2021 Nutrition Subject Assessment Advice

Overview

Subject assessment advice, based on the 2021 assessment cycle, gives an overview of how students performed in their school and external assessments in relation to the learning requirements, assessment design criteria, and performance standards set out in the relevant subject outline. They provide information and advice regarding the assessment types, the application of the performance standards in school and external assessments, and the quality of student performance.

Teachers should refer to the subject outline for specifications on content and learning requirements, and to the subject operational information for operational matters and key dates.

School Assessment

Assessment Type 1: Investigation Folios (30%)

For a 20-credit subject, students conduct one design practical investigation and one investigation with a focus on science as a human endeavour.

When submitting student work online it is important to include the relevant task sheet and highlighted performance standards that correlates with the grade allocated for each task. The development of clear, well-structured, and informative task sheets that allow students to demonstrate knowledge and apply understanding of concepts to real life scenarios is also advised.

Design Practical Investigations

Teachers are encouraged to take time at the start of the year to provide guidance and scaffolding for students to be able to successfully analyse and interpret results and apply nutritional theory to their findings, and thus present correct reports.

The more successful responses commonly:

* provided detailed justification in their design using an appropriate number of pages (e.g., although a page limit is not specified in the Stage 2 Nutrition subject outline, four pages is ample). The justifications were generally in a different colour (e.g., red) to the main text highlighting their presence (IAE1, KA4)
* constructed hypothesises using appropriate scientific conventions *rather tha*n forms such as: “I guess that X will happen” and used appropriate nutrition terminology to provide valid reasoning (IAE1)
* identified valid variables
* and justified how the independent variable will be manipulated and how many times
* how the dependent variable will be measured including the collection of sufficient data
* how controlled variables will be kept constant and justified why (due to their possible effect on the data)
* although, not required (as not specified in the Stage 2 Nutrition subject outline), several students identified uncontrolled variables explaining why they cannot be controlled (IAE1)
* produced a design which included a detailed list of materials and a method in a well-structured format and with sufficient detail that it could be implemented without further information. There were also justifications for the materials chosen and the steps in the method suggested. For example, reasons for choosing a particular ingredient as a substitution of another, or a specific swabbing technique when applying a sample on an agar plate (IAE1)
* included a blank data table with correct columns and headings (including units) that could be used to record the data collected. This provides evidence of both an understanding of sample size, measurement to be made and representation of data (IAE1, IAE2)
* made it clear where the design finished and where the report of their investigation began (KA4)
* a list of materials and method was only provided in the report if different to their design, and was changed into past tense (KA4)
* represented their data in a simple, concise manner using appropriate conventions for tabulation and graphing including labels and placing all raw data in the appendix (IAE2)
* wrote analyses of their data which were logical and critical, rather than essentially just describing what the data table and/or graphs showed. They referred to specific data points or specific trends in their analysis and linked the trends to relevant nutritional concepts. They made logical conclusions with clear justification based on the data they had collected (IAE3)
* undertook critical evaluation of the procedure they had used in their investigation by considering the likely random and systematic errors, *rather than* noting that they ran out of time, made mistakes reading measurements or dropping equipment. They connected errors to the effect they had on the data and used examples from the raw data to demonstrate the presence of random errors. Successful students also linked how these errors could affect the reliability, precision, accuracy, and validity of the results (IAE4).

The less successful responses commonly:

