



2020 Entry  
14+ Entrance Examination  
Guidelines and Sample Questions

English  
Maths  
Science  
Modern Languages

# 14+ Exam Guidelines

The 14+ Entrance Examination consists of papers in Mathematics, English, Science and a Modern Language. It is expected that pupils will be of above average academic ability at this age but the aim is to test potential rather than specific knowledge. Copies of past papers are not supplied but broad details of the content is provided below.

Candidates are expected to bring normal writing implements with them e.g. pen, pencil, ruler and rubber.

## 14+ English Examination (1 hour)

There are two sections to the examination:

### Section A: Reading (40 minutes)

Candidates will be given a short reading passage (fiction) and asked a series of questions based on this. This is based on the style of questions found at the beginning of the AQA English Language GCSE Paper 1. The questions will test explicit understanding of the passage, asking for fact retrieval, before asking for a response to language and literary techniques, requiring quotations and close engagement with these. The final section asks entrants to consider the structure of the extract, using quotations in support.

### Section B: Writing (20 minutes)

In Section B, pupils will demonstrate the accuracy and imagination of their writing by completing a short descriptive task. We are looking for engaging and lively ideas, varied and controlled grammatical features, and a broad, ambitious vocabulary that is spelled correctly. Paragraphing and appropriate punctuation will be used to make the sequence of events or ideas coherent and clear to the reader. We acknowledge that the response will be relatively short with just 20 minutes.

## 14+ Maths Examination (1 hour)

The written paper will consist mainly of short questions, with working and answers to be shown on the question paper. There is no choice of questions. Calculators are not permitted.

### SYLLABUS

#### NUMBER

- Whole number calculations including multiplication and division of 3 digit numbers by 2 digit numbers. Prime numbers, multiples and factors, squares and cubes, highest common factors, lowest common multiples. Indices (positive, negative, integer only)
- Negative (signed) numbers and their arithmetic
- Decimals: Addition, subtraction, simple multiplication and division. Simple recurring decimals
- The decimal system used with money; length (mm, cm, m, km); mass (g, kg); capacity (ml, l)

- Degree of accuracy: significant figures and decimal places. Estimating answers to multiplication and division problems
- Standard index form
- Manipulation of fractions (the four rules for regular and mixed fractions)
- Calculating percentages of quantities
- Ratios expressed as fractions, decimals and percentages
- Direct proportion
- Elementary problems involving time, distance and speed
- The 24-hour clock, timetables, travel graphs
- Conversion graphs

## **ALGEBRA**

- Introduction to algebraic notation: the four operations  $+$ ,  $-$ ,  $\times$ ,  $\div$  used algebraically
- Sequences and rules for generating them
- Using simple formulae or equations expressed in symbolic form
- Using coordinates in all four quadrants
- Solving linear equations
- Expressing a simple function symbolically
- Plotting cartesian coordinates to represent simple mappings
- Drawing graphs of linear functions (e.g.  $y=2x+1$ )
- Simple linear inequalities

## **SHAPE & SPACE**

- Measuring and drawing angles, properties of angles associated with intersecting and parallel lines and triangles, 3-figure bearings
- Recognising the following shapes: cuboid, cube, sphere, cylinder, cone, and pyramid
- Classifying types of quadrilateral
- Vocabulary of 3D solids: faces, edges, and vertices
- Calculating areas and perimeter of plane shapes: square, rectangle, triangle, circle
- Calculating volume of cubes and cuboids; volumes of prisms with rectangular, triangular or circular cross-sections
- Symmetry properties of plane figures (including interior and exterior angles of regular polygons). Simple constructions using ruler and compasses
- The theorem of Pythagoras (2D questions only)
- Use of map scales
- Conversion between units, both length and area (e.g. write  $12\text{m}^2$  in  $\text{cm}^2$ )

## **HANDLING DATA**

- Extracting data from diagrams; such as bar charts, pictograms, line graphs and frequency diagrams
- Constructing and interpreting pie charts
- Collecting, grouping and ordering discrete data to create a frequency table
- Understanding and using the probability scale from 0 to 1
- Listing all possible outcomes of an event and simple probabilities
- Averages: mean, median, mode. Spread: range

## 14+ Science Examination (1 hour)

### SPECIFICATION

The examination is based on the National Curriculum, with the emphasis on skills and processes. The aim is to test potential, as well as knowledge. Questions will test skills and the ability to apply understanding in unfamiliar settings.

