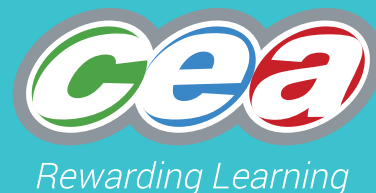
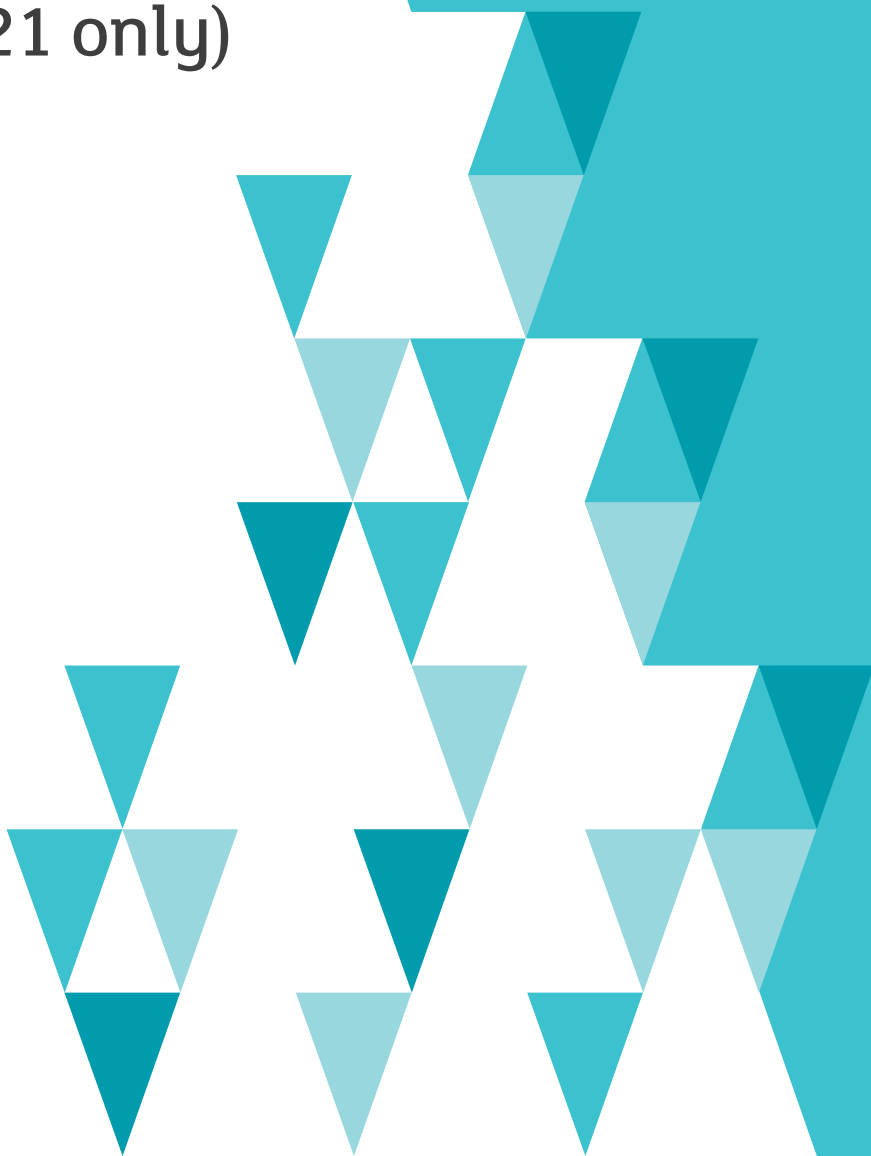


GCSE



CCEA GCSE Specimen Assessment
Materials
Controlled Assessment Task for
Statistics
(for Summer 2021 only)