* failed to use a suitable sample size and offered sparse instructions for the method (IAE1)
* represented data using tables (IAE2) which:
* did not employ appropriate column and row structure
* repeated units in each cell rather than in the heading of the column
* lacked a column for the average
* used a random mix of significant figures, although the number of significant figures is not specified in the Stage 2 Nutrition subject outline; the figures used should remain consistent throughout
* graphed results (IAE2) with:
* incorrect scales
* lack of labels or incorrect labels, with not the appropriate units
* incorrect type of graph according to the data obtained. For example, using a bar graph when a line graph should be used, using a dot-to dot graph when a line of best fit should be used
* misunderstood the effects of random errors (precision and reliability) and systematic errors (accuracy and validity) and did not clearly explain their possible effect on the data. They referred to aspects of the procedure such as running out of time or not having enough equipment, or group members not making correct reading. Some students identified valid sources of random and systematic errors and displayed these in a table, which did not allow for a detailed and logical evaluation of these factors on the data (IAE4)
* referred to strengths and weaknesses (IAE4)
* used personal pronouns in analysis of results, evaluation of procedures and conclusion and justification sections (KA4)
* exceeded the specified word count (1500 words) in their investigation report (KA4). Reasons for this included:
* putting an excessive amount of background research into their introduction
* repeating the information in the data tables and/or graphs by describing them again in words rather than summarising the trend before analysing them
* discussing improvements or enhancements, a requirement that is not in the current subject outline.

Science as a Human Endeavour

Science as a Human endeavour investigations were displayed in several ways including a traditional report structure or an article format. Students selected contemporary topics which were relevant to the Stage 2 Nutrition course.

The more successful responses commonly:

* used the words of the SHE key concepts (e.g., influence, development, application and limitation, and communication and collaboration) when discussing the interactions between science and society and put these words in bold, including ‘impacts’ also (KA3)
* a contemporary nutrition topic was explored in the Science as a Human Endeavour reports, which were well referenced and clearly linked it to one of the SHE key concepts. The most common SHE key concepts which were discussed included influence and application and limitation (KA3, KA4)
* demonstrated nutritional knowledge that was relevant to the topic and was detailed enough to be at Stage 2 standard (KA1).

The less successful responses commonly:

* the selected Science as a Human Endeavours key concepts were not made clear when discussing the interactions between science and society. As well as this, there was little to no evidence of the potential impact on Society (KA3)
* selected a Science as a Human Endeavour key concept such as ‘Development’ as the focus of their investigation, then only gave a history of the technique or innovative direction rather than relating it to the interaction between science and society (KA3)
* addressed several SHE concepts superficially rather one or two in depth (KA3)
* dwelt too much on the nutritional background of the chosen topic in the SHE report instead of showing evidence of the interaction between science and society (KA3/KA4)
* selected very general topics, such as the gut microbiome or the effect of beef production on the environment rather than focusing on a piece of current research
* were more of an issue’s investigation with advantages and disadvantages than a science as a human endeavour investigation focusing on one or more of the SHE key concepts
* failed to meet the specified word count (1500 words) in their report, falling short and therefore lacking detail and evidence of the interactions between science and society (KA4).

Assessment Type 2: Skills and Assessment Tasks (40%)

For a 20-credit subject, students must complete three skills and application tasks, one which must be a case study. The most common skills and application tasks (excluding the case study) were timed tests completed online and a Food Recall assessment. The skills and applications tasks should be designed to enable students to apply their science inquiry skills and demonstrate knowledge and understanding of key nutrition concepts and learning.

The more successful responses commonly:

* represented their data in the case study in a simple, concise manner using appropriate conventions for tabulation and graphing including labels and placing all raw data in the appendix, including patient history, original and modified meal plans, and data obtained from programs such as FoodWorks (IAE2)
* formulated appropriate graphs in the case study demonstrating the difference between the recommended intake, original intake and modified intake of specific nutrients which were of importance to their health in reducing the risk of developing certain diet related disorders. These graphs were labelled and included in the main body of the report and under the relevant paragraph where students used the data to support their discussions and justifications (IAE2)
* interpreted the diet of a known individual to the student, demonstrating greater meaning and application of nutritional concepts to real world contexts (KA2)
* used sub-headings in the case study to indicate their interpretation and analysis of the patient’s original diet and modified diet (KA4)
* clearly and concisely discussed and justified how the intake of specific macro and micronutrients in the patient’s current and modified diet can lead to the development of specific symptoms and disorders or how they can reverse or manage these symptoms and disorders. Students referred to graphs and used data to support their justifications (KA1, KA2, IAE3)
* were able to show competency answering questions requiring lower order thinking skills such as ‘describe’, and ‘discuss’ to higher order thinking such as ‘apply’ and ‘critique’ (KA1, KA2)
* applied knowledge to evaluate and solve problems in both timed tests and the case study (KA2)
* used clear, subject specific terminology in a concise manner (KA4)
* included a range of support materials (for example, graphs and info graphics) to assist student achievement through interpretation, analysis, and application of information (IAE3, KA2)
* provided multiple opportunities for students to explore and answer SHE concept questions, including different formats than the traditional “discuss how this demonstrates one or more key concepts” (KA3)
* analysed data succinctly in timed test situations and the case study, thus showing their understanding of concepts (KA1, IAE3)
* provided more than a single 2–4 mark question in a timed test assessing a PSR (for example KA3 or IAE3). There should be enough evidence across the three skills and application tasks to discriminate between student evidence of different quality.