### SUBJECT CONTENT

Questions will be spread equally between Physics, Chemistry and Biology, the subject content being based on Key Stage 3 of the National Curriculum. At King's students study the Key Stage 3 course through the Collins text book "KS3 Science Book 2".

### SUBJECT CONTENT

- Keeping healthy
- Studying disease
- Separating mixtures
- Atoms, elements & compounds
- Magnetism
- Sound and heat
- Life and death
- Variation in living things, classification of living organisms and food chains
- Cells, tissues, organs
- Photosynthesis
- Electricity
- Chemical reactions
- Reproduction in humans
- States of matter and changes of state
- Acids, alkalis and neutralization reactions in everyday life
- Energy changes

### SKILLS

- Graph plotting
- Identifying variables
- Fair testing
- Interpreting results of experiments and writing conclusions
- Familiarity with basic laboratory equipment

### EXAMINATION FORMAT

The examination is of one hour duration and has a maximum mark of 100. Mark allocations are provided throughout. Most questions are of a short answer style, but a few require an extended explanation or description.

*We would request that the candidates bring a calculator with which they are familiar, for use in the examination. The school will not provide a calculator.*

## 14+ Modern Languages Examination (45 minutes)

One written paper will be taken by every candidate. This paper can be chosen from French, German or Spanish:

### FRENCH

Pupils entering the school in Year 10 will be expected to be familiar with the following grammar points:

- Nouns: gender; singular and plural
- Articles: partitive article *du/de la/des* to indicate *some*
- Adjectives: agreement and position before and after nouns; colours; irregular adjectives
- Subject pronouns: *je, tu, il/elle* etc. Direct object pronouns *le/la/les*
- Verbs: infinitives; regular and irregular verbs in the present tense; *faire, aller, être* and *avoir* in the present tense; *aller* with infinitive to indicate future; perfect tense using *avoir* and *être*; reflexive verbs in present and perfect tenses; imperfect tense
- Time and frequency expressions
- Negatives with *ne... pas*
- Modal verbs: *pouvoir, devoir* and *vouloir*
- Questions: with and without question words
- Numbers/days/dates/times

Vocabulary for the exam will be drawn from the following topic areas:

- Daily routine
- Food and drink
- Personal information: birthdays, family, jobs, animals, pastimes and hobbies
- School: subjects studied, favourite subject, timetable
- Use of the perfect tense for narration in the past

Please prepare to do a piece of writing of 150-200 words on one or two of the following topics. You should aim to use a variety of different language, use more than one tense, and aim to write as accurately as you can. You can choose to include any information relevant to your chosen topics.

- Myself, my family and my friends
- My free time, hobbies and leisure
- Where I live
- My holidays
- My school
- My future plans
- The environment

### GERMAN

Pupils entering the school in Year 10 will be expected to be familiar with the following grammar points:

- Nouns: gender; singular and plural articles and cases - definite and indefinite articles; negative articles (*kein*); nominative (subject), accusative (object) and dative cases

- Prepositions: with the accusative, dative or both
- Adjectives: adjective endings after the definite and indefinite article; possessive adjectives (with accusative nouns)
- Pronouns: nominative pronouns; 'it'; *man*; words for 'you' (*du/ihr/Sie*)
- Verbs: infinitives; regular and irregular verbs in the present tense; *sein* and *haben* in the present tense; modal verbs; separable verbs; reflexive verbs; *sein* and present tense; imperatives; regular and irregular verbs in the perfect tense (also using *sein*, past participles, questions and separable verbs); imperfect tense (*war/hatte*); future tense (*werden*); present tense with future meaning
- Time and Frequency: time expressions; adverbs of frequency
- Word Order: normal word order; verb second; sequencers; time-manner-place
- *Weil/wenn/dass* and verb to end; *um...zu...*
- Questions - both with and without question words
- *Es gibt...*
- *(Nicht) gern, lieber, am liebsten*
- Numbers/Days/Dates/Months/Times

