

GCSE

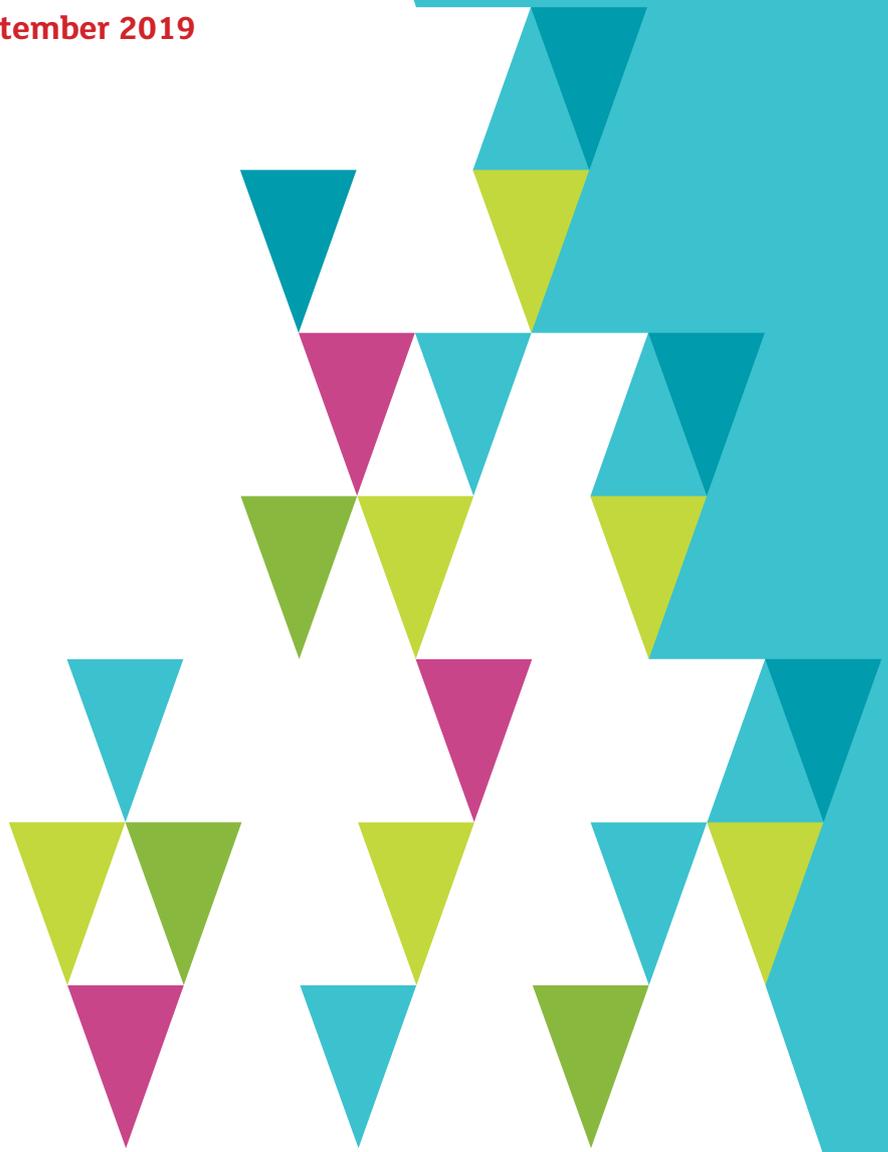


# CCEA GCSE Specification in Agriculture and Land Use

**Amended for first teaching in September 2019**

Updated: September 2019

For first teaching from September 2019  
For first assessment in Summer 2020  
For first award in Summer 2021 Subject  
Code: 0310





## Foreword

This booklet contains CCEA's General Certificate of Secondary Education (GCSE) Agriculture and Land Use for first teaching from September 2019. We have designed this specification to meet the requirements of the following:

- GCSE Qualification Criteria;
- Common Criteria for all Qualifications; and
- GCSE Controlled Assessment: Generic Regulations.

We will make the first full award based on this specification in summer 2021.

We are offering this specification as a unitised course. This offers flexibility and choice for teachers and learners.

The first assessment for the following units will be available in summer 2020:

- Unit 1: Soils, Crops and Habitats; and
- Unit 2: Animals on the Land.

We will notify centres in writing of any major changes to this specification. We will also publish changes on our website at [www.ccea.org.uk](http://www.ccea.org.uk)

The version on our website is the most up-to-date version. Please note that the web version may be different from printed versions.

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## 1 Introduction

This specification sets out the content and assessment details for our GCSE Agriculture and Land Use course. First teaching begins from September 2019, and we will make the first awards for this specification in 2021. You can view and download the latest version of this specification on our website at [www.ccea.org.uk](http://www.ccea.org.uk)

The specification builds on the broad objectives of the Northern Ireland Curriculum.

This specification supports students' development as individuals and skilled contributors to the land-based industries that are a significant source of economic activity and employment. It gives students a pathway into further studies and/or employment.

Our GCSE Agriculture and Land Use is an applied qualification in which students develop knowledge, understanding and skills through practical demonstration and/or in a context related to employability.

As with all GCSEs, the guided learning hours for this specification are 120 hours.

### 1.1 Aims

This specification aims to encourage students to:

- develop their scientific knowledge in relevant, enjoyable and work-based contexts;
- appreciate how knowledge of science can enhance productivity in the land-based and environmental sector;
- develop their awareness of complex relationships between humans and the environment in which they engage in agricultural activity;
- acquire core knowledge about the land-based and environmental sector and the skills required to work in it;
- develop a critical and analytical approach to problem solving within the context of work-related scenarios; and
- make informed decisions about further learning opportunities and career choices in the land-based and environmental sector.

### 1.2 Key features

The key features of the specification appear below:

- This is a unitised specification. This means that students have the opportunity to sit Unit 1 or Unit 2 in the first year of teaching. Unit 3 is the controlled assessment unit and can only be taken at the end of the course of study.
- Students can resit each unit once.
- This course offers opportunities to build on the skills and capabilities developed through the delivery of the Key Stage 3 curriculum in Northern Ireland.
- This course enables students to broaden their Key Stage 4 education and provides a platform for study of land-based subjects at a higher level.
- Students achieving a GCSE in Agriculture and Land Use can progress to Further Education, training or employment. (Please note that an award in this science subject alone is not considered sufficient to progress to GCE in Chemistry, Physics or Biology.)
- Students are given the opportunity to design and plan an experimental investigation based on realistic scenarios.

- This course encourages self-reliance. Students source and summarise relevant information, evaluate its quality and present it in a formal setting.
- Students develop an awareness and understanding of a range of careers available to them within the land-based and environmental industries.
- Teacher guidance and specimen assessment materials are available to accompany this specification.

### 1.3 Prior attainment

This specification builds on the knowledge, skills and understanding developed through the Northern Ireland Curriculum for science at Key Stage 3. Students are not required to have any prior experience of land-based and environmental activities/industries, but they may find such experience useful in their study of this specification.

### 1.4 Classification codes and subject combinations

Every specification is assigned a national classification code that indicates the subject area to which it belongs. The classification code for this qualification is 0310.

#### **Progression to another school/college**

Should a student take two qualifications with the same classification code, schools and colleges that they apply to may take the view that they have achieved only one of the two GCSEs. The same view may be taken if students take two GCSE qualifications that have different classification codes but have content that overlaps significantly. Students who have any doubts about their subject combinations should check with the schools and colleges that they wish to attend before embarking on their planned study.

## 2 Specification at a Glance

The table below summarises the structure of this GCSE course:

Content	Assessment	Weighting	Availability
<b>Unit 1: Soils, Crops and Habitats</b>	An externally assessed written examination consisting of a number of compulsory structured questions that provide opportunities for short answers, extended writing and calculations  <b>1 hour 15 mins</b>	25%	Every Summer from <b>2020</b>
<b>Unit 2: Animals on the Land</b>	An externally assessed written examination consisting of a number of compulsory structured questions that provide opportunities for short answers, extended writing and calculations  <b>1 hour 15 mins</b>	25%	Every Summer from <b>2020</b>
<b>Unit 3: Contemporary Issues in Agriculture and Land Use</b>	Controlled assessment  Students complete two controlled assessment tasks:  practical investigation task (20%); and research project (30%)  Teachers mark the tasks and we moderate the results.	50%	Terminal  Summer from <b>2021</b>

### 3 Subject Content

We have divided the course into three units. The content of each unit, as well as the respective learning outcomes, appears below.

