TWENTY FIRST CENTURY SCIENCE

Paper 0608/01
Multiple Choice (Core)

Question Number	*Key*	*Question Number*	*Key*
1	**A**	21	**D**
2	**D**	22	**D**
3	**B**	23	**C**
4	**C**	24	**B**
5	**A**	25	**B**
6	**A**	26	**C**
7	**C**	27	**B**
8	**D**	28	**A**
9	**A**	29	**B**
10	**C**	30	**B**
11	**D**	31	**A**
12	**A**	32	**B**
13	**B**	33	**B**
14	**B**	34	**C**
15	**A**	35	**A**
16	**C**	36	**A**
17	**C**	37	**B**
18	**A**	38	**C**
19	**A**	39	**B**
20	**B**	40	**C**

The core paper gave a good spread of marks, with a lowest score of 17 and a highest of 33. The mean mark for the paper was 24. There was a very small entry for the core paper.

Candidates made good use of time during the examination with no questions being left blank. There were no ambiguous responses made.

Questions answered well

In broad terms, questions testing direct recall of knowledge were well answered.

Candidates answered questions well relating to

- genetic diagrams (1)
- variation in data (7)
- antibiotics (18)
- barriers to radiation (26)
- protein structure (35)
- organic farming (36)

- power stations (37)
- radioactive materials (40)

In addition, all candidates gained the mark in the following questions.

- moons (13)
- polymer properties (20)
- microwaves (27)
- food chains (30)

Questions that proved difficult

6 Most candidates chose the incorrect choices B or D, believing that calculating a mean or repeating the test were evidence of repeatability rather than recognising that the evidence is the narrowness of the range of the results.

32 Most candidates thought glucose reacted with water, rather than oxygen, during respiration.

34 Most candidates thought antioxidants stop the growth of micro-organisms rather than that they prevent the food from reacting with oxygen.

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Paper 0608/02
Multiple Choice (Extended)

Question Number	*Key*	*Question Number*	*Key*
1	**B**	21	**A**
2	**C**	22	**D**
3	**A**	23	**B**
4	**C**	24	**A**
5	**A**	25	**C**
6	**A**	26	**C**
7	**C**	27	**D**
8	**B**	28	**D**
9	**C**	29	**B**
10	**A**	30	**C**
11	**C**	31	**B**
12	**B**	32	**B**
13	**B**	33	**B**
14	**A**	34	**B**
15	**B**	35	**C**
16	**C**	36	**B**
17	**C**	37	**B**
18	**B**	38	**B**
19	**D**	39	**C**
20	**A**	40	**A**

The extension paper gave a spread of marks, with a lowest score of 11 and a highest of 39. The mean mark for the paper was 24. There was a small entry for this paper.

Questions answered well

In general, questions testing direct recall of knowledge were well answered.

Candidates answered questions well relating to

- carriers for genetic conditions (2)
- diagrammatical representation of molecules (10)
- moons (13)
- fat and heart attacks (16)
- polymer properties and structure (22)
- interpretation of equations (25)
- the ALARA principle (28).

In addition, almost all candidates answered some questions correctly.

Specifically questions relating to

- diagrammatical representation of molecules (9)
- food additives (34).

Questions that proved challenging for some candidates.

6 In common with the core paper, most candidates chose responses B and D, both of which are means of *testing* reliability. The question asked for *evidence* of reliability. The correct answer is A.

31 This was a challenging question because it was a 'negative' question, which may have confused some candidates. The correct answer was B, most chose D believing that the complex molecules were least likely to come from somewhere other than Earth.

38 Most candidates found it difficult to interpret the information, incorrectly concluding that the source produced only beta particles. As the lead did not stop all radiation, the source must contain beta and gamma.