The less successful responses commonly:

* paraphrased the question in timed tests rather than answering it, or provided limited or generalised information in answering only part of the question (KA1, KA2)
* did not follow the explicit directions of a question (analyse, describe, determine, state etc.) (KA1, KA2)
* were unable to demonstrate higher order thinking due to question design (KA2)
* did not elaborate or justify answers in timed tasks or the case study (KA4)
* contained limited or poor use of nutritional terminology (KA4)
* did not recognise that, in short answer questions, parts within a question were related and hence did not make use of the stem of the question for their answers or for the following parts of the same question (KA1. KA2)
* used general terms to answer questions, rather than the correct nutritional terminology (KA4)
* were found in tasks that had a large proportion of basic ‘recall’ questions and straight forward ‘application’ questions and hence the students did not have the opportunity to demonstrate a high level of understanding (KA1, KA2)
* did not have sufficient opportunity to show that they understood in depth the interaction between science and society because the task included relevant questions worth very few marks (3-4 marks) or, in some instances, no SHE questions at all, which is recommended to be assessed in AT2 (KA3).

External Assessment

Assessment Type 3: E-Examination (20 credits)

The exam has a time length of 130-minutes, with a total mark of 100. The exam was made up of two sections containing both short-answer and analytical questions, including a case study question.

Section 1

Question 1

(a)(i)(1) and (2)

The more successful responses commonly:

* stated two clearly different and relevant reasons e.g. *cheap to purchase*, *adaptable to a number of different dishes*, *long shelf life*, *convenient storage* (not requiring refrigeration)
* provided detail in answer rather than stating one word e.g. *cheap to purchase*, rather than just saying ‘cheap’.

The less successful responses commonly:

* provided two reasons that were too similar to gain a mark for each, e.g. *long-shelf life* AND *long time to spoil*.

(a)(ii)(1)

The more successful responses commonly:

* most common micronutrient identified was Vitamin C.

The less successful responses commonly:

* incorrectly stated a macronutrient, such as proteina small number of students.

(a)(ii)(2)

The more successful responses commonly:

* clearly stated the effect of canning on micronutrient e.g. *canning of peaches reaches temperatures of 121oC degrading Vitamin C and reducing its content*.

The less successful responses commonly:

* missed the point of the question was the ‘effect of canning on the micronutrient selected’, but instead discussed the effect of canning on microbes
* discussed that water soluble vitamins would leach into the water of the tomato soup and baked beans, however failed to receive marks due to the liquid also being consumed. This answer was acceptable if the student discussed peaches and mentioned they would be drained prior to consumption.

(b)(i)(1) and (2), and (ii)(1) and (2)

The more successful responses commonly:

* correctly identified a nutrient for each food and clearly stated a function of that nutrient. The most common response for red meat was iron, with most correctly identifying its function as being a component of red blood cells. The most common nutrient selected for wholemeal flour was carbohydrates and the function being a primary source of energy.

The less successful responses commonly:

* stated a nutrient that was not present in the food e.g. *glucose in red meat*.
* did not provide appropriate information for the function of the nutrient e.g. *the function of iron is red blood cells*.