Unit 1 and Unit 2 are related to the external assessment. Unit 3 is the Controlled Assessment Unit.

#### 3.1 Unit 1: Soils, Crops and Habitats

In this unit students gain an understanding of plants and recognise the key role of plants in the food chain, starting with an appreciation of soil composition and its importance in producing plant crops. Through practical work and fieldwork, students learn how to identify native species in a variety of habitats as well as developing knowledge of how plants contribute to maintaining a healthy and balanced environment.

The unit also aims to raise student awareness of the diverse types of farming employed across Northern Ireland and the impact that a range of factors has on the production systems used. Finally, students analyse the impact agricultural practices have on the natural environment and consider how modern farming can limit this impact, while enhancing biodiversity and promoting sustainability.

You can find more detail about managing the controlled assessment task in Section 6 of this specification.

Content	Learning Outcomes
<b>Composition of Soils</b>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• identify the four main components of any soil and state their relative proportions:               <ul style="list-style-type: none"> <li>– rock particles;</li> <li>– water;</li> <li>– air; and</li> <li>– organic matter;</li> </ul> </li> <li>• demonstrate knowledge and understanding of the physical characteristics, for example temperature, drainage, nutrient and water holding capacity, of different types of soil:               <ul style="list-style-type: none"> <li>– clay;</li> <li>– sand;</li> <li>– peat; and</li> <li>– loam;</li> </ul> </li> <li>• give examples of those crops that are most appropriate to each soil type; and</li> <li>• identify the factors contributing to soil type and location in Northern Ireland (limited to uplands versus lowlands).</li> </ul>



Content	Learning Outcomes
<p><b>Plant Biology</b></p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• demonstrate a knowledge and understanding of the conditions necessary for germination in relation to water, oxygen and temperature;</li> <li>• describe the process of germination with reference to radicle, plumule, root hairs and cotyledons;</li> <li>• describe the functions of the root, stem and leaves and relate these to the structure of a plant;</li> <li>• outline the process of photosynthesis;</li> <li>• state the word equation for photosynthesis;</li> <li>• comment on the significance of photosynthesis to maintaining life on earth, referring to the importance of rain forests as oxygen producers and carbon dioxide absorbers;</li> <li>• investigate the impact of water and temperature on seed germination;</li> <li>• investigate the effect of light and chlorophyll on photosynthesis;</li> <li>• demonstrate an understanding of annual, biennial, and perennial life cycles and recognise examples of each type;</li> <li>• label a diagram of a simple flower, stating the functions of each part;</li> <li>• describe the difference between wind-pollinated flowers and insect-pollinated flowers;</li> <li>• compare and contrast wind pollination and insect pollination;</li> <li>• use labelled diagrams to describe the process of pollination and fertilisation; and</li> <li>• evaluate the role of bees and insects in facilitating pollination and discuss the impact of recent declines in bee populations.</li> </ul>

Content	Learning Outcomes
<p><b>Crop Production (including grass)</b></p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• demonstrate a knowledge of the most common crops grown in Northern Ireland;</li> <li>• understand the need for continuous research into improving the quality of farm crops (Northern Ireland Recommended Varieties List);</li> <li>• identify a selection of <ul style="list-style-type: none"> <li>grasses: <ul style="list-style-type: none"> <li>– perennial ryegrass;</li> <li>– timothy;</li> <li>– scutch;</li> <li>– cocksfoot;</li> <li>– white clover;</li> </ul> </li> <li>weeds: <ul style="list-style-type: none"> <li>– chickweed;</li> <li>– docks;</li> <li>– dandelion;</li> <li>– creeping buttercup; and</li> </ul> </li> <li>crops: <ul style="list-style-type: none"> <li>– barley;</li> <li>– wheat;</li> <li>– potato; and</li> <li>– maize;</li> </ul> </li> </ul> </li> <li>• consider how the time of year and stage of grass maturity affects its nutritional value;</li> <li>• describe the process of silage-making practised on Northern Ireland farms: <ul style="list-style-type: none"> <li>– production;</li> <li>– harvesting;</li> <li>– preservation; and</li> <li>– storage;</li> </ul> </li> <li>• assess silage quality using indicators such as colour, smell and moisture levels; and</li> <li>• use oven drying techniques to compare the percentage of dry matter in a sample of fresh herbage or silage.</li> </ul>



Content	Learning Outcomes
<p><b>Care and Management of the Countryside (cont.)</b></p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• develop an awareness of the following habitats: <ul style="list-style-type: none"> <li>– improved grassland;</li> <li>– unimproved grassland;</li> <li>– deciduous or coniferous forests; and</li> <li>– wetland or bog;</li> </ul> </li> <li>• study one of these habitats in detail and use this study to: <ul style="list-style-type: none"> <li>– measure and record abiotic factors: <ul style="list-style-type: none"> <li>soil pH;</li> <li>light levels;</li> <li>wind speed; and</li> <li>temperature;</li> </ul> </li> <li>– explore the biodiversity of plants and animals, using appropriate sampling equipment;</li> <li>– use the data collected to explain the distribution of species within the habitat and evaluate the validity of this data; and</li> <li>– comment on how species found in the habitat, for example bluebells, gorse or curlew, are adapted to living there;</li> </ul> </li> <li>• evaluate the benefits, to farmers, the general public and future generations, of initiatives to enhance biodiversity, for example financial incentives, sustainable agriculture and public recreational areas;</li> <li>• describe how farmers can minimise the impact on ecosystems and improve biodiversity by: <ul style="list-style-type: none"> <li>– preventing soil erosion;</li> <li>– restoring and establishing hedges;</li> <li>– minimising soil compaction;</li> <li>– creating and managing habitats;</li> <li>– reducing reliance on chemicals; and</li> <li>– protecting plant/animal species;</li> </ul> </li> <li>• list a variety of plant species that can be used in hedging, for example hawthorn, hazel, dog rose, guelder rose, holly, rowan, oak or cherry; and</li> <li>• define the term ‘priority species’ and explain the importance in an all-Ireland and UK context.</li> </ul>



Content	Learning Outcomes
<b>Careers</b>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• understand the importance of the agri-food industry to the economy of Northern Ireland;</li> <li>• identify careers in the agri-food and land use sectors where the knowledge gained in this unit could be applied, for example farmer, grower, food processor, conservation worker, agricultural contractor, feed merchant, agri-sales, agricultural engineer or agronomist;</li> <li>• research the skills and qualifications required for two chosen careers in the agri-food and land use sector; and</li> <li>• understand the need for those working in the agriculture and land sector to have ongoing training in skills such as people management, business innovation, applied technology and health and safety.</li> </ul>

### 3.2 Unit 2: Animals on the Land

Over 60 percent of the population of Northern Ireland is classified as rural. Farming, along with land-based and environmental industries, makes a significant contribution to the local economy. This unit aims to educate students about the main animal species that are kept commercially in Northern Ireland. The unit focuses on the key aspects of cow, sheep, pig and poultry husbandry, including health, welfare and breeding. Students understand how decisions, for example about breeding and feeding, affect farm profitability. They learn how farming is responding to increasing environmental concerns about land use and consider aspects of sustainability at farm level, including farm diversification.

Through practical work students will be able to apply their knowledge and understanding to a realistic context.