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Paper 0608/03

Paper 3 (Core Written)

Key comments

The entry for this paper was quite small, making it difficult to give overall comments. More able candidates showed knowledge and understanding in some areas of the specification, though rarely in all areas or in depth. Weaker candidates evidenced patchy knowledge and often a superficial understanding of key concepts. Many candidates clearly had difficulty in understanding what was required by the question. Interpretation of simple data was generally good, but more complex data proved more difficult to many candidates. Simple calculations were usually performed well. Many of the 'ideas about science' concepts were not well understood.

Comments on specific questions

Question 1

Interpretation of the data was generally good.

(a) (i) All candidates gave the correct range.

(ii) Most candidates gave the correct times.

(iii) Many candidates realised that at these times people travel to and from work but few related this to the number of cars in the town.

(b) Only the more able knew that both gases derive from the air.

(c) Most candidates could name a relevant pollutant gas. Sulfur dioxide was a common incorrect answer.

Question 2

Most candidates could calculate a best estimate but showed weak knowledge of the effect of plasticiser on polymer molecules.

(a) Most candidates correctly calculated the mean as the best estimate.

(13+11+12+13+14+12)/6 = 12.5 mm

(b) (i) More able candidates realised that adding plasticiser increases the stretch of the polymer. Others mistakenly referred to flexibility or strength.

(ii) Even the more able candidates had little idea of how a plasticiser changes polymer properties. Few used ideas of forces correctly and some did not even mentioned forces.

(c) Most candidates gave sensible answers based on comfort or ease of use.

Question 3

Few candidates showed much knowledge of this area of the syllabus.

(a) (i) Only the more able knew the digestion products of starch and protein. A variety of incorrect answers were seen, including fatty acids, minerals and cellulose.

(b) Few candidates could name a correct food type. Fast food was a common error.

(c) (i) Vague answers that gave no detail of the health problem or how it could be avoided were common. Only the most able gave logical, coherent answers.

(ii) Most candidates made a sensible suggestion to gain this mark.

Question 4

Most candidates showed only superficial knowledge and understanding.

(a) (i) Most candidates knew that planets are bigger than asteroids to gain this mark.

(ii) Few candidates gave a correct difference. Many incorrectly based their answer on whether the object would fall to Earth.

(b) (i) Only the more able referred to clouds of dust blocking out the sunlight. A common error was to think that the asteroid fell on an area populated by dinosaurs.

(ii) Few candidates could make a sensible suggestion.

Question 5

Most candidates gained marks across this question.

(a) (i) Most candidate plotted the points correctly.

(ii) Only the more able could describe the trend correctly.

(b) (i) Most candidates correctly suggested carbon dioxide.

(ii) Few candidates gave two sensible suggestions, though most gained one mark for the idea of either more fossil fuels burned or deforestation. Mention of the ozone layer was a common error.

(iii) Most candidates gained one mark for mention of either flooding or drought affecting crops. Few gave two distinct ideas.

Question 6

Calculations were performed well but knowledge of this area of the syllabus was rather weak.

(a) Most candidates could name the three types of radiation but could not place them in the correct order.

(b) (i) Most candidates correctly worked out that 10% of the original activity remains.

(ii) More able candidates correctly worked out the time as 24 thousand years.

(c) (i) Few candidates presented a logical and coherent answer. Many referred to the benefits of recycling in general rather than benefits to this region.

(ii) Few sensible suggestions were seen.

Question 7

Candidates generally gained some marks across the question, but few showed sound knowledge and understanding.

(a) White blood cell was the most common, and correct, answer.

(b) The idea of protection from infection or that the baby could not produce antibodies gained this mark for most candidates.

(c) Only the more able realised that each disease requires its own antibody. The idea that the mother produces lots of different antibodies and therefore passes them all to the baby was a common incorrect answer.

(d) (i) More able candidates had some idea of what a vaccination is, but few could gain both marks.

(ii) Only the most able knew that the baby would not produce its own antibodies before 12 weeks.

(iii) Few candidates could frame an answer related to society as a whole. Most simply suggested it stops babies getting ill.

(iv) Only the more able candidates made sensible suggestions.

Question 8

Candidates generally performed quite well in this question.

