent reading skills and were able to comprehend complex texts effectively, reflecting a strong grasp of language nuances and context. The translations submitted were generally of good quality. However, a notable observation was that some candidates lacked basic topic vocabulary and struggled with translating time phrases such as *el año pasado*, *el año que viene*. In the extended writing section, candidates exhibited a commendable range of vocabulary. Several candidates stood out by providing well-developed answers, incorporating opinions and justifications effectively. Manipulating the past tense posed a problem for many candidates. Having a basic understanding of phrases like *fui a, fue* + adjective would have improved their writing. However, there was a high level of confidence in handling the present and near-future tenses.

## LANGUAGE APTITUDE TEST

This paper was intended to provide evidence of linguistic skills for candidates who have not studied a European language (taught at Radley) for a significant length of time. In most instances, candidates have acquired English as a second language. The overall quality of responses was mixed.

The first question required a working knowledge of the various parts of speech. Most candidates were able to identify at least seven of the errors, although a couple of papers showed limited awareness of spelling, punctuation and grammar in English. Stronger candidates were able to correct each error with reference to specific categories such as adverbs, adjectives, possessive adjectives, tenses and pronouns. There was a wide spread of marks for this question.

The second question required candidates to study runes and to decode short fragments of written language with reference to the meaning of proper nouns and cognates in English. A key step was to identify repeated patterns, such as the sounds at the end of each syllable in "London" and the various instances of "-land". The most impressive papers evidenced a clear understanding of such links and contained concise, logical observations. Candidates who did not make the necessary connections scored low marks due to a series of consequently incorrect answers and lengthy observations of limited merit.





## **HISTORY**

This year's paper was designed to test reading comprehension and aptitude rather than prior learning or knowledge. The Scholarship exam comprised three questions, the first and second of which were tied to an unseen primary source. The third question invited candidates to discuss in the abstract the utility of learning History.

Impressive responses to the first source question developed a tripartite structure for each point made: a) an inference would be asserted, b) specific reference to the text which illustrated that inference would be quoted, c) analysis or explanation of that text would be offered. Candidates who scored most highly made 3+ inferences, supported by textual evidence and analysis/explanation.

Strong responses to the second question identified and evaluated both strengths and weaknesses of the source for the historian's craft, paying close attention to the question. Issues such as provenance, bias, intended audience and reception, motivation, limitations, publication and dissemination were creditable considerations. Candidates would be reminded of the questions historians use to interrogate sources, and to apply them critically.

Answers to the third question varied significantly, but the most reflective responses operated both in the abstract while being grounded with specific examples from candidates' past studies. This question tested argumentation and historical imagination.

On the whole, those who earned top marks not only addressed all of the aforementioned criteria, but expressed themselves clearly, with careful attention to spelling and grammar. History is largely a written discipline; the value placed in reading comprehension and writing fluidly (and well) cannot be understated.

## **GEOGRAPHY**

It was a pleasure to read a wide variety of responses to this year's Geography paper. It was clear that students had a good grounding in key geographical concepts and many wrote enthusiastic responses to the questions posed, especially around natural environments and sustainability.

The paper requires students to select three questions from a choice of six. The paper is designed to test candidates' ability to apply their geographical knowledge and understanding to new questions. Credit is given for referring to examples and knowledge of current affairs.

Students are advised to read the questions very carefully before selecting three. Questions vary in terms of topic and scope. Themes this year included climate change, traffic congestion, river flooding and population growth. Some questions require students to focus on causes, others relate to impacts and some to management. Students should BUG the question (Box command word, Underline key word and Glance back) to ensure their answers are focused.

It was pleasing to read about varied examples and references to current affairs. Students must remember to be selective here, using evidence to further develop their points, rather than writing all they know about a particular case study. They are also encouraged to include examples from their local area as well as other global examples.



Answers that scored the highest marks were clearly structured, included geographical terminology and were tightly focused on the key word/command words. They also used precise and relevant examples to develop their points. Students should be encouraged to arrange their answers neatly on the page, using extra lines to promote legibility, if necessary.

## **THEOLOGY**

There were three questions on the paper covering Christianity, Theology and Ethics. Candidates were required to answer one question. Candidates were also required to show both sides of the argument in the question, with clear references to religion. Five marks were awarded for spelling, punctuation and grammar in this paper.

The most important element that candidates should display is the ability to construct an argument which clearly answers the question. Poorer answers deviated from the question, referring to factual but irrelevant knowledge. For example, some candidates argued about corporal punishment rather than capital punishment in the Ethics question. Similarly, answers which did not make specific references to religious or ethical teaching tended to score poorly.

Stronger answers made clear references to specific religious teachings and/or beliefs. Specificity allows candidates to demonstrate a high level of knowledge and construct more sophisticated evaluative points. Vague references to religion did not allow candidates to put forward a convincing argument. The very best answers referred to the works of scholars; Bentham's principle of utilitarianism was successfully applied in answers to the question on capital punishment, for example. Stronger answers provided developed and justified reasoning for their assertions; these essays were balanced in favour of analysis rather than narrative.

Having considered both sides of the argument, it is strongly recommended that candidates select one side of the argument to support and provide justified reasoning for their judgement in a conclusion. The candidates tended to conclude with partial agreement or disagreement, but those answers which did not choose a side of the debate to support were unable to give a definitive answer to the question.

## **LATIN**

It was pleasing to have 34 candidates take this year's paper, which followed the same structure as the previous one. It was very challenging in places, with some sentences having greater complexity than what one could expect to find at GCSE. Given the difficulty of the paper, the wide range of marks (8%-84%) was not surprising, but most candidates gave a decent account of themselves, especially in grasping the overall sense of the translation passage of Section A. Clauses involving the subjunctive were done particularly well, whereas all but the most accurate candidates struggled with indirect statements. So, too, did deponent verbs create much confusion, invariably going unrecognised or translated as passive in meaning. The grammar comprehension which, on paper, was easier, was not done as well as Section A, perhaps a reflection of the effects of time pressure. Indeed, following a review of these scripts, the translation passage of Section A will be cut down by around a third next year. Although in the minority, those who did undertake the prose composition of Section C did so with success. Again, given the challenging nature of the Latin required – much beyond GCSE – the accuracy of these responses was impressive.



## **GREEK**

The paper was undertaken with varying success (ranging from 14%-78%). This was a challenging paper, even with the change in format designed to make the first half of the paper more accessible. Section A contained transliteration practice and the translation of some common verbs in mixed tenses. It was hoped that, by starting in such a way, candidates would be able to find their feet before tackling the sentences of Section B and the challenging passage of Section C. As was evident from transliteration errors and inaccuracies in translating the five common verbs in Section A, some candidates had clearly covered a lot of material quickly but had not been able to consolidate the basics. The sentences of Section B and the comprehension questions of Section C were undertaken with the most success. The two most common sources of errors were the mistranslation of verbs and the failure to recall vocabulary accurately. All the words on the paper came from the CASE vocabulary list, as they will next year. We encourage future candidates to learn diligently the words on this vocabulary list.

As ever, we very much welcome anyone who would like to “have a go” at the Greek paper in the future. All exposure to Greek is a good thing, and a low score would never be held against a candidate in the overall process.