Content	Learning Outcomes
<p><b>Livestock Farming</b></p> <p><b>Breeding and Reproduction</b></p> <p>Cows, Sheep and Pigs</p>	<p>Unless otherwise stated students <b>must</b> apply the learning outcomes below (as appropriate) to the study of cows, sheep, pigs and poultry.</p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• name the five basic freedoms of farm animals:               <ul style="list-style-type: none"> <li>– freedom from hunger and thirst;</li> <li>– freedom from discomfort;</li> <li>– freedom from pain, injury or disease;</li> <li>– freedom to express normal behaviour; and</li> <li>– freedom from fear and distress;</li> </ul> </li> <li>• outline five characteristics that can be used to assess the general health of an animal:               <ul style="list-style-type: none"> <li>– level of interest in food;</li> <li>– level of alertness;</li> <li>– skin and coat condition;</li> <li>– colour of urine; and</li> <li>– colour of mucous membrane;</li> </ul> </li> <li>• label a diagram of the male and female reproductive systems;</li> <li>• state appropriate gestation periods; and</li> <li>• describe different fertilisation methods:               <ul style="list-style-type: none"> <li>– natural fertilisation;</li> <li>– artificial insemination (AI); and</li> <li>– embryo transfer.</li> </ul> </li> </ul>

Content	Learning Outcomes
<p><b>Breeding and Reproduction (cont.)</b></p> <p>Cows</p> <p>Poultry</p> <p>Poultry and Cows</p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• evaluate the advantages and disadvantages of each fertilisation method;</li> <li>• describe the benefits of colostrum compared to ordinary milk;</li> <li>• describe the main features of a lactation curve;</li> <li>• discuss the effects of artificial lighting on breeding and egg production in poultry;</li> <li>• know how to incubate an egg (with concern for health and welfare);</li> <li>• label a diagram of the inside of an egg, to include albumen, egg cell, vitelline membrane, yolk, air pocket, shell and chalazae;</li> <li>• state the typical range of annual production for dairy cow milk and layer egg yield;</li> <li>• discuss, with examples, how selectively breeding farm animals using traits such as growth rate, productivity, conformation, hardiness and longevity has led to the development of different breeds;</li> <li>• give one example of a commercial breed and one example of a traditional breed;</li> <li>• discuss the importance of rare breeds in preserving the gene pool;</li> </ul>
<p><b>Health and Welfare</b></p> <p>Cows</p>	<ul style="list-style-type: none"> <li>• describe the cause, symptoms, prevention, and treatment of mastitis in cows, fluke in sheep, pneumonia in pigs and salmonella in poultry;</li> <li>• describe the effects of tuberculosis and brucellosis in cows;</li> <li>• explain the impact of tuberculosis and brucellosis on the agricultural economy;</li> <li>• outline how the government and other agencies try to limit the spread of tuberculosis and brucellosis; and</li> <li>• understand the need for farm biosecurity and describe methods of good practice, for example disinfectant foot baths.</li> </ul>



Content	Learning Outcomes
<p><b>Food Production and Processing (cont.)</b></p> <p><b>Farm Economics</b></p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• describe what happens at each stage of food processing from farm to supermarket shelf: <ul style="list-style-type: none"> <li>– quality control, pasteurisation, homogenisation (for milk);</li> <li>– quality control, slaughtering, butchering (for meat); and</li> <li>– quality control, cleaning, packaging (for eggs);</li> </ul> </li> <li>• describe methods used to preserve the products for later use, for example drying, vacuumed packing, tinning or curing;</li> <li>• define the terms ‘income’, ‘cost’ and ‘profit’, and calculate cost and profit margins;</li> <li>• use secondary data to calculate the cost and profit margins of an animal production system;</li> <li>• investigate the principal costs associated with keeping animals;</li> <li>• explain how farmers benefit from schemes such as the Northern Ireland Farm Quality Assurance Scheme and the Countryside Management Scheme, and identify the requirements of these schemes;</li> <li>• assess the advantages and disadvantages of the European Union financial support to farm businesses;</li> <li>• describe how the agricultural industry has adopted technology (such as electronic ID collars/tags, computer-based record keeping programs, pedometers for heat detection and Animal and Public Health Information System (APHIS)) and explain the benefits to farm businesses;</li> <li>• describe farm diversification and why it can be beneficial to the farmer and the economy; and</li> <li>• discuss ways that farms in Northern Ireland have diversified with particular reference to tourism, farm shops and niche premium food products such as ice cream, meat, cheese and yoghurt.</li> </ul>



Content	Learning Outcomes
<p><b>Pollution and Farm Waste (cont.)</b></p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• describe how farmers can reduce pollution from animal waste and effluent, referring to slurry application using a dribble bar or trailing shoe or shallow injection and dirty water irrigation;</li> <li>• explain how reed beds can be used to clean dirty water and assess the viability of using this system on farms;</li> <li>• demonstrate knowledge and understanding of how technology, such as GPS on tractors, allows for more accurate application of fertilisers and pesticides;</li> <li>• analyse how pollution affects water quality by using secondary sources of data, for example biological oxygen demand (BOD) values and invertebrate indicator species:             <ul style="list-style-type: none"> <li>– worms;</li> <li>– leeches;</li> <li>– mayfly nymphs;</li> <li>– damselfly nymphs;</li> <li>– caddisfly larvae; and</li> <li>– dragonfly nymphs; and</li> </ul> </li> <li>• discuss the potential to produce energy on farms through anaerobic digestion of animal waste.</li> </ul>

### 3.3 Unit 3: Controlled Assessment – Contemporary Issues in Agriculture and Land Use

In this unit students carry out a **practical investigation** (Task 1) and a **research project** (Task 2) into topics relevant to contemporary issues in Agriculture and Land Use. The two tasks must each be selected from a choice of three Task 1 titles and three Task 2 titles that we provide (see Appendix 2). We recommend that students spend no more than a total of 45 hours on the controlled assessment tasks.

#### Task 1

Students carry out a practical investigation relating to a topic relevant to contemporary issues in Agriculture and Land Use. The investigation provides students with the opportunity to apply their skills, knowledge and understanding, including that gained in Units 1 and 2 of the specification.

In this task students:

- plan an investigation and develop a risk assessment;
- carry out an investigation; and
- present a report.

The task is marked out of 60 of the total marks available for the unit.

Investigation	Learning Outcome
<b>Planning and Risk Assessment</b> (24 marks)	Students should be able to: <ul style="list-style-type: none"> <li>• develop a hypothesis based on the topic;</li> <li>• identify relevant practical technique(s);</li> <li>• identify appropriate equipment/apparatus;</li> <li>• justify the chosen methodology and <b>outline</b> the procedures they will use;</li> <li>• develop a risk assessment for each practical task, including ways to minimise the risk;</li> </ul>
<b>Data Collection</b> (16 marks)	<ul style="list-style-type: none"> <li>• carry out practical activities, considering the appropriate health and safety issues; and</li> <li>• accurately record their observations and findings.</li> </ul>

Investigation	Learning Outcome
<b>Analysis and Conclusion</b> (12 marks)	Students should be able to: <ul style="list-style-type: none"> <li>• interpret the results and present evidence-based conclusions;</li> <li>• link the results to the data and hypothesis;</li> </ul>
<b>Evaluation</b> (8 marks)	<ul style="list-style-type: none"> <li>• provide an evaluation of the investigation;</li> <li>• suggest ways that the investigation can be improved;</li> <li>• suggest areas for further research relevant to the investigation;</li> </ul>
<b>Investigation Report</b>  <b>Word Limit</b> <b>2000 Words</b> <b>Maximum</b>	Present the research findings in a report format as outlined below: <p><b>Title:</b> clearly identify the investigation;</p> <p><b>Introduction:</b> set out the hypothesis and aims of the investigation;</p> <p><b>Planning and Risk Assessment:</b> identify equipment, set out the methods used with reasons for the choice of practical method and risk assessment;</p> <p><b>Data Presentation:</b> present the findings using appropriate formats, including graphical forms, diagrams, etc.;</p> <p><b>Analysis and Conclusion:</b> interpret and discuss results and present reasoned conclusions, making reference to the hypothesis;</p> <p><b>Evaluation:</b> evaluate the investigation, comment on the reliability and accuracy of the results, and suggest areas for further research; and</p> <p><b>References:</b> reference all sources used, including internet sources.</p>

## Task 2: Research Project

Students research a topic relating to a contemporary issue in Agriculture and Land Use. The research will provide the students with opportunities to apply the knowledge and understanding gained in Unit 1 and Unit 2 to a realistic context.