Question 2

(a)(i) and (ii)

The more successful responses commonly:

* used data appropriately from the table and clearly explained the health benefit or health concern that arose from the nutrient identified e.g. *Following a pescatarian diet provides more fibre* (33g) than an omnivorous diet (27g) which increases feelings of satiety and prevents over-eating, so more likely to remain in the healthy weight range and reduces the chances of an individual becoming overweight or obese, OR *A pescatarian diet provides 6g more fibre per day on average than an omnivorous diet …*

The less successful responses commonly:

* did not include any data from the table
* referred to a nutrient not listed in the table, e.g. *iron*
* were not specific enough in their detail, e.g. *saturated fat is bad for the heart*
* incorrectly referred to the pescatarian diet as plant based.

(b)(i)

The more successful responses commonly:

* clearly explained an impact on the environment, either positive (*fish farming can reduce commercial fishing, resulting in less fishing nets and therefore less impact on biodiversity*) or negative (*fish farming uses non-renewable fossil fuels to power machinery, contributing to climate change*)
* explained the process of the impact e.g. *high concentration of fish waste in a lake can lead to eutrophication*, *leading to an algal bloom*, *resulting reduced oxygen levels*, *impacting the biodiversity of the lake*.

The less successful responses commonly:

* explained an impact on the economy or diet, rather than the environment
* failed to add detail, e.g. *fish farming decreases biodiversity*
* incorrectly described an impact of other types of fishing, but not fish farming.

(b)(ii)

The more successful responses commonly:

* identified a processing technique e.g. *canning*, *vacuum packaging*
* explained how the technique makes the farmed fish safer for consumers e.g. *vacuum packaging the fish ensure oxygen levels are reduced*, *slowing bacterial reproduction and ensuring food safety*.

The less successful responses commonly:

* explained a fish farming technique instead of a processing technique, e.g. *putting the farm in water that is not contaminated*
* explained the impact on the environment instead of food safety e.g. *refrigeration decreases food waste that could go to landfill*.

Question 3

(a)(i)

The more successful responses commonly:

* explained that fortification was required by law (or was compulsory, or required), and that the nutrient was added to address a public health concern

The less successful responses commonly:

* repeated the information provided in the stem of the question
* were able to identify the need for adding nutrients but did not identify the legal requirement.

(a)(ii)

The more successful responses commonly:

* referred to FSANZ setting regulations/standards/guidelines for labelling, primary production, novel foods, etc.
* included detail in the description of the role e.g. *FSANZ sets labelling standards that must be followed to increase consumer safety such as allergen warning statements*, *storage instructions and use by dates*.

The less successful responses commonly:

* provided vague statements e.g. *FSANZ improves food safety*
* over-stated the role of FSANZ e.g. *checks every food product that is sold for contamination*, *to keep people safe*.

(b)(i)

*The more successful responses commonly:*

* suggested clear reasons why bread-making was chosen e.g. *bread is regularly consumed by a high percentage of the population*, OR *bread is cheap to buy allowing a high percentage of the population able to purchase*, OR *bread is widely accessible allowing a high percentage of the population able to purchase and consume*, AND *communicated how adding folic acid to bread-making flour would reduce Neural Tube Defects*, e.g. *allowing individuals to have high levels of folic acid*, *prior to and during pregnancy*, *reducing neural tube defects in the population*.

The less successful responses commonly:

* repeated information in the stem of the question that folic acid reduces NTD, but did not address the question about why it should be added to bread-making flour and not another type of food.

(b)(ii)(1) and (2)

The more successful responses commonly:

* provided two specific food sources from different food groups e.g. *broccoli*, *oranges*
* stated foods that are naturally rich in folate.

The less successful responses commonly:

* stated a group of foods, e.g. green leafy vegetables or legumes, rather than being specific
* stated a food source that has had folate added, e.g. vegemite.

