Teacher(s)	PTH, ARO	Subject group and discipline	Maths		
Unit title	6 Data Handling	MYP year	3	Unit duration (hrs)	

Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global context
relationships	**Representation, justification, measurement**	Orientation in space and time: the interconnectedness of individuals and civilisations

Statement of inquiry
Different representations and measurements of relationships can help justify conclusions about interconnectedness from data.

Inquiry questions
Factual – How do we draw a box plot, and what does it show us? How can we use capture/recapture to estimate a population size?
Conceptual— What does a scatter diagram show you? How do different diagrams allow you to compare data sets?
Debatable— Is it better to have data in tabulated form, or an individual list?

Objectives	Summative assessment	
Assessment 1: Criteria C i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written explanations ii. use appropriate forms of mathematical representation to present information	Assessment 1: Outline of summative assessment task(s) including assessment criteria: Students investigate the statistical relationship between two variables of their choice and assess correlation.	Assessment !: Relationship between summative assessment task(s) and statement of inquiry: By consideration of their own data, students can use different representations and justify sensible conclusions.

iii. move between different forms of mathematical representation iv. communicate complete and coherent mathematical lines of reasoning v. organize information using a logical structure. .	G To collect data and investigate findings; testing a hypothesis R Student with interest in a particular area A Fellow students S You will collect information and display it in meaningful ways to enable conclusions to be drawn. P Report to share with other students S Crit C	
Assessment 2: (if used in the unit) Criteria A i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations ii. apply the selected mathematics successfully when solving problems iii. solve problems correctly in a variety of contexts.	Assessment 2: (if used in the unit) Outline of summative assessment task(s) including assessment criteria: G To tackle problems involving maths from a variety of sources; linking together the skills and knowledge gained from throughout the MYP years R Student A Teacher S Demonstrate knowledge and skills gained to solve increasingly complex problems; many with real-life scenarios P Concise, accurate and clear answers to questions given S Crit A	Assessment 2: Relationship between summative assessment task(s) and statement of inquiry:
Approaches to learning (ATL)		

Research skills: Process data and report results Social skills: Build consensus

Action: Teaching and learning through inquiry - To be completed once resourcing is finalised, but here is an overview at this stage

Activity within lesson	Learning experiences and teaching strategies	Formative Assessment	Differentiation
B1 = Statistical modelling B1L1	Representing data in tables – stem and leaf vs grouped. Which is better? Reviewing averages – which average is best?		
B1L2	Calculating averages from tabulated data (grouped and otherwise) – Is converting back to the list necessary?		
B1L3	Quartiles and median – creating box plots for discrete data to represent spread more fairly		
B1L4	Scatter diagrams – adding line of best fit; causation vs correlation; outliers;		
B1L5	Capture/recapture to estimate population size		
B1L6	Consolidation or cumulative frequency curves as a way of estimating medians and quartiles for grouped data. [discussion of cumulative step graph?]		
B1L7	Assessment		
B1L8	Feedback		

B2 = Combining knowledge from across the year B2L1	Reviewing number topics from the year		
B2L2	Reviewing number topics from the year		
B2L3	Reviewing shape topics from the year		
B2L4	Reviewing shape topics from the year		
B2L5	Reviewing algebra topics from the year		
B2L6	Reviewing algebra topics from the year		
B2L7	Assessment (Crit A)		
B2L8	Feedback		
B3 = Statistical investigation B3L1	Planning how to collect data to answer a question		
B3L2	Collection of data – how to remove bias and planning what to do with anomalies – referencing and the importance of citing sources		
B3L3	How to write a valid conclusion from given data.		
B3L4	Collecting data – put into practice and students collect data. Consider what types of data will enable skills to be showcased.		
B3L5	Representing bivariate data – students use own data and recognise the distinction between causation and correlation		
B3L6	Assessment – writing a report. With writing frame as necessary for support		
B3L7	Showcase of student work		

B3L8	Final MYP lesson – reflection on MYP, and Getting ready for GCSE		

Reflection: Considering the planning, process and impact of the inquiry [prompts for planning and reflecting on the unit once it has been developed and delivered to students for the first time]

Prior to teaching the unit	During teaching	After teaching the unit
Why do we think that the unit or the selection of topics will be interesting? - Potential opportunity to incorporate some research skills What do students already know, and what can they do? What have students encountered in this discipline before? What does experience tell us about what to expect in this unit? What attributes of the learner profile does this unit offer students opportunities to develop? What potential interdisciplinary connections can we identify? What do we know about the students' preferences and patterns of interaction? What in the unit might be inspiring for community or personal projects?	What difficulties did we encounter while completing the unit or the summative assessment task(s)? What resources are proving useful, and what other resources do we need? What student inquiries are emerging? What can we adjust or change? What skills need more practice? What is the level of student engagement? How can we scaffold learning for students who need more guidance? What is happening in the world right now with which we could connect teaching and learning in this unit? How well are the learning experiences aligned with the unit's objectives?	What were the learning outcomes of this unit? How well did the summative assessment task serve to distinguish levels of achievement? Was the task sufficiently complex to allow students to reach the highest levels? What evidence of learning can we identify? What artefacts of learning should we document? Which teaching strategies were effective? Why? What was surprising? What student-initiated action did we notice? What will we do differently next time? What did we learn from standardizing the assessment? How will we build on our experience to plan the next unit?

		How effectively did we differentiate learning in this unit?