In this task students:

- plan research into a contemporary issue in Agriculture and Land Use;
- carry out research using primary and secondary sources; and
- present a report.

The task is marked out of 88 of the total marks available for the unit.

Investigation	Learning Outcome
<p><b>Planning</b> (24 marks)</p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• identify the issues related to the chosen topic and choose one for further research;</li> <li>• justify choice of research methods;</li> <li>• identify sources (primary and secondary) of information;</li> </ul>
<p><b>Data Collection</b> (24 marks)</p>	<ul style="list-style-type: none"> <li>• obtain relevant information from primary and secondary sources;</li> <li>• carry out the research;</li> <li>• record research findings;</li> </ul>
<p><b>Conclusions: Analysis and Discussion</b> (24 marks)</p>	<ul style="list-style-type: none"> <li>• present and analyse findings; and</li> <li>• present conclusions based on their findings.</li> </ul>

Investigation	Learning Outcome
<b>Evaluation</b> (16 marks)	Students should be able to: <ul style="list-style-type: none"> <li>• present an evaluation of the research;</li> <li>• suggest ways that the research can be improved;</li> <li>• suggest areas for further research relevant to their chosen topic;</li> </ul>
<b>Research Report</b>  <b>Word Limit</b> <b>3000 Words</b> <b>Maximum</b>	Present the research findings in a report format as outlined below: <p><b>Title:</b> should be concise and clearly identify the specific issue to be investigated;</p> <p><b>Introduction:</b> should explore issues relating to the topic and set out the reasons for selecting your chosen issue. It should also identify the aim(s) of the research;</p> <p><b>Planning:</b> set out targets and deadlines, identify sources of information, should set out methods of data collection and justification of your choice;</p> <p><b>Data Presentation:</b> present the findings using appropriate formats, including graphical forms, diagrams, pictures, etc.;</p> <p><b>Analysis, Discussion and Conclusions:</b> present a discussion of the issue and reasoned conclusions based on the research;</p> <p><b>Evaluation:</b> evaluate all aspects of the task, make recommendations for improvements in the research and for possible future research on the topic; and</p> <p><b>References:</b> reference all sources used including internet sources.</p>

You can find details of the tasks in Appendix 2.

## 4 Scheme of Assessment

### 4.1 Assessment opportunities

For the availability of examinations and controlled assessment, see Section 2.

This is a unitised specification; candidates must complete at least 40 percent of the overall assessment requirements at the end of the course, in the examination series in which they request a final subject grade. This is the terminal rule.

Candidates may resit individual assessment units once before cash-in. The better of the two results will count towards their final GCSE grade unless a unit is required to meet the 40 percent terminal rule. If it is, the more recent mark will count (whether or not it is the better result). Results for individual assessment units remain available to count towards a GCSE qualification until we withdraw the specification.

### 4.2 Assessment objectives

Below are the assessment objectives for this specification. Candidates must:

- AO1** recall, select and communicate their knowledge and understanding of agriculture and land use in the environment and land-based industries;
- AO2** apply skills, knowledge and understanding of agriculture and land use in the environment and land-based industries and other contexts; and
- AO3** analyse and evaluate evidence, make reasoned judgements and draw conclusions based on evidence.

### 4.3 Assessment objective weightings

The table below sets out the assessment objectives for each assessment component and the overall GCSE qualification:

Assessment Objective	Component Weighting			Overall Weighting
	External Assessment		Controlled Assessment	
	Unit 1	Unit 2	Unit 3	
<b>AO1</b>	10%	10%	10%	30%
<b>AO2</b>	11%	11%	21%	43%
<b>AO3</b>	4%	4%	19%	27%
<b>Total Weighting</b>	25%	25%	50%	100%

## 4.4 Quality of written communication

In GCSE Agriculture and Land Use, candidates must demonstrate their quality of written communication. In particular, candidates must:

- ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear;
- select and use a form and style of writing appropriate to their purpose and to complex subject matter; and
- organise information clearly and coherently, using specialist vocabulary where appropriate.

Examiners and teachers assess the quality of candidates' written communication in their responses to examination questions and tasks requiring extended writing. They assess the quality of written communication within all assessment objectives and examination components in this specification.

## 4.5 Reporting and grading

We report the results of individual assessment units on a uniform mark scale that reflects the assessment weighting of each unit. We determine the grades awarded by aggregating the uniform marks that candidates obtain in individual assessment units.

We award GCSE qualifications on a grade scale from A\* to G, with A\* being the highest. The nine grades available are as follows:

<b>Grade</b>	A*	A	B	C*	C	D	E	F	G
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If candidates fail to attain a grade G or above, we report their result as unclassified (U).

## 5 Grade Descriptions

Grade descriptions are provided to give a general indication of the standards of achievement likely to have been shown by candidates awarded particular grades. The descriptions must be interpreted in relation to the content in the specification; they are not designed to define that content.

The grade awarded depends in practice upon the extent to which the candidate has met the assessment objectives overall. Shortcomings in some aspects of candidates' performance in the assessment may be balanced by better performances in others.

Grade	Description
A	<p>Candidates recall, select and communicate precise knowledge and detailed understanding of agriculture in the environment and land-based sector and its effects on society and the economy. They demonstrate a clear understanding of why and how agricultural applications, technologies and techniques change over time and the need for regulation and monitoring. They use a wide range of agricultural and technical terminology and use symbols and techniques appropriately and consistently.</p> <p>They apply appropriate skills, knowledge and understanding effectively to a range of practical contexts. They apply a comprehensive understanding of practical methods, processes and protocols to plan and justify a range of appropriate methods to solve practical problems. They apply a range of observational, practical enquiry and problem-solving skills to carry out procedures, investigate questions and test hypotheses effectively. They follow procedures and protocols consistently, evaluating and managing risk and working accurately and safely.</p> <p>Candidates analyse and interpret critically a broad range of information presented in a variety of forms. They reflect on the limitations of the methods, procedures and protocols they have used and the data they have collected. They evaluate information systematically and make reasoned judgements consistent with the evidence to develop substantiated conclusions.</p>

Grade	Description
<b>C</b>	<p>Candidates recall, select and communicate secure knowledge and understanding of the effects on and risks to society and the economy of agricultural developments in the environment and land-based sector and their applications. They describe with reasons how agricultural applications, technologies and techniques change over time. They use agricultural and technical terminology and use symbols and techniques appropriately.</p> <p>They apply appropriate skills, knowledge and understanding in a range of practical and other contexts. They use agricultural ideas to provide straightforward explanations of agricultural applications. They plan and use appropriate methods and apply a variety of skills to address questions and practical problems. They follow procedures, recognising and managing risk, to work safely and competently.</p> <p>Candidates analyse, interpret and evaluate a range of information. They recognise the limitations of evidence and undertake some evaluation and present reasons for their argument. They draw conclusions consistent with their evidence.</p>
<b>F</b>	<p>Candidates recall and communicate their limited knowledge and understanding of the effects on and risks to society and the economy of agricultural developments in the environment and land-based sector and their applications. They recognise simple interrelationships between agriculture in the environment and land-based sector and society. They demonstrate a limited understanding of how agricultural applications and technologies and techniques change over time. They use a limited range of agricultural terms.</p> <p>They apply appropriate skills, knowledge and understanding in a limited range of practical and other contexts. They apply limited knowledge and ideas in different practical contexts. They identify simple links between evidence and explanations. Using a limited range of skills and techniques, they follow instructions to investigate agricultural questions. They recognise a narrow range of risks and work safely.</p> <p>Candidates interpret and evaluate information from a limited range of sources. They can draw elementary conclusions having collected limited evidence.</p>

## 6 Guidance on Assessment

### 6.1 Controlled assessment review

The controlled assessment unit is **50** percent weighting and is a terminal unit, which means that it must only be submitted at the end of the course.

We set the controlled assessment tasks for internal assessment. We designed them to support good teaching and learning and to be manageable for candidates and teachers. To ensure that they continue to set an appropriate challenge and remain valid, reliable and stimulating we will review the controlled assessment tasks every year.