Vocabulary will be drawn from the following Year 9 topic areas:

- *Die Ferien*: seasons and activities; where you went in the holidays; describing a past holiday; places to stay; what you did (on holiday and at the weekend)
- *Einkaufen und Essen*: fruit and vegetables; ordering in a café; what you can buy in different shops; pocket money
- *Nach der Schule*: TV programmes and preferences; using the 12-hour clock; after-school activities
- *Gesundheit!*: parts of the body; illnesses and symptoms; healthy and unhealthy eating
- *Wir gehen aus*: accepting/declining invitations (and giving reasons); clothes; daily routine
- *Austausch*: what you want to do; German towns; shopping trips; school trips; giving information on a town

However, the following topic areas are covered during Year 8 and pupils would be expected to be familiar with them:

- *Hallo!*: introductions; self; age; where you live; spelling; school bag; birthday
- *Die Schule*: school subjects and opinions; timetable; telling the time; breaktime snacks; school uniform
- *Familie und Freunde*: family members; describing appearance and characteristics; pets
- *Freizeit*: sports; hobbies and favourite things; making arrangements
- *Mein Zuhause*: where you live - area and types of house; rooms and activities; describing rooms; furniture
- *Stadt und Land*: geography of Germany, Austria and Switzerland; weather; buildings in town; transport; directions; food and drink; money

Please prepare to do a piece of writing of 150-200 words on one or two of the following topics. You should aim to use a variety of different language, use more than one tense, and aim to write as accurately as you can. You can choose to include any information relevant to your chosen topics.

- Myself, my family and my friends
- My free time, hobbies and leisure
- Where I live
- My holidays
- My school
- My future plans
- The environment

## **SPANISH**

**Pupils entering the school in Year 10 will be expected to be familiar with the following language points:**

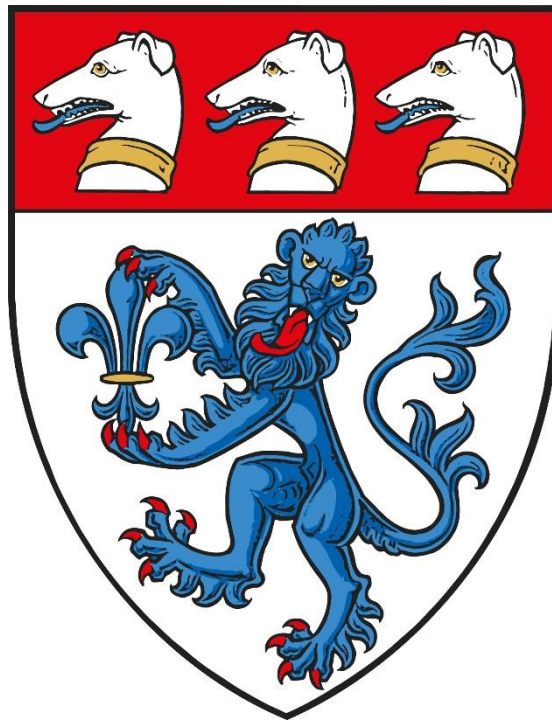
- Nouns: gender, singular and plural
- Articles: *el / la / los / las*
- Adjectives: agreement and position, colours, some irregular adjectives
- Subject pronouns: *yo, nosotros*, etc
- Verbs: infinitives, regular and irregular verbs in the present tense and some common radical changing verbs
- Verbs: reflexive verbs
- Time words and adverbs of frequency
- Negatives
- Some modal verbs: *deber, poder, querer*
- Questions: information questions with question word, yes/no questions
- Numbers, dates, times

**Vocabulary for the examination will be drawn from the following areas:**

- Leisure activities
- Daily routine
- School life
- Family life
- Places around the town

Please prepare to do a piece of writing of at least 150 words on one or two of the following topics. You should aim to use a variety of different language, use more than one tense, and aim to write as accurately as you can. You can choose to include any information relevant to your chosen topics.

- Myself, my family and my friends
- My free time, hobbies and leisure
- Where I live
- My holidays
- My school
- My future plans
- The environment



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