(b)(iii)(1)

The more successful responses commonly:

* identified a micronutrient that needs to be increased, not just maintained, e.g. *iron*.

The less successful responses commonly:

* identified a macronutrient, most commonly protein, rather than a micronutrient.

(b)(iii)(2)

The more successful responses commonly:

* explained the reason for the increase in relation to pregnancy, e.g. *iron is required for RBC development and due to a higher blood volume during pregnancy more iron is required*.

The less successful responses commonly:

* did not include enough detail in their answer, e.g. *due to a baby present more iron is needed*.

(c)(i)

Identification of Indigenous Australians was correctly answered by the majority of students.

(c)(ii)

The more successful responses commonly:

* explained the trend would plateau eventually AND provided a reason for this, e.g. *not all individuals may consume the fortified bread and therefore numbers would be maintained*

The less successful responses commonly:

* stated that the trend would continue to decrease, without acknowledging that it cannot decrease past zero cases
* did not provide a reason for the decrease or plateau.

Question 4

(a)(i)

The more successful responses commonly:

* clearly stated that consumer wastage is higher in Europe than in Sub-Saharan Africa, using data from the graph in their response e.g. *consumer wastage in Europe (270kg per capita per year) is 100kg higher per capita per year, than in Sub-Saharan Africa which wastes 170kg per capita per year*.

The less successful responses commonly:

* did not refer to data from the graph or used data that was incorrect.

(a)(ii)

The more successful responses commonly:

* clearly indicated a difference between Europe and Sub-Saharan Africa and explained how it lead to greater consumer wastage e.g. *Europeans have more disposable income so food is seen as less valuable so they are more relaxed about food wastage than in Sub-Saharan Africa where income is less and food is seen as more valuable*.

The less successful responses commonly:

* used an incorrect reason e.g. *Europe has a greater population*
* did not fully explain their reason e.g. *Europeans have higher incomes*.

(b)(i)

The more successful responses commonly:

* used data from the graph as evidence for the trend e.g. *wastage from the production and sale of food is similar in all countries, being between 160-190kg per capita per year*
* other successful responses compared the trend of wastage from the production and sale of food with consumer wastage.

The less successful responses commonly:

* did not refer to data from the graph
* did not identify a trend and just stated the number of kg per capita per year wasted from the production and sale of food.

(b)(ii)

The more successful responses commonly:

* explained a clear reason why food is wasted at the production and sale stage, including referring to farmers being unable to sell fruits and vegetables that do not meet the cosmetic standards for appearance, size, colour set by supermarkets and retailers.

The less successful responses commonly:

* explained a reason for wastage by consumers, not at the production and sale stage
* re-explained the trend they described in (i).

Question 5

(a)

The more successful responses commonly:

* referred to a clear difference between 4–5-year-olds and 6-7-year-olds and explained how it would impact on screen time, e.g. *all 6-7-year-olds are at school for a large part of the day and would not have as much access to screens compared to 4-5-year-olds who are not all at school or kindergarten or childcare, who may play video games or watch TV more*

The less successful responses commonly:

* used improbable reasons, such as 4-5 year-olds not being able to move as much as 6-7 year-olds so needing to spend more time on screens
* described one reason that any children spend time on screens without accounting for the 4-5 year-olds spending longer than the 6-7 year-olds
* identified a reason for one age range without a comparison to the other range or reason for the difference in the age ranges for screen time.

(b)

The more successful responses commonly:

* clearly explained one role that vitamin D has on growth and development e.g. *increasing calcium absorption for growing bones and to reach peak bone mass*
* gave specific food sources that are high in vitamin D e.g. *sardines*, *mushrooms exposed to sunlight*
* discussed how vitamin D deficiency can lead to a disorder such as rickets
* discussed the link between spending more time on screens and less exposure to sunlight and explained the role of sunlight in the synthesis of vitamin D in the body.