### 6.2 Internal Assessment

The controlled assessment for GCSE Agriculture and Land Use comprises two tasks:

- a practical investigation; and
- research into a contemporary issue in Agriculture and Land Use.

#### Task 1: Practical Investigation 20 percent

Candidates select **one** task from the three titles that we provide.

#### Task 2: Research 30 percent

Candidates select **one** task from the three titles that we provide.

Refer to Appendix 1 for assessment criteria for Tasks 1 and 2.

### 6.3 Skills assessed by controlled assessment

The controlled assessment tasks draw on the candidates' ability to:

- devise methods to solve problems using a scientific approach;
- carry out primary research;
- select and use information from primary and secondary sources;
- develop hypotheses and plan practical ways to test them;
- develop practical skills, relevant to the agriculture and land-based sector;
- work safely and assess and manage risk;
- make observations, collect and record data;
- draw evidence-based conclusions;
- evaluate methods used to solve practical problems;
- process, analyse and interpret primary and secondary data;
- assess the validity and quality of evidence and review hypotheses;
- use a range of methods to display and present relevant information in a concise and coherent manner; and
- analyse and evaluate evidence.

Elements of all these skills may also be assessed externally.

## 6.4 Level of control

Rules for controlled assessment in GCSE Agriculture and Land Use are defined for the three stages of the assessment:

- task setting;
- task taking; and
- task marking.

The purpose of the controls is to ensure the validity and reliability of the assessment and enable teachers to confidently authenticate candidates' work.

## 6.5 Task setting

The level of control for task setting in both tasks is high. This means that we set the tasks. The controlled assessment provides centres with the opportunity to contextualise tasks to best suit their specific circumstances. This includes the availability of and access to resources.

Titles for controlled assessment tasks are available in Appendix 2.

## 6.6 Task taking

### Task 1: Practical Investigation

The level of control for the task taking is medium.

Area of Control	Detail of Control
<b>Authenticity</b>	<p>Candidates must complete all work under informal supervision.</p> <p>Candidates may need to collect data outside the centre. However, as the collection of data is assessed, candidates are required to carry out data collection independently. The work may be authenticated through photographs, video clips or witness statements. The necessary risk assessments should be carried out for all tasks outside the classroom.</p> <p>Teachers must ensure the authenticity of individual candidates' work.</p>
<b>Feedback</b>	<p>Teachers must guide and supervise candidates in relation to the following:</p> <ul style="list-style-type: none"> <li>• monitoring progress;</li> <li>• preventing plagiarism;</li> <li>• ensuring compliance with health and safety requirements;</li> <li>• ensuring work is completed in accordance with the specification requirements; and</li> <li>• ensuring work can be assessed in accordance with the procedures and marking criteria.</li> </ul>

Area of Control	Detail of Control
<b>Feedback (cont.)</b>	<p>For research and data collection, teachers may provide guidance to candidates on the following aspects:</p> <ul style="list-style-type: none"> <li>• the focus of the investigation;</li> <li>• the relevance of the materials;</li> <li>• the techniques of data collection; and</li> <li>• the skills of analysis and evaluation.</li> </ul> <p>If candidates require support and guidance, teachers must reflect this in the mark band that they select in the assessment grid and in the marks they award.</p>
<b>Word Limit</b>	The report should not exceed 2000 words.
<b>Collaboration</b>	The work of individual candidates may be informed by working with others, but each candidate must provide an individual response. Where work is undertaken in a group, or is teacher-directed, candidates must indicate their individual contribution.
<b>Resources</b>	Candidates' access to resources is determined by those available to the centre.

**Task 2: Research Project**

The level of control for report writing is medium and for data collection it is low.

<b>Area of Control</b>	<b>Detail of Control</b>
<b>Authenticity</b>	<p>Candidates may carry out all work relating to data collection under limited supervision.</p> <p>Report writing and preparation of presentation materials is carried out under informal supervision.</p> <p>Teachers must ensure the authenticity of individual candidates' work and ensure that candidates reference all resources that they access via the internet.</p>
<b>Feedback</b>	<p>Teachers must guide and supervise candidates in relation to the following:</p> <ul style="list-style-type: none"> <li>• monitoring progress;</li> <li>• preventing plagiarism;</li> <li>• ensuring compliance with health and safety requirements; and</li> <li>• ensuring work is completed in accordance with the procedures and marking criteria.</li> </ul> <p>For research and data collection, teachers may provide guidance to candidates on the following aspects:</p> <ul style="list-style-type: none"> <li>• the focus of the investigation;</li> <li>• the relevance of the materials;</li> <li>• the techniques of data collection; and</li> <li>• the skills of analysis and evaluation.</li> </ul>
<b>Word Limit</b>	The report should not exceed 3000 words.
<b>Collaboration</b>	The work of individual candidates may be informed by working with others, but each candidate must provide an individual response. Where work is undertaken in a group, or is teacher-directed, candidates must indicate their individual contribution.
<b>Resources</b>	<p>Candidates' access to resources is determined by those available to the centre.</p> <p>Candidates must reference any resources that they access via the internet.</p>

## Presentation of Work

### Task 1: Practical Investigation

Students should present their report for each task under the following headings:

- title;
- introduction;
- planning and risk assessment;
- risk assessment;
- data presentation;
- analysis and conclusion;
- evaluation; and
- references.

### Task 2: Research Project

Students should present their report for each investigation under the following headings:

- title;
- introduction/overview of topic
- planning;
- data presentation;
- presentation;
- analysis, discussion and conclusions;
- evaluation; and
- references.

Candidates should include the following information on a front sheet for each report:

- Centre number;
- Centre name;
- Title of investigation; and
- Unit code and title.

## 6.7 Task marking

The level of control for task marking is medium. Teachers mark the controlled assessment tasks using assessment criteria that we provide (see Appendix 1). They should use professional judgement to select and apply the criteria in each successive mark band appropriately and fairly to candidates' work. They should follow a 'best fit' approach when selecting a candidate's mark, making allowance for balancing strengths and weaknesses within each response.

There are separate assessment criteria for Task 1 and Task 2 of the controlled assessment.

Teachers must ensure that the work they mark is the candidate's own. For up-to-date advice on plagiarism or any other incident in which candidate malpractice is suspected, please refer to the Joint Council for Qualifications' *Suspected Malpractice in Examinations and Assessments: Policies and Procedures* on the JCQ website: [www.jcq.org.uk](http://www.jcq.org.uk)

## 6.8 Internal standardisation

Centres with more than one teaching group must carry out internal standardisation of the controlled assessment tasks before submitting them to us. This is to ensure, as far as possible, that each teacher has applied the assessment criteria consistently when marking assessments.

As a result of internal standardisation, it may be necessary to adjust an individual teacher's marking. This is to bring assessments into line with other teachers in the centre and to match the standards established at the agreement trial. Where adjustment is necessary, the total/final mark recorded on the Candidate Record Sheet should be amended.

## 6.9 Moderation

Centres must submit their marks and samples to us by the specified date in May of any year. We may adjust centres' marking. This is to bring the assessment of the candidates' work into line with our agreed standards.

We issue full instructions at the appropriate time on:

- the details of moderation procedures;
- the nature of sampling; and
- the dates by which marks and samples have to be submitted to us.

Teachers and centre staff may contact us at any stage if they require advice, assistance or support regarding any aspect of internal assessment. We provide moderators to support groups of centres or to contact individual centres to discuss issues arising from the controlled assessment.

## 6.10 Drafting/Redrafting

Teachers must not correct candidates' work in detail and return it to them to write up a fair copy. Responsibility for drafting a piece of work towards completion lies entirely with the candidate. Once a candidate has submitted the controlled assessment and it has been awarded a mark, that mark is final. The candidate may not carry out further work.

See Appendix 3 for a glossary of controlled assessment terms.

## 7 Links

### 7.1 Support

We provide the following resources to support this specification:

- a subject microsite within our website;
- specimen papers and mark schemes; and
- controlled assessment tasks.
- past papers and mark schemes;
- Chief Examiner's reports;
- Principal Moderator's reports;
- schemes of work;
- centre support visits;
- support days for teachers;
- portfolio clinics;
- agreement trials;
- controlled assessment guidance for teachers;
- controlled assessment guidance for candidates;
- a resource list; and
- exemplification of standards.