(a) Most candidates scored both marks.

(b) More able candidates could give one difference but others had little idea.

(c) (i) Most correctly suggested brain but few also suggested spinal cord. A variety of incorrect suggestions were seen, including eyes, heart and skin.

(ii) Most candidates gave a correct conclusion but few supported it with data.

Question 9

Not all candidates gave answers that followed logically from the questions.

(a) Candidates made suggestions related to the benefits of this procedure rather than giving an explanation.

(b) More able candidates gave sensible suggestions to gain one or both marks.

TWENTY FIRST CENTURY SCIENCE

Paper 0608/04

Paper 4 (Extended Written)

General comments

Most candidates were well prepared for aspects of the examination specific to 21st Century Science IGCSE, including the central nature of 'Ideas about Science'. The quality of English was good and most candidates were able to tackle mathematical aspects of the examination well.

In preparing for the examinations, candidates would be well advised to look carefully at the command words on each question to ensure that they are making the correct type of answer. In a number of places in this paper candidates either gave scientific explanations for a phenomenon when asked to comment on data or observations, or commented on data when a scientific explanation was required: this was particularly noticeable in both parts of **Question 5(b)** and both pats of **Question 7(b)**.

Another issue which candidates should note is that the degree of detail required in an answer is often indicated by the number of marks awarded: a two- or three-mark question is clearly expecting more detail that a single response.

Comments on specific questions

Question 1

Air pollution by cars

(a) and (b) Most candidates could identify the range and suggest good reasons for the existence of two peaks per day.

(c) Only the better candidates knew how nitrogen monoxide is formed in car engines, but most realised that this reacted with oxygen in the air to form nitrogen dioxide.

Question 2

Testing a new polymer

(a) Many candidates were handicapped in this question by a lack of clear expression. It was clear that many realised that the fibre diameter was a variable which needed controlling, but could not explain why.

(b) and (c) Most candidates could find the best estimate while ignoring the outlier, and were able to justify the real difference between the samples with reference to their ranges. Only the best candidates were able to explain the action of plasticisers in **(c)(ii)**.

Question 3

Food.

This was the most successfully-attempted question on this paper.

(a) Few candidates could recall that starches and proteins are broken down into glucose and amino acids respectively.

(b) Reference to food labelling to avoid health problems was well understood. Many candidates used diabetes as the example in both instances.

(c) Explanation of the reasons for obesity was well done.

Question 4

Near-Earth asteroids.

(a) Many candidates suggested mineral exploitation rather than the danger posed by an asteroid collision, and often suggested scenarios from Hollywood movies as remedies for approaching asteroids.

(b) Many candidates here recognised that the discovery of the Chcxulub, occurring at the same time, served to support the asteroid-collision theory of the destruction of the dinosaurs.

Question 5

Global warming

(a) Most candidates plotted the graph well and could draw a best-fit curve: for this very 'noisy' data a broad latitude was allowed on the curve that was drawn, provided that it was not forced to go slavishly through all the points.

(b) In this part, most candidates did not realise that Dr Chang's account should have described the scientific mechanism for global warming in terms of greenhouse effect. In **(b)(ii)**, only the very best were able to state that the very variable nature of the data, and the short time-span covered, allowed for very different interpretations.

Question 6

Radioactive waste.

This proved the most difficult question on the paper.

(a) Weaker candidates confused radioactive waste disposal plants with nuclear power stations, but many could suggest one advantage of having such a plant built in their area. Better candidates could also suggest a way in which the risk to the workers or the local population could be kept as small as possible.

(b) Only the best candidates realised that it takes two half-lives for the activity of a radioactive material to drop to one quarter of its initial value.

(c) Few candidates realised that part **(i)** was asking for the standard penetration method of identifying sources of alpha, beta and gamma radiation, but better candidates could explain the difficulties in storage of the two named isotopes in part **(ii)**.