The less successful responses commonly:

* misread physiological as psychological and tried to link to mental health
* gave foods that either do not contain vitamin D (e.g. *spinach*) or did not indicate the need for fortification (e.g. cereals)
* discussed osteoporosis as a diet-related health disorder that could develop in the child
* stated that sunlight is a source of vitamin D, rather than linking sunlight to the synthesis of vitamin D.

Section 2

Question 6

(a)(i) and (ii)

The more successful responses commonly:

* described a clear similarity or difference between males and females, as shown in the data.

The less successful responses commonly:

* stated a difference, in the section requiring a similarity (or vice versa)
* did not mention males and females, but rather gave a difference between age groups.

(b)

The more successful responses commonly:

* stated the full dependent variable – *prevalence of self-reported heart*, *stroke and vascular disease*.

The less successful responses commonly:

* stated one of the independent variables – age or gender.

(c)

The more successful responses commonly:

* explained how a larger sample size decreases the effect of random errors or in this case, participant variables on the data AND how this increases the precision and/or reliability of the data.

The less successful responses commonly:

* discussed that a higher sample size would increase accuracy, rather than precision
* incorrectly stated that random errors were decreased or minimised, rather than reducing the effect of random errors.

(d)(i) and (ii)

The more successful responses commonly:

* clearly identified a variable to be controlled, whether this variable would increase or decrease the prevalence of CVD, and described the process of how it does this
* chose a variable which has a direct and clear impact on the prevalence of CVD, e.g. *diet including saturated fat intake*, *number of hours of exercise*, *socio-economic status*.

The less successful responses commonly:

* incorrectly identified age or gender as a variable to be controlled. Both are part of the designed independent variable ‘Prevalence of self-reported heart, stroke, and vascular disease by age group and gender, 2017-18’
* chose a variable that did not link to prevalence, e.g. *whether a doctor or ‘self’ reported the diagnosis*
* partial marks were awarded for selection of clear variable, but many were unable to describe the link to increased or decreased CVD.

Question 7

(a)

The more successful responses commonly:

* clearly explained that saturated fatty acids have no carbon-carbon double bonds in the carbon chain, whereas unsaturated fatty acids have at least one carbon-carbon double bond in the carbon chain
* explained that saturated fatty acids have the maximum number of hydrogen atoms bonded to carbons in the carbon chain (the molecule is saturated with hydrogen), whereas unsaturated fatty acids have the potential to bind more hydrogens to carbons in the carbon chain (the molecule is unsaturated).

The less successful responses commonly:

* confused terms e.g. hydrogen atoms/molecules, or spoke generally about bonds, rather than carbon‑carbon bonds
* explained the physical nature of the fatty acids; solid/liquid at room temperature.

(b)

The more successful responses commonly:

* stated this fatty acid had multiple carbon-carbon double bonds e.g. *contains more than one carbon-carbon double bond and is therefore a polyunsaturated fatty acid.*

Less successful responses:

* confused terms as discussed in (a).

(c)(i)

The more successful responses commonly:

* referred to data of the number of double bonds e.g. *one compared to two double bonds* OR *low melting points of -5°C compared to higher melting point of 44.5°C*
* using data from the table and explained how this would impact melting point e.g. *linoleic acid contains two carbon-carbon double bonds compared to elaidic acid which contains one less, which causes linoleic acid to be bent in shape so greater separation between molecules and requires less heat energy to break bonds, therefore a lower melting point (or the opposite for elaidic acid is straight in shape, more saturated with hydrogen, more heat energy required to break the bonds and therefore melting point is higher)*.

The less successful responses commonly:

* no reference to data e.g. *elaidic acid requires more heat energy to break bonds and therefore higher melting point*
* explanation did not provide sufficient reasoning as to the difference in melting points.

(c)(ii)

The more successful responses commonly:

* provided reasoning for the use of trans fatty acids including taste, texture, or cheap and then linked to the benefit to the manufacturer e.g. *consumers purchase product due to desired taste and texture and therefore increased profits for the manufacturer or as cheap to purchase and use for manufacturer results in greater profit* OR *increased melting point ensures product is less likely to melt at room temperature which results is easy storage and less wastage and therefore less costly for the manufacturer*.