### 7.2 Curriculum objectives

This specification addresses and builds upon the broad curriculum objectives for Northern Ireland. In particular, it enables students to:

- develop as individuals and contributors to the economy, society and environment;
- progress from Key Stage 3 Northern Ireland Curriculum requirements;
- develop an understanding of moral, ethical, social, legislative and economic and cultural issues by providing opportunities to explore topics such as:
  - use of hydroponics in relation to global food production;
  - GM crops;
  - protected species and environmental protection areas;
  - European directives on pollution control; and
  - consumer choice/demand in food production;
- investigate sustainable development, health and safety considerations and European legislation by providing opportunities to explore topics such as:
  - developing renewable energy sources;
  - reducing water pollution;
  - farm diversification; and
  - dangers of operating farm machinery;
- understand and relate to the 'skills agenda' and employability by providing opportunities to consider:
  - a range of careers in the land-based and environmental sector; and
  - the qualifications and skills required for careers in the land-based and environmental sector.

### 7.3 Skills development

This specification provides opportunities for students to develop the following key skills:

- application of number, for example measuring, scientific calculation, cost and profit analysis;
- communication, for example communicating ideas visually, verbally and in written form;
- improving their own learning and performance, for example producing a portfolio containing scientific reports, carrying out research and analysing and evaluating work;
- information and communication technology, for example conducting research, designing and producing an information leaflet;
- problem solving, for example planning a scientific investigation, developing hypotheses; and
- working with others, for example working in groups, liaising with employers/voluntary organisations/regulatory bodies.

You can find details of the current standards and guidance for each of these skills on our website at [www.ccea.org.uk](http://www.ccea.org.uk)

### 7.4 Examination entries

Entry codes for this subject and details on how to make entries are available on our Qualifications Administration Handbook microsite, which you can access at [www.ccea.org.uk](http://www.ccea.org.uk)

Alternatively, you can telephone our Examination Entries, Results and Certification team using the contact details provided in this section.

### 7.5 Equality and inclusion

We have considered the requirements of equality legislation in developing this specification.

GCSE qualifications often require the assessment of a broad range of competences. This is because they are general qualifications and, as such, prepare students for a wide range of occupations and higher level courses.

During the development process, an external equality panel reviewed the specification to identify any potential barriers to equality and inclusion. Where appropriate, we have considered measures to support access and mitigate barriers.

Reasonable adjustments are made for students with disabilities. For this reason very few students, if any, should have difficulty accessing the assessment.

Students with speech or hearing impairments may need access to a sign language interpreter in order to complete the assessment tasks.

It is important to note that where access arrangements are permitted, they must not be used in any way that undermines the integrity of the assessment. You can find information on reasonable adjustments in the Joint Council for Qualifications' document *Access Arrangements and Reasonable Adjustments* available at [www.jcq.org.uk](http://www.jcq.org.uk)

## 7.6 Contact details

The following list provides contact details for relevant staff members and departments:

- Specification Support Officer: Nuala Tierney  
(telephone: (028) 9026 1200, extension 2292, email: [ntierney@ccea.org.uk](mailto:ntierney@ccea.org.uk))
- Officer with Subject Responsibility: Gareth Wilson  
(telephone: (028) 9026 1200, extension 2267, email, [gwilson@ccea.org.uk](mailto:gwilson@ccea.org.uk))
- Examination Entries, Results and Certification  
(telephone: (028) 9026 1262, email: [entriesandresults@ccea.org.uk](mailto:entriesandresults@ccea.org.uk))
- Examiner Recruitment  
(telephone: (028) 9026 1243, email: [appointments@ccea.org.uk](mailto:appointments@ccea.org.uk))
- Distribution  
(telephone: (028) 9026 1242, email: [cceadistribution@ccea.org.uk](mailto:cceadistribution@ccea.org.uk))
- Support Events Administration  
(telephone: (028) 9026 1401, email: [events@ccea.org.uk](mailto:events@ccea.org.uk))
- Business Assurance (Complaints and Appeals) email: [complaints@ccea.org.uk](mailto:complaints@ccea.org.uk) or [appealsmanager@ccea.org.uk](mailto:appealsmanager@ccea.org.uk) (telephone: (028) 9026 1244)
- Moderation  
(telephone: (028) 9026 1200, extension 2236, email: [moderationteam@ccea.org.uk](mailto:moderationteam@ccea.org.uk))

## Appendix 1

### Assessment Criteria for Controlled Assessment Tasks

#### Task 1: Practical Investigation Planning and Risk Assessment (AO1; AO2)

Mark Band 1: [1–6]	Mark Band 2: [7–12]	Mark Band 3: [13–18]	Mark Band 4: [19–24]
At this level, candidates may require considerable support and guidance.	At this level, candidates may require some support and guidance.	At this level, candidates may require only minimal support and guidance.	At this level, candidates may require no guidance.
<p>Making little or no use of relevant specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>develop a basic hypothesis based on the topic that states simply what they wish to find out;</li> <li>produce a simple plan using limited scientific knowledge;</li> <li>identify a limited list of apparatus/equipment requirements and a suitable practical technique with limited detail;</li> <li>provide a basic justification for the choice of research methods; and</li> <li>carry out a basic risk assessment.</li> </ul>	<p>Using some relevant specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>develop a satisfactory hypothesis, with scientific reasoning, as to the outcomes of the investigation;</li> <li>produce a satisfactory plan, using appropriate scientific knowledge;</li> <li>identify apparatus/equipment and an appropriate technique that will obtain a range of results;</li> <li>provide a satisfactory justification for the choice of research methods; and</li> <li>carry out a satisfactory risk assessment.</li> </ul>	<p>Using a good range of specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>develop a good hypothesis, with good scientific reasoning, as to the outcomes of the investigation;</li> <li>produce a detailed plan using a good level of scientific knowledge;</li> <li>identify equipment/apparatus and a practical technique that will produce accurate results;</li> <li>provide a good justification for the choice of research methods; and</li> <li>carry out a good risk assessment, including suggesting how to minimise risks.</li> </ul>	<p>Using a wide range of specialist terms skilfully and with precision, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>develop a detailed hypothesis with detailed and scientific reasoning as to the outcomes of the investigation;</li> <li>produce a complex plan using a high level of detailed scientific knowledge;</li> <li>identify equipment/apparatus and more than one practical technique to produce a range of accurate results;</li> <li>provide a detailed justification for the choice of research methods; and</li> <li>carry out detailed risk assessment and identify how to minimise each risk and what to do in event of an incident.</li> </ul>
Spelling, punctuation and grammar are used with some accuracy so that the meaning is sometimes clear.	Spelling, punctuation and grammar are used with reasonable accuracy so that the meaning is reasonably clear.	Spelling, punctuation and grammar are used with considerable accuracy so that the meaning is clear.	Spelling, punctuation and grammar are used with almost faultless accuracy so that the meaning is clear.
<b>Award zero for work not worthy of credit.</b>			
			<b>Marks Total [24]</b>

**Data Collection (AO2)**

<b>Mark Band 1: [1–4]</b>	<b>Mark Band 2: [5–8]</b>	<b>Mark Band 3: [9–12]</b>	<b>Mark Band 4: [13–16]</b>
At this level, candidates may require considerable support and guidance.	At this level, candidates may require some support and guidance.	At this level, candidates may require only minimal support and guidance.	At this level, candidates may require no guidance.
<p>Candidates may:</p> <ul style="list-style-type: none"> <li>● carry out some parts of the investigation displaying limited practical skills;</li> <li>● show limited understanding of health and safety issues; and</li> <li>● obtain and record limited data that may not be accurate.</li> </ul>	<p>Candidates may:</p> <ul style="list-style-type: none"> <li>● carry out most parts of the investigation displaying satisfactory practical skills;</li> <li>● demonstrate satisfactory understanding of health and safety issues; and</li> <li>● obtain and record a satisfactory number of measurements and/or observations of variable quality.</li> </ul>	<p>Candidates may:</p> <ul style="list-style-type: none"> <li>● carry out all parts of the investigation, displaying good practical skills;</li> <li>● demonstrate a good understanding of health and safety issues including at times identifying potential risks and taking appropriate precautions; and</li> <li>● Obtain <b>and record</b> a complete set of measurements and/or observations using appropriate precision.</li> </ul>	<p>Candidates may:</p> <ul style="list-style-type: none"> <li>● carry out all parts of the investigation independently displaying an excellent level of technical skills;</li> <li>● demonstrate a high level of understanding of health and safety issues including identifying potential risks and taking appropriate precautions; and</li> <li>● Obtain <b>and record</b> a complete set of accurate measurements and/or observations using a high degree of precision.</li> </ul>
<b>Award zero for work not worthy of credit.</b>			
<b>Marks Total [16]</b>			

