

VCE Systems Engineering: 2021 School-assessed Task (SAT)

Authentication and completing the
authentication form

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The Systems Engineering **mechanical and electrotechnological integrated and controlled system** created for the School-assessed Task (SAT) is based on Unit 3, Outcome 1 and Unit 4, Outcome 1.

Teachers are required to fill out the Authentication record form **and provide the student with feedback on their progress at each observation.**

Students ... research all aspects of their proposed production in detail, but the work undertaken for their record of investigation, design, planning and production must be their own.

Teachers are reminded that it is not appropriate to provide 'detailed advice on, corrections to, or actual reworking of students' drafts or productions or folios'.

The SAT is not a group project and students must work on their own design and production work for the entire SAT.

... written documentation and **visual representations**, required as part of the student's record of investigation, design, planning and production, form the basis for authentication of their work. ,
... **show annotated references to proposed** specifications, processes, materials or components and the **relevance to the design brief**. All notes should be dated and clearly documented to enable teachers to authenticate students' work.

The annotated design options are part of the student's record of investigation, design, planning and production ... which should be maintained and updated throughout the production process. The student's record of investigation, design, planning and production, together with the Authentication record form, informs the teacher about how the student refers to the proposed specifications, processes, materials or components and their relevance to the design brief.

Teachers must sight and monitor the development and documentation of the student's work on a regular basis in order to record each student's progress The Authentication record form for the Systems Engineering SAT sheet must be completed by the class teacher **to monitor the student's work-in-progress** The student must declare that all resource materials and assistance used have been acknowledged **and that all unacknowledged work is their own.**

Teachers should also make ongoing notes of observations of each student during the production of the SAT on the Authentication record form. The Authentication record form **provides teachers with the opportunity to present written information** that may be required to support the School-based Assessment Audit.

As the production work for the SAT occurs over a period of time, this form can also assist teachers in their record keeping. Teachers may find it useful to [refer to the comments on the sheet when assessing the four criteria related to the production work](#). Some skills, particularly those relating to the use of tools, equipment, machines and safety measures may not be clearly documented by the student.

Risk assessment and risk management must be addressed **throughout** the design, planning, construction, testing and operation of the integrated controlled system Teachers should supply written information based on **observations of the student during practical work sessions, including individual student adherence to safety procedures and project management**, on the Systems Engineering Authentication record form.

Any use of external support and/or equipment must be documented in the student's record of investigation, design, planning and production ... to ensure that any use of external support and/or equipment is appropriately limited and that the student does not receive undue assistance.

All use of external support must be planned and documented in the student's record of investigation, design, planning and production and teachers must certify that such support does not constitute undue assistance.

Photographs taken during the production process must be true and accurate representations of a student's work. This ensures the integrated controlled system can be authenticated as a realisation of the design brief developed by the student and that the student is not receiving undue assistance in the production stage. This in turn ensures that all students are assessed equitably. **All photographs must be dated.**

Teachers are reminded that the authentication procedures are required to be followed for all student work in relation to this SAT. The School-based Assessment Audit includes the inspection of Authentication record forms.

Authentication record forms will also be required to be forwarded for all works nominated for Seasons of Excellence awards in 2022.

Assessment criteria for School-assessed Task	Indicators	Date observed/ submitted	Authentication issues/comments	Teacher's initials	Student's initials
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1. Investigation of a problem/situation/ opportunity/need and develop a design brief for an integrated controlled system including evaluation criteria	<ul style="list-style-type: none"> identifies problem/situation/ opportunity/need 				
	<ul style="list-style-type: none"> develops design brief for an integrated controlled system 				
	<ul style="list-style-type: none"> develops evaluation criteria 				
	<ul style="list-style-type: none"> responds to design brief 				
	<ul style="list-style-type: none"> references factors that influence the creation and use of system 				

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2. Researching, devising, designing and modelling design options	<ul style="list-style-type: none"> conducts research including modeling of components, subsystems, systems 		(Note: all resources must be acknowledged)		
	<ul style="list-style-type: none"> generates design ideas 				
	<ul style="list-style-type: none"> produces feasible design options 				
	<ul style="list-style-type: none"> selects preferred option 				

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3. Planning the creation of the system	<ul style="list-style-type: none"> devises workplan (timeline, sequence of steps and associated equipment, components, materials, and processes) 				
	<ul style="list-style-type: none"> references materials, components and processes 				
	<ul style="list-style-type: none"> describes safety and risk assessment for materials, components and processes 				

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4. Use of tools, equipment and machines to make the system	<ul style="list-style-type: none"> implements work plan 				
	<ul style="list-style-type: none"> complies with OH&S requirements 				

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5. Realisation of an integrated controlled system	<ul style="list-style-type: none"> produces integrated, controlled system 		(Note: all outsourced processes must be recorded. At least three observations need to be recorded)		

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6. Use of diagnostic test procedures and interpreting test data	• identifies diagnostic tests				
	• provides reason for diagnostic tests				
	• explains how to set up diagnostic tests				
	• conducts tests				
	• generates and uses test data				

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7. Project management to realise the preferred option	<ul style="list-style-type: none"> manages production of system 				
	<ul style="list-style-type: none"> documents decision-making, modifications and justifications 				

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8. Evaluating the use of the systems engineering process, including finished, integrated controlled system	<ul style="list-style-type: none"> evaluates design 				
	<ul style="list-style-type: none"> evaluates production (materials, tools, processes) 				
	<ul style="list-style-type: none"> tests and evaluates system 				

For further information

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