Question 7

Infection and antibodies

(a) In part **(i)**, most realised that babies are protected by their mother's antibodies when small, and cannot be vaccinated until they make their own antibodies. In **(ii)**, only better candidates appreciated that vaccination is needed to protect others, as well as the infant being vaccinated, by preventing epidemics. Many could suggest reasons for making vaccination optional, rather than compulsory, in **(iii)**.

(b) Better candidates were able to identify two differences in response to the two exposures – the more rapid production of antibodies and the greater concentration produced – and to explain them in terms of the response of the immune system.

Question 8

Nervous and hormonal communications systems

(a) Most candidates could give at least one example of nervous communication and the response to a stimulus was well described. Analysis of the data for vertebrates and invertebrates was only completely answered by the better candidates, and many did not actually refer to the data in their answers.

(b) The widespread nature of hormonal response was generally poorly understood in this part, although the rapid response of the nervous system was often well explained.

Question 9

Stem cell therapy.

This question was well attempted by most candidates.

(a) Most candidates realised that stem cells could become different types of cells, and the better candidates knew that this was due to their being unspecialised.

(b) Most could suggest at least one reason why people might oppose stem cell therapy; usually expense or a conflict with religious opinion.

TWENTY FIRST CENTURY SCIENCE

Paper 0608/05

Paper 5 (Analysis and Interpretation)

Key Comments

Candidates should be reminded to read the questions carefully to understand what the question is actually asking. Also, candidates should not restate the question in their answer.

General comments

Most candidates attempted all questions on the paper. There was no indication that candidates were short of time. **Questions 3(a), 3(b), 5(b), 5(c)** and **5(d)** proved to be more accessible to candidates, with **Questions 1(c)(ii), 2(b)(ii), 3(d)(ii) and 4(c)** causing the most difficulty. Questions requiring knowledge of Ideas about Science were generally well answered and the standard of written English was very good.

Comments on specific questions

Question 1

(a) Many candidates struggled with this question but a significant number were able to identify that fossils allow us to see the features of an organism and observe changes in these features over time.

(b) (i) A small number of candidates were able to clearly define 'common ancestor' but many candidates did not clearly explain what is meant by the word 'ancestor' and instead just restated the question, e.g. 'it is an ancestor common to more than one organism'.

(ii) This was generally well answered by candidates.

(iii) Many candidates made reference to the use of DNA evidence and a significant number identified the need for studying more fossils.

(c) (i) The majority of candidates were able to correctly interpret the diagram and identify that monkeys and apes diverged 28 million years ago.

(ii) Some candidates found this question difficult but many were able to explain that the skull provides new evidence which would reduce confidence in the original idea – the new skull suggests that apes and monkeys diverged earlier than 28 million years ago.

(d) (i) Most candidates identified *Australopithecus* as the extinct species.

(ii) Candidates identified the arrival of new predators and disease, or increased competition as the main reasons for the extinction of *Australopithecus*.

(e) Many candidates identified the need for organisms to adapt to changes in the environment. Few were able to describe how this might then lead to the evolution of new species.

Question 2

(a) The majority of candidates successfully drew layers within the circle given and labelled the central circle as the core. Few could correctly label the mantle and the crust and a few did not really understand what the question was asking them to do and did not refer to core, mantle or crust.

(b) (i) Candidates were able to state that there was insufficient evidence to support Wegener's theory. Some of the more able candidates had a clear understanding of Wegener and knew that he was an outsider to the group of scientists and that his ideas were therefore not respected by others.

(ii) Most candidates found this question difficult but there were some excellent answers which referred to the eruption of magma through the sea floor and the sea floor becoming larger.

(c) (i) A significant number of candidates linked the movement of the earth to the cracking or collapse of buildings. It was not enough to just state that the buildings were damaged as this was given in the question.

(ii) The majority of candidates were able to state an improvement to building structure that would reduce damage caused by earthquakes. These included descriptions of rubber bearings, for example.