**Analysis and Conclusions (AO2; AO3)**

<p><b>Mark Band 1: [1–3]</b></p> <p>At this level, candidates may require considerable support and guidance.</p>	<p><b>Mark Band 2: [4–6]</b></p> <p>At this level, candidates may require some support and guidance.</p>	<p><b>Mark Band 3: [7–9]</b></p> <p>At this level, candidates may only require minimal support and guidance.</p>	<p><b>Mark Band 4: [10–12]</b></p> <p>At this level, candidates may require no guidance.</p>
<p>Making little or no use of relevant specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● produce a basic set of results presented in a table and identify a trend in their results;</li> <li>● use a simple graph/chart to display data; and</li> <li>● produce a basic conclusion that may not be linked to the data or hypothesis.</li> </ul> <p>Spelling, punctuation and grammar are used with some accuracy so that the meaning is sometimes clear.</p>	<p>Using some relevant specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● produce a satisfactory set of results presented in an appropriate table and identify at least one trend in their results;</li> <li>● use an appropriate graph/chart, with labelled axes, to display the data obtained; and</li> <li>● produce a conclusion that is linked to the data or hypothesis.</li> </ul> <p>Spelling, punctuation and grammar are used with reasonable accuracy so that the meaning is reasonably clear.</p>	<p>Using a good range of specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● produce an accurate set of results presented in a table with appropriate headings and units and use of one form of mathematical technique to process the data and identify appropriate trends in their results;</li> <li>● use a graph/chart with labelled axes, units and headings to display data; and</li> <li>● produce a good conclusion linked to the data and hypothesis.</li> </ul> <p>Spelling, punctuation and grammar are used with considerable accuracy so that the meaning is clear.</p>	<p>Using a wide range of specialist terms skilfully and with precision, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● produce a comprehensive and accurate set of results presented in a table with appropriate headings and units and use more than one mathematical technique to process the data and identify trends in their results;</li> <li>● use a range of graphs to display data, using appropriately labelled axes, units and headings; and</li> <li>● produce detailed conclusions with reference to relevant data and hypothesis.</li> </ul> <p>Spelling, punctuation and grammar are used with almost faultless accuracy so that the meaning is clear.</p>
<p><b>Award zero for work not worthy of credit.</b></p>			
<p><b>Marks Total [12]</b></p>			

**Evaluation (AO1; AO3)**

<p><b>Mark Band 1: [1–2]</b></p> <p>At this level, candidates may require considerable support and guidance.</p>	<p><b>Mark Band 2: [3–4]</b></p> <p>At this level, candidates may require some support and guidance.</p>	<p><b>Mark Band 3: [5–6]</b></p> <p>At this level, candidates may require only minimal support and guidance.</p>	<p><b>Mark Band 4: [7–8]</b></p> <p>At this level, candidates may require no guidance.</p>
<p>Making little or no use of relevant specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● provide a brief evaluation of the investigation, making limited or no reference to the reliability of the results;</li> <li>● give a simple suggestion as to how they could improve the methodology; and</li> <li>● give a basic suggestion for further research that may be relevant to the investigation.</li> </ul> <p>Spelling, punctuation and grammar are used with some accuracy so that the meaning is sometimes clear.</p>	<p>Using some relevant specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● provide a brief evaluation of the investigation, including some reference to the reliability of the results;</li> <li>● give a suggestion as to how they could improve the methodology; and</li> <li>● give an appropriate suggestion for further research that is relevant to the investigation.</li> </ul> <p>Spelling, punctuation and grammar are used with reasonable accuracy so that the meaning is reasonably clear.</p>	<p>Using a good range of specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● provide an evaluation that considers the processes, techniques and risk assessment used and identify anomalous results and consider the reliability of the data obtained;</li> <li>● provide relevant suggestions as to how they could improve the methodology; and</li> <li>● give suggestions for further research that are relevant to their investigation.</li> </ul> <p>Spelling, punctuation and grammar are used with considerable accuracy so that the meaning is clear.</p>	<p>Using a wide range of specialist terms skilfully and with precision, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● provide a detailed and thorough evaluation of the processes, techniques and risk assessment used, giving in depth consideration to the reliability and validity of the data produced and details of any anomalous results;</li> <li>● provide detailed suggestions as to how they could improve the methodology; and</li> <li>● provide detailed suggestions for further research that are relevant to their investigation.</li> </ul> <p>Spelling, punctuation and grammar are used with almost faultless accuracy so that the meaning is clear.</p>
<p><b>Award zero for work not worthy of credit.</b></p>			
<p><b>Marks Total [8]</b></p>			

## Assessment Criteria for Task 2 Research Project

### Planning (AO1; AO2)

Mark Band 1: [1–6]	Mark Band 2: [7–12]	Mark Band 3: [13–18]	Mark Band 4: [19–24]
At this level, candidates may require considerable support and guidance.	At this level, candidates may require some support and guidance.	At this level, candidates may only require minimal support and guidance.	At this level, candidates may require no guidance.
<p>Making little or no use of relevant specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● demonstrate a basic understanding of some of the issues related to the research topic;</li> <li>● produce a basic justification of the choice of the topic;</li> <li>● identify a basic range of primary and/or secondary sources; and</li> <li>● provide a basic justification for the choice of research methods.</li> </ul> <p>Spelling, punctuation and grammar are used with some accuracy so that the meaning is sometimes clear.</p>	<p>Using some relevant specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● demonstrate a satisfactory understanding of some of the issues related to the research topic;</li> <li>● produce a satisfactory justification of the choice of the topic;</li> <li>● identify a satisfactory range of primary and secondary sources; most of which are appropriate; and</li> <li>● provide a satisfactory justification for the choice of research methods.</li> </ul> <p>Spelling, punctuation and grammar are used with reasonable accuracy so that the meaning is reasonably clear.</p>	<p>Using a good range of specialist terms, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● demonstrate a good understanding of some of the issues related to the research topic;</li> <li>● produce a good justification of the choice of topic;</li> <li>● identify a good range of primary and secondary sources; and</li> <li>● provide a good justification, supported by the appropriateness of the findings, for the choice of research methods.</li> </ul> <p>Spelling, punctuation and grammar are used with considerable accuracy so that the meaning is clear.</p>	<p>Using a wide range of specialist terms skilfully and with precision, where appropriate, candidates:</p> <ul style="list-style-type: none"> <li>● demonstrate a detailed understanding of a wide range of issues related to the research topic;</li> <li>● produce a thorough justification of the choice of topic;</li> <li>● identify a wide range of primary and secondary sources; which are relevant and appropriate; and</li> <li>● provide a justification for the choice of research methods, supported by the high level of relevancy and appropriateness of the findings.</li> </ul> <p>Spelling, punctuation and grammar are used with almost faultless accuracy so that the meaning is clear.</p>
<b>Award zero for work not worthy of credit.</b>			
			<b>Marks Total [24]</b>

