

CBA2

A Statistical Investigation

A Guide for Junior Cycle 2022-23 Students Only



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ONLINE SUPPORT SYSTEM FOR JC & LC MATHS

What is a CBA?

- CBA = Classroom Based Assessment
- A project carried out by students during class time
- Two CBAs in Mathematics for Junior Cycle
 - CBA 1 - Mathematical Investigation (MI)
 - CBA 2 - Statistical Investigation (SI)
 - 2022-23 students must complete CBA 1 or CBA 2 or both
 - Both assessed at common level



CBA 2 (SI) Overview

- Takes place in 3rd year
- Based on Junior Cycle Statistics
- Pose a statistical question, investigate it and solve it
 - Use numerical data and statistical analysis
- All work is undertaken during class time
- For CBA 2, individual work and report
- Complete investigation and report within 3 weeks
- CBA 2 will form the basis of your Assessment Task (AT)



Where do I Start?

- Check out examples of a great CBA 2
 - To help you get the overall idea of what is required
- Download our “CBA Design Template”
- Now, pick an interesting maths topic
 - e.g. conducting a survey
- Pick a sub-topic within that
 - e.g. survey investigating student transport modes
- Formulate a specific mathematical question
 - e.g. “What is the most common mode of transport used by students at my school and why?”
- Begin your investigation



CBA Design Template

- CBA 2 can be presented using a range of formats
 - Recommended: use MS Word / other document type
- Use our “CBA Design Template” document to guide you
 - Open the template and start to complete it based on your own question
 - This helps to break down the task in a manageable way
 - It also helps to ensure completeness
- Don't forget to view official examples of CBA 2



Investigating and Reporting

- Complete the following sections
 - Title Page
 - Table of Contents
 - Introduction
 - Assumptions
 - Method
 - Results
 - Discussion of Results and Data
 - Conclusion
 - CBA Self-reflection
 - References



Features of Quality for CBA 2

<u>Statistical Investigation CBA 2</u> <u>Features of Quality</u>	Yet to Meet Expectations	In Line with Expectations	Above Expectations	Exceptional
Designing the Investigation	Uses given statistics question and collection method	Poses a question that anticipates variability and plans to collect/source the type of data appropriate for the question posed	Poses a question that anticipates variability and seeks generalisation; data collection plan shows awareness of how variability affects the validity and reliability of the findings	Poses a question that anticipates variability and seeks generalisation, study design will produce as far as practical reliable and valid results by taking into account variability and confounding variables
Identifying the Variables of Interest	Gathers and displays data	Identifies variables and develops a measuring strategy for measuring the dependent and independent variable	Chosen measuring strategy will provide valid and reliable data	Describes relationship between the variables and describes considerations related to reliability and fairness
Organising and Managing the Data	Makes statements about the data displayed	Displays data in a way that allows patterns to be identified, identifies patterns and describes the data in terms of those patterns	Uses appropriate data displays and describes the data in terms of measures of centre and spread	Use distributions to analyse the data and justifies measures of centre used to describe the data
Analysing and Interpreting Data Summaries	No concrete connection back to the original question	Makes a concrete connection to the original question of the investigation but does not look beyond the data	Reports the findings and the conclusion refers to the original question and attempts to look beyond the data	Interprets the data in relation to the original question; conclusion displays understanding of the limitations of generalising to the population and considers the need to reformulate the original question in light of the findings

Completing Your Report

- Allow roughly one page per section
- Check against the “Features of Quality” as you go along
- CBA should be between 650-800 words (excluding tables & charts)
 - Word count is indicative but not rigid



How to Get a Great Grade in CBA 2

- Choose a statistics topic that you are interested in
- Keep your topic simple
- Use our template
 - To make investigation & reporting more manageable
 - To ensure completeness
- Check against the “Features of Quality” as you go along
- Include visual representations of data
- Use reliable sources and keep a reference list
- Get a friend or family member to review it
- When complete, do a final check and polish-up of every section



Further Resources

- Find essential CBA and AT resources at our CBA Hub!
 - Videos
 - Examples
 - Templates
 - Links to official guidelines and resources
- Go to www.themathstutor.ie/cbahub





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