(d) Many candidates referred to evacuation plans and the idea of educating people so that they would be prepared for the earthquake. Fewer candidates were able to explain how their suggestion would help people in terms of reducing injuries or the number of people killed.

(e) (i) The majority of candidates were able to link the increased release of radon gas to increased earth movements and hence the greater risk of an earthquake occurring. Far fewer made reference to the need for constant monitoring so that these increases could be identified.

(ii) It was pleasing to see a large number of candidates engage with the data and attempt to explain whether an earthquake was imminent. Perhaps surprisingly, few candidates actually stated that the reading on day 7 was the greatest. Far more candidates identified that a similar increase in reading had occurred on day 3 but had not then led to an earthquake. A significant number of candidates identified that there was no convincing pattern in the data and hence it was difficult to predict whether an earthquake would occur.

Question 3

(a) (i) Most candidates correctly read the scale on the measuring cylinder and identified that 43 cm^3 of alkali remained in the tube.

(ii) As with part **(a)(i)**, this was well answered by the majority of candidates.

(b) It was pleasing to see that this question about correlations was well answered. This is an Ideas about Science concept and candidates clearly had a good understanding of this.

(c) Most candidates identified that there would be a colour change, and in many cases this was described as a green colour. Fewer candidates made reference specifically to the use of an indicator.

(d) (i) This was poorly answered on the whole, although a few candidates identified the use of a measuring cylinder with finer divisions as an appropriate piece of apparatus.

(ii) This was not well answered by most candidates. It was apparent that some had the correct idea, but answers were not well expressed and not explicit enough for the mark to be awarded.

(e) This question also assessed one of the Ideas about Science concepts and it was pleasing to see that candidates could identify why repeating an experiment leads to more reliable results. There were lots of references to the identification of outliers, and the calculation of a mean (from more than one result).

Question 4

(a) Many candidates found this question difficult. These types of question, which ask for experimental methods, expect candidates to describe how to use the equipment to obtain the results shown. In addition, marks are awarded for identifying that the process should be repeated. This idea was rarely seen in candidate responses.

(b) Some candidates made reference to the different sizes of the rocks but many found this question difficult.

(c) This question caused significant difficulties for many candidates. Some were able to recognise that the radioactivity of B was higher than might be expected from the size of the rock. Most did not realise that the only valid conclusions and comparisons could be made between rock A and rock E because they were the only rocks of the same shape and size.

(d) (i) This was well answered with most candidates choosing a thermometer as their additional piece of apparatus.

(ii) Few candidates could describe how to use the thermometer and many did not realise that they would need to measure the temperature and the radioactivity of the rocks to see if there was any pattern.

Question 5

(a) The most common correct answers here were using the same amount of cotton wool and the same size of plastic dish. Several candidates did not understand that the question was asking for variables that should be controlled and incorrectly stated that this should include the amount of water and the distance travelled by the woodlouse.

(b) Most candidates removed the outlier and correctly calculated the best estimate as:

5 + 6 = 11/2 = 5.5

The remaining candidates included the outlier (and calculated the best estimate as 4) but still scored one mark.

(c) The majority of candidates were successfully able to label the axis. A few missed this question completely.

(d) Candidates were very good at plotting the points correctly.

(e) Generally the lines of best fit were good. Candidates need to use a ruler when drawing straight lines of best fit.

(f) Many candidates were able to extrapolate their line of best fit to make their prediction. Some candidates did not show their working on their graphs, despite being asked to, as in some cases, this meant the mark could not be awarded.

TWENTY FIRST CENTURY SCIENCE

Paper 0608/06

Paper 6 (Case Study)

Key Messages

As a reminder for all Schools, the November 2013 exam sitting will be the last opportunity for candidates to be entered for this syllabus.

It would be helpful if details could be included, for the November sitting, about how each of the tasks used for assessment have been introduced and presented to candidates. It would also be helpful if candidates' work could be annotated showing where and why the marks were awarded to support the moderation process.