### Data Collection and Presentation of Findings (A02)

<b>Mark Band 1: [1–6]</b> At this level, candidates may require considerable support and guidance.	<b>Mark Band 2: [7–12]</b> At this level, candidates may require some support and guidance.	<b>Mark Band 3: [13–18]</b> At this level, candidates may only require minimal support and guidance.	<b>Mark Band 4: [19–24]</b> At this level, candidates may require no guidance.
Candidates may: <ul style="list-style-type: none"> <li>● carry out research from a limited range of appropriate primary and/or secondary sources;</li> <li>● record a basic range of findings in a given table; and</li> <li>● present findings using basic graphical forms.</li> </ul> Spelling, punctuation and grammar are used with some accuracy so that the meaning is sometimes clear.	Candidates may: <ul style="list-style-type: none"> <li>● collect data from a satisfactory range of primary and secondary sources;</li> <li>● record a satisfactory range of findings in a table they produced; and</li> <li>● present findings using satisfactory graphical forms.</li> </ul> Spelling, punctuation and grammar are used with reasonable accuracy so that the meaning is reasonably clear.	Candidates may: <ul style="list-style-type: none"> <li>● collect <b>relevant</b> data from a good range of primary and secondary sources;</li> <li>● record detailed findings in a format they devised; and</li> <li>● present findings using detailed graphical forms</li> </ul> Spelling, punctuation and grammar are used with considerable accuracy so that the meaning is clear.	Candidates may: <ul style="list-style-type: none"> <li>● collect <b>relevant</b> data from a wide range of primary and secondary sources that are appropriate;</li> <li>● record detailed findings in a format they devised including appropriate headings; and</li> <li>● present findings using highly detailed graphical forms.</li> </ul> Spelling, punctuation and grammar are used with almost faultless accuracy so that the meaning is clear.
<b>Award zero for work not worthy of credit.</b>			
<b>Marks Total [24]</b>			

### Conclusion: Analysis and Discussion (AO3)

<b>Mark Band 1: [1–6]</b> At this level, candidates may require considerable support and guidance.	<b>Mark Band 2: [7–12]</b> At this level, candidates may require some support and guidance.	<b>Mark Band 3: [13–18]</b> At this level, candidates may only require minimal support and guidance.	<b>Mark Band 4: [19–24]</b> At this level, candidates may require no guidance.
Making little or no use of relevant specialist terms, where appropriate, candidates: <ul style="list-style-type: none"> <li>● produce a basic conclusion based on a limited analysis of the research; and</li> </ul> Spelling, punctuation and grammar are used with some accuracy so that the meaning is sometimes clear.	Using some relevant specialist terms, where appropriate, candidates: <ul style="list-style-type: none"> <li>● produce a satisfactory conclusion based on a limited analysis of the research; and</li> </ul> Spelling, punctuation and grammar are used with reasonable accuracy so that the meaning is reasonably clear.	Using a good range of specialist terms, where appropriate, candidates: <ul style="list-style-type: none"> <li>● produce a good conclusion based on a analysis of the research; and</li> </ul> Spelling, punctuation and grammar are used with considerable accuracy so that the meaning is clear.	Using a wide range of specialist terms skilfully and with precision, where appropriate, candidates: <ul style="list-style-type: none"> <li>● produce a detailed conclusion based on a comprehensive analysis of the research; and</li> </ul> Spelling, punctuation and grammar are used with almost faultless accuracy so that the meaning is clear.
<b>Award zero for work not worthy of credit.</b>			
<b>Marks Total [24]</b>			

### Evaluation (AO3)

<b>Mark Band 1: [1–4]</b> At this level, candidates may require considerable support and guidance.	<b>Mark Band 2: [5–8]</b> At this level, candidates may require some support and guidance.	<b>Mark Band 3: [9–12]</b> At this level, candidates may only require minimal support and guidance.	<b>Mark Band 4: [13–16]</b> At this level, candidates may require no guidance.
Making little or no use of relevant specialist terms, where appropriate, candidates: <ul style="list-style-type: none"> <li>● produce a basic evaluation of the task;</li> <li>● give a simple suggestion as to how the methodology could be improved; and</li> <li>● produce a basic statement about further research related to the topic.</li> </ul> Spelling, punctuation and grammar are used with some accuracy so that the meaning is sometimes clear.	Using some relevant specialist terms, where appropriate, candidates: <ul style="list-style-type: none"> <li>● produce a satisfactory evaluation of all aspects of the task;</li> <li>● give relevant suggestions as to how the methodology could be improved; and</li> <li>● produce some suggestions for further research.</li> </ul> Spelling, punctuation and grammar are used with reasonable accuracy so that the meaning is reasonably clear.	Using a good range of specialist terms, where appropriate, candidates: <ul style="list-style-type: none"> <li>● produce a good evaluation of all aspects of the task;</li> <li>● provide detailed suggestions as to how the methodology could be improved; and</li> <li>● produce relevant and appropriate suggestions for further research.</li> </ul> Spelling, punctuation and grammar are used with considerable accuracy so that the meaning is clear.	Using a wide range of specialist terms skilfully and with precision, where appropriate, candidates: <ul style="list-style-type: none"> <li>● produce a detailed evaluation of all aspects of the task;</li> <li>● provide highly detailed suggestions as to how the methodology could be improved; and</li> <li>● produce comprehensive and detailed suggestions for further research.</li> </ul> Spelling, punctuation and grammar are used with almost faultless accuracy so that the meaning is clear
<b>Award zero for work not worthy of credit.</b>			
<b>Marks Total [16]</b>			

## Appendix 2

### Controlled Assessment - Contemporary Issues in Agriculture and Land Use

Students must select **one** task from the three task titles that we provide.

#### Task 1: Practical Investigation

Students are required to choose **one** investigation from a list of three which are changed annually.

#### Task 2: Research Project

Students must select **one** research task from a list of three which are changed annually.

## Appendix 3

### Glossary of Terms for Controlled Assessment Regulations

Term	Definition
<b>Component</b>	<p>A discrete, assessable element within a controlled assessment/qualification that is not itself formally reported and for which the awarding body records the marks</p> <p>May contain one or more tasks</p>
<b>Controlled assessment</b>	A form of internal assessment where the control levels are set for each stage of the assessment process: task setting, task taking, and task marking
<b>External assessment</b>	A form of independent assessment in which question papers, assignments and tasks are set by the awarding body, taken under specified conditions (including detailed supervision and duration) and marked by the awarding body
<b>Formal supervision (High level of control)</b>	The candidate must be in direct sight of the supervisor at all times. Use of resources and interaction with other candidates is tightly prescribed.
<b>Informal supervision (Medium level of control)</b>	<p>Questions/tasks are outlined, the use of resources is not tightly prescribed and assessable outcomes may be informed by group work.</p> <p>Supervision is confined to:</p> <ul style="list-style-type: none"> <li>• ensuring that the contributions of individual candidates are recorded accurately; and</li> <li>• ensuring that plagiarism does not take place.</li> </ul> <p>The supervisor may provide limited guidance to candidates.</p>
<b>Limited supervision (Low level of control)</b>	Requirements are clearly specified, but some work may be completed without direct supervision and will not contribute directly to assessable outcomes.

Term	Definition
<b>Mark scheme</b>	<p>A scheme detailing how credit is to be awarded in relation to a particular unit, component or task</p> <p>Normally characterises acceptable answers or levels of response to questions/tasks or parts of questions/tasks and identifies the amount of credit each attracts</p> <p>May also include information about unacceptable answers</p>
<b>Task</b>	<p>A discrete element of external or controlled assessment that may include examinations, assignments, practical activities and projects</p>
<b>Task marking</b>	<p>Specifies the way in which credit is awarded for candidates' outcomes</p> <p>Involves the use of mark schemes and/or marking criteria produced by the awarding body</p>
<b>Task setting</b>	<p>The specification of the assessment requirements</p> <p>Tasks may be set by awarding bodies and/or teachers. Teacher-set tasks must be developed in line with awarding body specified requirements.</p>
<b>Task taking</b>	<p>The conditions for candidate support and supervision, and the authentication of candidates' work</p> <p>Task taking may involve different parameters from those used in traditional written examinations. For example, candidates may be allowed supervised access to sources such as the internet.</p>
<b>Unit</b>	<p>The smallest part of a qualification that is formally reported.</p> <p>May comprise separately assessed components</p>