**Phil Feain** - Hello and welcome to this VCE Algorithmics (HESS) School-assessed Task on-demand video for the School-assessed Task. The purpose of Video 4 is to support teachers with understanding Unit 4 Outcome 2 the SAT, Criteria 8 to 10, authentication and assessment for Algorithmics (HESS). My name is Phil Feain and I'm the Curriculum Manager for Digital Technologies with the VCAA.

This presentation will involve the following topics: the nature of the task, SAT Criteria 8-10, authentication and assessment. Now we'll look at the nature of the task for Unit 4 Outcome 2. Before we discuss the nature of the task, we need to look at the outcome statement. The Unit 4 Outcome 2 statement says: On completion of this unit the student should be able to solve a variety of information problems using algorithm design patterns and explain how heuristics can address the intractability of problems. The Nature of the task for Unit 4 Outcome 2 is stated in the study design and in the Administrative information for School-based Assessment. It involves a design of an improved data model and algorithm combination to solve the applied problem, including: the selection of an efficient, coherent and fit-for-purpose solution, a time complexity analysis and a comparison to the original solution.

The following slides reference the Administrative information for School-based Assessment for Algorithmics (HESS). We will unpack Criteria 8-10 by looking at the scope of the task and each criterion. There are two parts to the design of an improved solution, Criterion 8 and Criterion 9.

Criterion 8 assesses students' skills in the design of an improved data model and algorithm combination. Students are to apply their knowledge and skills from Unit 4 Outcome 2 to select and design an improved algorithmic solution. This may include combining or modifying Unit 4 course algorithms. Students should discuss the rationale underpinning their data model and algorithm design decisions and precisely describe their designs. The word range for this task is approximately 200-400 words. The evidence from this task is observed through Observation 7 and assessed through Criterion 8.

This is Criterion 8 which involves skills in the design of an improved data model and algorithm combination. The indicators state the tasks that students need to complete to satisfy the criteria. These are assessed against the levels of performance. Each criterion is worth 10 marks. In this criterion students are to: describe the design of an improved algorithmic solution to the real world or applied problem.

Criterion 9 assesses students' skills in advanced algorithmic problem-solving. Students are assessed on the quality of their improved designs based on the solutions coherence, efficiency and fitness for purpose. The evidence from this task is observed through Observation 8 and assessed through Criterion 9.

This is Criterion 9 which involves skills in advanced algorithmic problem-solving. In this criterion students are to: write about the quality of the improved solution.

Criterion 10 is connected with Criterion 7. Criterion 7 assesses students' skills in the comparison of the time complexities of algorithmic solutions to a real-world/applied problem. Criterion 10 assesses students' skills in the comparison of algorithmic solutions in terms of their coherence and fitness for purpose. Students draw on Unit 4 Outcomes 1 and 2 to compare the suitability of their developed solutions. The word range for this task is approximately 400-600 words. The evidence from this task is observed through Observation 10 and assessed through Criterion 7 and 10. Students should submit their completed Unit 4 Outcomes 1 and 2 School-Assessed Task work.

This is Criterion 10 which involves skills in the comparison of algorithmic solutions in terms of their coherence and fitness for purpose. In this criterion students are to: compare algorithmic solutions in terms of their coherence and fitness for purpose.

Just a quick look over authentication as this is covered in more detail in the Background to the SAT on-demand video and Authentication on-demand video. Teachers are to fill out these forms during the year. They are to state the date of observation and submission of each of the components of the SAT. Comment on the observation and the submission of each of the components and sign their initials for each observation and submission. Students are also required to sign their initials for each observation and submission. At the completion of the unit students are to sign and date the declaration that all resource materials and assistance used have been acknowledged and that all unacknowledged work is their own. The Authentication record form should be updated for each observation and submission during the lifetime of the SAT. It should not be left to the end of the SAT. Authentication record forms can be requested as part of the audit process by the VCAA.

And finally looking at the assessment of the SAT. This is the assessment sheet for scores to be added and submitted through VASS. All ten criteria for the SAT are listed on this page with spaces provided for each of the scores. The final three scores will be filled in for the SAT in Unit 4 Outcome 2. In this video we looked at: the nature of the task, discussed SAT Criteria 8-10, looked at authentication and looked at assessment.

Thank you for following this presentation. If you have any questions regarding this presentation, you can contact Phil Feain, the Digital Technologies Curriculum Manager, at the contact details below.

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