There has been noticeable progress in the quality of work submitted over the years of this syllabus and in particular the performance levels shown in Strands B and D have improved. However, the reliability of the sources of information that candidates use in their Case Study reports is an area which is often not addressed sufficiently to merit the award of the top marks in Strand A. Strand C is still generally the weakest area of the assessment. Candidates often gather and report suitable information from a variety of sources but do not generally analyse, compare and evaluate the claims, opinions and scientific evidence. More individual input is required if the highest marks are to be awarded for Strand C.

The award of marks is based on the professional judgement of the science teacher, working within a framework of performance descriptions which are divided into strands and aspects of performance. Each aspect of performance within each Strand should be considered in turn, comparing the piece of work against the lowest performance description first, then each subsequent higher one in a **hierarchical** manner until the work no longer matches the performance description. For Strands B or C, where candidate performance exceeds that required by one performance description, but does not sufficiently match the next higher one, the intermediate whole number mark should be given. Thus, the level of performance in each aspect is decided. The single, overall, mark for the whole strand is then determined.

General comments

Case Studies

The purpose of the Case Study is for candidates to gather together claims, opinions and evidence about a controversial issue in science. Candidates should use their scientific knowledge and understanding of the Ideas about Science (IaS) to compare and evaluate the evidence that they have collected so that they can form their own conclusions and make appropriate recommendations for future action. Case Studies are always best formulated in terms of a question to provide a focus in an area of controversy. For example, 'does air pollution cause asthma?' rather than just 'asthma'. A question will encourage candidates to look for different opinions and views, and to consider the underlying evidence and the reliability of sources. The Case Study is not a report on a topic but a critical analysis of a controversial issue. The key point is that the Case Study question must invite debate and discussion of both sides of the case and be firmly embedded in a scientific context so that candidates can use their scientific knowledge and understanding to produce a balanced and informed account. It is this latter aspect which many candidates found the most difficult.

Some typical Case Study titles:

Are mobile phones a risk to health?
Is global warming due to human or natural causes?
Is nuclear power the answer for our future energy needs?
Are human vaccines safe?
Should human cloning be allowed?
What is the best diet?
Does the use of insecticides outweigh the risk?
Are humans accountable for the extinction of animals?

Assessment

Strand A: Quality of selection and use of information.

A(a): The key aspect here is for candidates to use sources of information to provide evidence for **both sides** of their case study. If no sources are identified by the candidate then a maximum of one mark will be allowed. To meet the three mark performance description, candidates must select sources which represent a variety of different views or opinions. It does not matter if all the sources are from the Internet although a balanced use of websites, textbooks and journals is to be encouraged. Whatever sources are used by candidates they must assess their sources in terms of reliability in a meaningful and appropriate way if four marks are to be awarded. The majority of candidates achieved three marks in this aspect but did not address the issues of reliability sufficiently to warrant four marks.

A(b): If only one or two incomplete references e.g. website homepages, are given then one mark should be awarded and of course if no references are given then zero marks. For three marks candidates must include a number of complete references to the exact URL address of the webpage which would allow direct access to the source of information, and when referencing books, title, author and page references would be required. Most candidates achieved three marks in this aspect. Candidates awarded four marks included the date that the site was visited and also some information about the nature or sponsorship of the site.

A(c): Candidates may copy some, but reasonably short, material from their sources. However, it is essential that they make this completely clear with the use of quotation marks, use of a different font or colour highlighting etc. A number of candidates did not make it clear what information was copied and what was their own analysis. The better candidates included references or specific links within the text to show the source of particular quotations including details of the author as well as the institution.

Strand B: quality of understanding of the Case.

In simple terms this strand assesses candidates' ability to describe and explain the underlying relevant science and to recognise and evaluate the scientific evidence on which any claims are based (IaS 1, 2 and 3). Many candidates achieved high marks for this Strand.