Subject Code: 2260



Foreword

Summer 2021 GCSE Statistics

CCEA has produced specimen assessment materials to reflect the controlled assessment task for Summer 2021. The specimen assessment materials are provided to give centres guidance on the structure and character of the planned controlled assessment in advance of Summer 2021. It is intended that the specimen assessment materials contained in this booklet will help teachers and students to understand, as fully as possible, the markers' expectations of candidates' responses to the types of tasks and questions set at GCSE level for the controlled assessment task. These specimen assessment materials should be used in conjunction with CCEA's GCSE Statistics specification and specification addendum for Summer 2021. These specimen assessment materials also follow the theme of and contain an extract from the pre-release specimen materials.

These arrangements apply to candidates who began their GCSE qualification in Statistics in September 2019 and wish to achieve a qualification-level grade in Summer 2021. This also includes candidates wishing to resit.

In GCSE Statistics candidates will be permitted the option of completing the examination for one assessment unit and a controlled assessment task for the second unit, as an alternative to the second examination.

Candidates **will not have the option** of completing both examination units **and** the assessment task.

GCSE Statistics

Specimen Assessment Materials

Controlled Assessment Task

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Rewarding Learning
General Certificate of Secondary Education
2021

Centre Number

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Candidate Number

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GCSE Statistics

Unit 3 – Controlled Assessment Task

[CODE]

SPECIMEN TASK

TIME

1 hour.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Answer **all** the questions in the spaces provided in this booklet.

You **may** use a calculator.

INFORMATION FOR CANDIDATES

The total mark for this paper is 20.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

For Teacher use only	
Question Number	Marks
1	
2	
Total Marks	

- 1 The table below shows the visitor numbers to Country Parks, Parks and Forests in Northern Ireland between 2011 and 2015

Visitor Numbers for Country Parks/Parks/Forests 2011 – 2015

Owner	Attraction	2011	2012	2013	2014	2015	Change 2014 - 2015 (%)
G	Castlewellan Forest Park*	122,590	—	119,974	135,421	136,522	1%
LA	Cave Hill Country Park	110,000	100,000	100,000	91,000	95,000	4%
G	Colin Glen Adventure Park	—	—	—	—	250,000	n/a
LA	Colin Glen Forest Park	—	—	—	—	120,000	n/a
G	Crawfordsburn Country Park	770,000	775,000	800,000	826,893	513,415	-38%
LA	Delamont Country Park	577,165	263,311	246,823	220,783	211,859	-4%
G	Drum Manor Forest Park*	15,500	14,649	10,285	11,777	12,520	6%
LA	Dungannon Park	125,000	142,426	224,060	331,670	291,070	-12%
G	Glenariff Forest Park*	36,287	36,287	28,356	33,985	22,741	-33%
G	Gortin Glen Forest Park*	6,713	6,240	4,232	4,566	2,554	-44%
G	Gosford Forest Park*	—	—	51606	58,081	47,051	-19%
LA	Kilbroney Park	81,640	85,794	114,586	94,838	122,279	29%
LA	Kinnego Marina	343,927	158,448	174,365	216,000	209,027	-3%
G	Lagan Valley Regional Park (Inc Lagan Tow Path)	1,071,655	1,088,240	1,254,414	1,257,354	1,285,963	2%
NT	Lisnabreeny	—	—	—	—	50,000	n/a
G	Ness Country Park	25000	20000	25,000	30,000	30,000	0%
G	Peatlands Park	95000	100000	90000	95,000	126,123	33%
G	Portglenone Forest Park*	—	—	9,222	8,859	7,068	-20%
G	Redburn Country Park	—	—	—	—	50,440	n/a
G	Roe Valley Country Park	280,000	250,000	250,000	250,000	250,000	0%
G	Scрабо Country Park	200,000	155,913	161,412	187,358	196,014	5%
LA	Shaftesbury Park	—	—	65000	64,000	63,800	0%
G	Sir Thomas and Lady Dixon Park	230,000	—	300,000	300,000	270,000	-10%
G	The Peace Bridge	339,858	914,739	1,242,538	1,070,807	981,053	-8%
G	Tollymore Forest Park*	—	—	134,707	130,820	131,431	0%
LA	Wallace Park	—	—	—	—	1,100,000	n/a
OTC	William McCrum Park	—	—	—	—	6,000	n/a

- (a) How many visitors were there to Scрабо Country Park in 2013?