The less successful responses commonly:

* could state a reason for the inclusion of trans fatty acids in a product, but did not explain why this would benefit the manufacturer, e.g. trans-fats are cheap.

(d)(i) and (ii)

The more successful responses commonly:

* explained the impact on blood cholesterol in terms of whether it increased or decreased LDL or HDL cholesterol.

The less successful responses commonly:

* did not mention blood cholesterol at all, but may have explained that saturated fatty acids increase cardiovascular disease
* incorrectly referred to blood glucose levels or liver disease, rather than blood cholesterol levels
* incorrectly said that saturated fatty acids contain LDL cholesterol or omega-3 fatty acids contain HDL cholesterol.

Question 8

(a)

The more successful responses commonly:

* explained that dairy products have a high biological value/were complete proteins, which provide all essential amino acids.

The less successful responses commonly:

* discussed the amount of protein rather than the quality
* described the benefits of dairy unrelated to protein e.g. *provides calcium*
* discussed the benefits in providing protein and/or calcium required for calf.

(b)(i) and (ii)

The more successful responses commonly:

* identified an appropriate mineral e.g. *calcium*
* stated the function of the mineral in enough detail e.g. *calcium maintains bone density*
* provided a specific food example e.g. *sardines*.

The less successful responses commonly:

* identified a mineral that is not found in milk, e.g. *iron*
* identified a food group rather than a specific food e.g. *green leafy vegetables*.

(c)(i) and (ii)

The more successful responses commonly:

* stated two clear, specific and different nutritional benefits e.g. *high nutrient density, high in fibre, rich sources of water soluble vitamins such as vitamin C and folate*.

The less successful responses commonly:

* suggested two benefits that were very similar, e.g. *(i) high in fibre, (ii) high in soluble fibre*.

(d)

The more successful responses commonly:

* successfully compared fruit containing higher amounts of simple carbohydrates or natural sugars than vegetables and then provided an impact of simple sugars e.g. *fruits contain higher amounts of simple sugars than vegetables, if consumed in excess over long periods can lead to insulin resistance or type 2 diabetes*.

The less successful responses commonly:

* lack of explanation of the impact of simple sugars on the body
* identified that fruit contained simple sugars but no comparison to vegetables, or impact explained.

Question 9

The more successful responses commonly:

* correctly identified examples seen in the Source linked to one or more of the SHE concepts (Influence, Communication and Collaboration, Development, Application and Limitation) AND explained their importance to society – three examples were required to gain six marks.

e.g. *The production of meat free alternatives is limited due to the processing technology not yet available in Australia, preventing an estimated revenue of 6.6 billion dollars by 2030 which would greatly enhance our economy through both local purchases and export*. (This in one example – note three were required).

The less successful responses commonly:

* identified SHE concepts seen in the Source, but no importance to society explained
* identified and explained only one SHE concept
* repeated direct sentences from the article and did not provide expansion or explanation.

Question 10

The more successful responses commonly:

* justified the diagnosis of diverticular disease using multiple sources as evidence e.g. *source 4 the x-ray shows evidence of pouches which are as a result of the large intestine rupturing due to dry hard stools creating pressure on the walls*. (Note: this is only one piece of evidence, and multiple were required)
* recommendations identified and explained related to dietary and/or lifestyle changes, e.g. *increased fibre through greater vegetable consumption and an increased water consumption will allow softer stools as water binds with fibre, reducing transit time and decreasing constipation*.

The less successful responses commonly:

* identified incorrect diagnosis e.g. *obesity or Type 2 diabetes*
* sources were not referred to, or if they were, no link to diverticular disease was given
* confused understanding of diverticular/diverticulosis/diverticulitis when explaining diagnosis or making recommendations
* symptoms stated that they were linked to diverticular disease but contained no explanation
* appropriate recommendations were given, but no explanation on how it would resolve symptoms were given, e.g. *eat more vegetables which has fibre*.