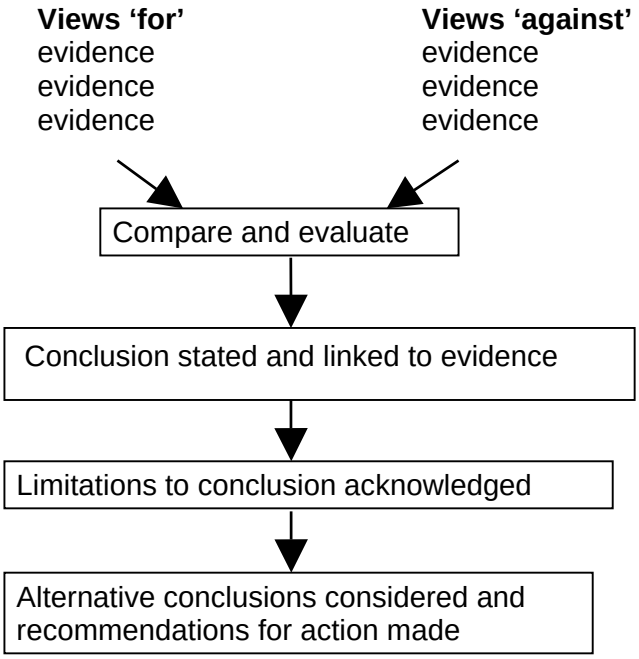
B(a): Candidates often describe the relevant background science in the introduction to their case studies, with the more able candidates going to a greater depth and detail. However, only the most able linked their scientific knowledge and understanding to the claims and opinions that they had found from their sources. For topics which are related to course modules, it can be taken as a general guide that six marks requires all that is available in the candidate book. The seventh or eighth mark will come either from **applying** this correctly to the case, or for finding and explaining some more specialised knowledge.

B(b): Candidates were awarded four marks if they were able to recognise and extract relevant scientific content and data from their sources. Candidates who were awarded six marks referred to the evidence base of the various claims and opinions e.g. data from research studies, a collection, survey or review of existing data, a computer simulation etc. Candidates obtaining 7 or 8 marks looked more critically at the quality of the evidence using terms such as 'reliability' and 'accuracy'. When considering issues of reliability of sources of information, the nature of the publication, the status of the author and the author's affiliation or institution should be considered. When discussing reliability of data, the range and nature of the sample size, the validity of the experimental method used and the repeatability of results should all be considered. Many candidates matched the requirements for six marks but very few were awarded seven or eight marks.

Strand C: quality of conclusions

In this strand candidates should consider aspects of IaS 5 about actual and perceived risks and the ALARA principle and in IaS 6 about how society should respond.

The aspects for Strand C can be summarised in the following simple flowchart



Most candidates could sort the information that they had gathered into views 'for and against', sometimes in a tabular form if appropriate. Those who just listed it in this way were awarded four marks. Better candidates started to compare and balance arguments against one another in both their 'for and against' list and were awarded six marks. The best candidates began to analyse and evaluate the claims and opinions, describing their own viewpoint or position in relation to the original question and justifying this by reference to the sources. Alternative conclusions should be considered where appropriate and recommendations for future action should also be included. This Strand proved the most difficult for the majority of candidates.

Strand D: quality of presentation

D(a): Most reports included a table of contents, numbered pages and headings/sub-headings to provide the necessary structure to help guide readers quickly to particular sections and this matched the three mark performance description.

D(b): Suitable diagrams and graphics should be incorporated as appropriate to clarify difficult ideas and encourage effective communication but the visual impact was often variable. If there are no decorative or informative images included then zero marks is awarded. If one image is included, a decorative front cover or other low level attempt to add interest then one mark is appropriate. Two marks would be awarded for the inclusion of decorative images only or perhaps for the minimal use of informative images. Three marks would be given for including a variety of informative illustration e.g. charts, tables, graphs, or schematic diagrams and four marks if this is fully integrated into the text, referred to and used. Too often downloaded images from the Internet were not clear, too small and not referred to in the text. Most candidates were awarded two or three marks in this aspect but very few securely matched the four mark criteria.