Answer _____ [1]

- (b) (i) How many people visited Peatlands Park from 2011 to 2015?

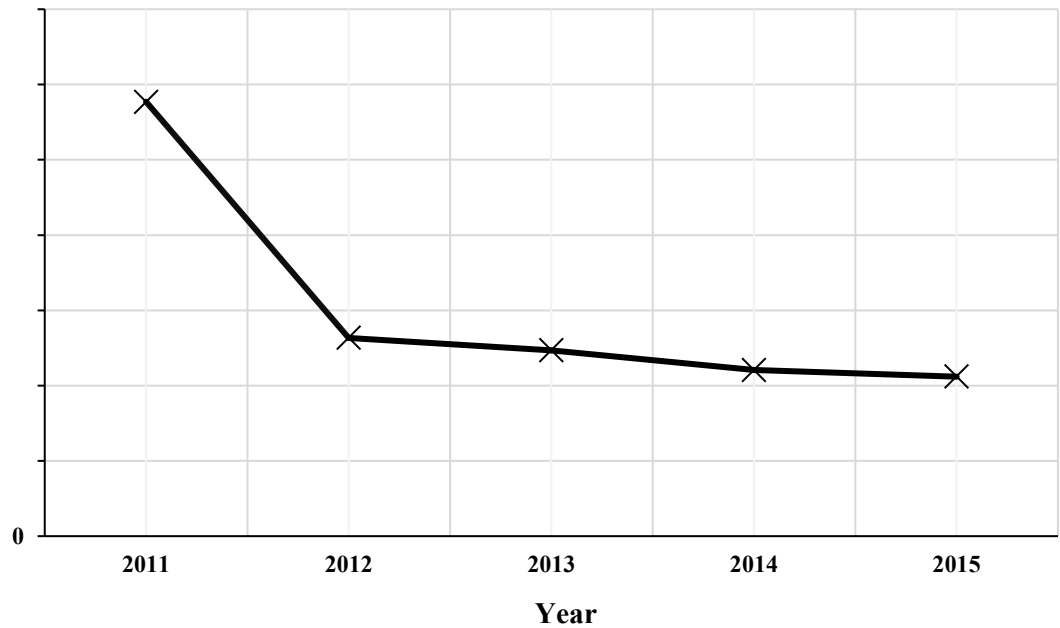
_____ [1]

- (ii) What do the recorded visitor numbers from 2011 to 2015 suggest about the method of counting that was used by Peatlands Park?

 _____ [2]

Julie is drawing a time series graph to show the trend in visitor numbers to one of the attractions.

She has not given the graph a title. She also needs to complete the vertical axis on her graph.



- (c) (i) Write down the name of the attraction whose visitor numbers are shown in the graph.

_____ [1]

- (ii) Complete the vertical axis of the graph. [2]

The number of visitors to an attraction is a categorical variable.

- (d) Is this statement true or false?

True

False

[1]

2 Liam wishes to investigate if the weather affects the number of visitors to a country park near his home.

He will use the statistical enquiry cycle to carry out his investigation.

Write a plan for Liam's investigation.

Your plan should include:

- a suitable hypothesis;
- a method for collecting the required data, including a problem which could be encountered and how this could be overcome; and
- a description of how the data could be analysed and how the results would be interpreted.

You may use this space to plan your answer.

[12]

Answer _____

THIS IS THE END OF THE CONTROLLED ASSESSMENT TASK

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DO NOT WRITE ON THIS PAGE**

GENERAL MARKING INSTRUCTIONS

General Marking Instructions

Introduction

Mark Schemes are intended to ensure that the GCSE examinations are marked consistently and fairly. The mark schemes provide teachers with an indication of the nature and range of candidates' responses likely to be worthy of credit. They also set out the criteria which they should apply in allocating marks to candidates' responses. The mark schemes should be read in conjunction with these general marking instructions.

Assessment Objectives

Below are the assessment objectives for GCSE Statistics.

- AO1** demonstrate knowledge and understanding, using appropriate terminology and notation, of standard statistical techniques used to:
- collect and represent data; and
 - calculate summary statistics and probabilities;
- AO2** interpret statistical information and results in context and reason statistically to draw conclusions; and
- AO3** assess the appropriateness of statistical methodologies and the conclusions drawn through the application of the statistical enquiry cycle.

Quality of candidate's responses

In marking the Controlled Assessment Task (CAT), teachers should be looking for a quality of response reflecting the level of maturity which may reasonably be expected of a 16 year old which is the age at which the majority of candidates sit their GCSE examinations.

Flexibility in marking

Mark schemes are not intended to be totally prescriptive. No mark scheme can cover all the responses which candidates may produce. In the event of unanticipated answers, teachers are expected to use their professional judgement to assess the validity of answers. If an answer is particularly problematic, then teachers should seek the guidance of the Education Manager at CCEA.

Positive marking

Teachers are encouraged to be positive in their marking, giving appropriate credit for what candidates know, understand and can do rather than penalising candidates for errors or omissions. Teachers should make use of the whole of the available mark range for any particular question and be prepared to award full marks for a response which is as good as might reasonably be expected of a 16-year-old GCSE candidate.

Awarding zero marks

Marks should only be awarded for valid responses and no marks should be awarded for an answer which is completely incorrect or inappropriate.

Types of mark schemes

Mark schemes for questions which require candidates to respond in extended written form are marked on the basis of levels of response.

Other questions which require only short answers are marked on a point for point basis with marks awarded for each valid piece of information provided.

Levels of response

Questions requiring candidates to respond in extended writing are marked in terms of levels of response. In deciding which level of response to award, teachers should look for the ‘best fit’ bearing in mind that weakness in one area may be compensated for by strength in another. In deciding which mark within a particular level to award to any response, teachers are expected to use their professional judgement. The following guidance is provided to assist teachers:

- **Threshold performance:** Response which just merits inclusion in the level and should be awarded a mark at or near the bottom of the range.
- **Intermediate performance:** Response which clearly merits inclusion in the level and should be awarded a mark at or near the middle of the range.
- **High performance:** Response which fully satisfies the level description and should be awarded a mark at or near the top of the range.

MARK SCHEME



Rewarding Learning

**General Certificate of Secondary Education
2021**

GCSE Statistics

Unit 3

Controlled Assessment Task

[CODE]

SPECIMEN

MARK SCHEME

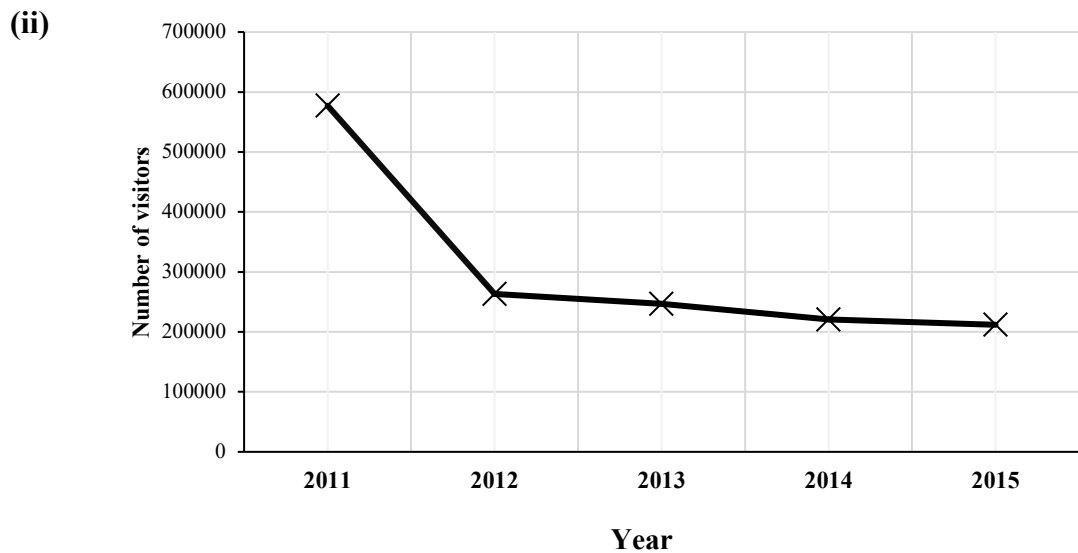
1 (a) 161 412 A1

(b) (i) 506 123 A1

(ii) For one mark, student states the visitor numbers were estimated between 2011 and 2014, or student states the method of counting in 2015 was more accurate.

For two marks, student states the visitor numbers were rounded to the nearest thousand whereas in 2015 they were not rounded. A1 A1

(c) (i) Delamont Country Park. A1



Correct labels (100 000 to at least 600 000). A1

Correct title for vertical axis. A1

(d) False. A1

Suitable hypothesis

Mark	Criteria	Elaboration
0	No hypothesis given or hypothesis not suitable	
1	Hypothesis stated with some attempt to connect it to the aim of the investigation. Some appropriate language.	<ul style="list-style-type: none"> • Must not be a question. Should attempt to determine how weather affects the number of visitors to the country park.
2	Hypothesis stated with a clear connection to the aim of the investigation. Clear and appropriate language.	<ul style="list-style-type: none"> • Must clearly link two stated variables that would show a connection between weather and the number of visitors.

Method for collecting the required data

Mark	Criteria	Elaboration
0	No suitable description of what data would be selected, where it would be sourced from and any problems with collecting the data.	
1–2	Description of what data is required and a suitable suggestion for where it could be sourced from.	<ul style="list-style-type: none"> • Student describes what data is required based on their hypothesis. • Student provides a suitable source from where to collect the data, e.g., Met Office, park's website.
3–4	Description of what data is required, where it could be sourced from as well as a problem that could be encountered when collecting the data and how this could be overcome.	<ul style="list-style-type: none"> • In addition to describing what data is required and where to source it from, see above, student also describes a problem that could be encountered, e.g., unavailability of the required data. • For full marks, student also provides an example of how the problem could be overcome.

Description of how the data could be analysed

Mark	Criteria	Elaboration
0	No description of any method for analysing the data.	
1–3	Description of a method to analyse the data which is not the most suitable within the context of the investigation. An attempt to describe how the results would be interpreted in relation to their hypothesis.	<ul style="list-style-type: none"> • Student describes a chart and/or calculation that does not appropriately determine the link between two variables. • They make an attempt to describe what the chart and/or calculation would look like when investigating how weather affects visitor numbers. • They attempt to explain how the chart and/or calculation relates to their hypothesis.
4–6	Description of a method to analyse the data which is the most suitable within the context of the investigation. Clear and appropriate explanation of how the results would be interpreted in relation to their hypothesis.	<ul style="list-style-type: none"> • Student states the use of a scatter diagram and what this would look like e.g., positive/negative correlation depending on chosen variables. Student relates correlation to their hypothesis. • In addition, student states the use of the product moment correlation coefficient as a suitable calculation but is unable to relate this calculation to their hypothesis. • For full marks, student also provides justification for the product moment correlation coefficient, e.g., a value of r close to 1 would support the hypothesis.

[12]

Total [20]