**Leanne Compton:** Hello, my name is Leanne Compton and I'm the Curriculum Manager for Design and Technologies at the Victorian Curriculum and Assessment Authority. This video is one in a series of videos that we are developing, for both VCE Product Design and Technology and Systems Engineering in the delivery of the School-assessed Task for 2021. This video focuses in on occupational health and safety and outsourcing work.

With me today, I have Colin Chapman who is the state reviewer for VCE Systems Engineering and Simon Van Dillen who is the state reviewer for VCE Product Design and Technology. Colin and Simon will take you through this presentation today. So over to you, thank you.

**Simon Van Dillen:** Thank you Leanne and thank you everyone, and thank you Colin too for being here today. This video is going to go quickly through some information around OH&S and outsourcing for the SAT, and thank you educators for taking the time to watch this. Our IP statement. So the critical parts, I guess around the subject areas is our responsibility and duty of care for all people involved in this area, especially as students undertaking the study.

The study involves students potentially handling hazardous materials, and hazardous equipment quite a bit to produce their SAT. So the Department of Education actually has a lot of information regarding this on their website, and also to Safe Work Australia. Our recommendation would be go to the Department of Education first, their website around the safe use of equipment, hazardous materials and so forth. To begin with we going to go through, a little bit around risk management, risk assessments on this by saying a little bit simple, perhaps for some teachers But it is very important that we're all on the same page and the expectations of all teachers is the same and also to support our new educators to the study, perhaps.

So let's look at what's risk management. So risk management is the process of identifying assessing and controlling threats to an individual or multiple workers. Risk management reviews controls and evaluates the effectiveness of those controls. And that's what we expect the students to do in the SAT in a number of cases, they are assessed against this.

So what is the risk assessment? A risk assessment involves considering, what is possible, what could happen to someone if they're exposed to a hazard and likelihood of this happening. So if we look at our risk assessment and what it requires it identifies which workers are exposed to this risk could be exposed to the risks. Determines what sources and processes might cause this risk. So what are the hazards? Identifies what control measures could be used, and then requires us to checking those control measures. I think something students do very well is the first three.

Not necessarily, there's a lot of evidence in their SACs around how they go their SATs, sorry, around how they go about doing number four, checking the controls. So when students are looking at controls, we'll be expecting them to follow the hierarchy of control. So firstly looking at elimination, substitution, engineering, administrative of controls and then PPE.

Very quickly the first response could be who use PPE for a particular hazard where it really the students need to be taught this and taught how to follow these controls. And what's required at each of these different levels. And what's the most appropriate for the hazard or risk that they're trying to either eliminate or control.

Risk assessment So when the students are actually undertaking this assessment, here's just a template. There's numerous templates available. Your school might have a particular template they want or wish to use. And it's some on the Department of Education website as well, but it breaks it down simply for the students to look at what's the task that's been involved, what is involved what task they are undertakings, they're breaking it down to each task. What are the hazards going to be involved there? What's the risk level? How are these controls going to be checked? And then finally, sorry, what controls are going to be used? And then how we going to check these controls? or when are they going to be checking these controls? Where level of risk, which most people have seen this a table like this before this will expect the students to be, a table like this, using to determine the level of risk that's involved. So if we have a student come through and they've come to determine the level of risk is extreme. As a teacher you'd be thinking, okay, is this process even required? And how can the student do it without that even work in the very high column, it's level of risk is high. You'd be probably questioning. Does the student really need to do use this process or this piece of equipment whether they get up to those sort of levels, that's going to be a teacher judgement call on that. They are making sure too that the student actually has followed this table correctly. So teaching them how to read this table how to apply the information that is on it.

**Colin Chapman:** It's important to understand this risk management and elimination process as being a narrative process for the students. We do expect that as they engage with their School-assessed Task, that their attitude and effective use of risk management will mature. And it is important in the record of evidence that we should see evidence of this happening. And that's what's important that in any template that is used for risk assessment and management, that there is an opportunity for students to continually review the application.

So there are resources available with the department and we have here documents on the slide that really should be with the equipment and finance that in the workshops that are being used by the students as engage with their School-assessed Task. So we have a plants and equipment risk management form which should be filled in. And you note that there is a space for the people who are in that the activity as well as photographs for your individual instance of the equipment is used as well as description of use and summary of key risks. And then there is a more detailed safe work procedure template, which should be a placard which is associated with each tool or plant that's in workspace. And you'll see there are some checklists for appropriate PPE and Simon has said, that's not your first port of call. That is a response after you've gone through the hierarchy of risk assessment.

In addition to those documents, you can see that we have some plant and equipment management procedures. And that's quite a detailed document which is important for not only the teacher but also for students who are engaged in the School-assessed Tasks to be accessing and rating. It's important that you engage the students in a discussion about this document. So they look at the, not just this as being a list of things to do, but really a justified procedure and process that people must undergo in order to be able to evaluate plants and equipment before use in response to the School-assessed Task This document is a great document for everyday teaching. It's not really exclusive just to VCE. The documentation that can be used at all levels for students who are engaged in use of plants and equipment. It's a competency test.

It's competency test is really giving us evidence that student can undertake minimum requirements before using plants and equipment. And it's really associated with direct instruction of this equipment. It's important that this is completed year in year out and not just a once off so that we can be sure that the competencies are still used by the student effectively when using plant and equipment. And you can see the grid there with the particular types of plants and equipment. And there's a checklist, which is a yes, no.

You must also sign this off as teacher assessor and the student must also do SAT there's space for comments as well. This documentation should also be included with the record of evidence. This would be supportive of criteria four and five in Systems Engineering. There is a list which is clearly indicated in the department's documentation for a plant that requires completion of a student safe use test. This means that these equipments and plant can be used but they must be associated with competency tests as shown in the previous slide, the list is self evident.

There are some key rules in respect to electrical safety in the next part, that's it. This is a rule that applies to all Victorians. So having appropriate current electrical licence to carry out electrical work on products or equipment voltage is greater than 50 volts AC or 120 volts ripple-free DC. The main requirement for working with such appliance is to be an A-grade electrician. So students may not carry out such electrical work. Such work as this must be outsourced and acknowledged as outsourced work. Students are permitted to work with approved apparatus, appliances and testing that operate at main's power, including appliances such as drills soldering irons however, but they may not access or modify such equipments, appliances, or plant.

To be Systems Engineering specific in this case, and Simon we'll go over the appropriate statements for Product Design and Technology, any use of external support or equipment must be documented in the student's record of investigation, design, planning and production. It is permitted to outsource particular tasks. It may well be that in your circumstance, you don't have access to particular 3D printers or a laser cutter or a waterjet cutter. Such work may be outsourced. It would be good if the student was able to witness use of such equipment and my commentary about the use and still talk about safe use and include it in their record of evidence. We do this to ensure that any use of external support and or equipment is appropriately limited, and the student does not receive any undue assistance.

This 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. Now, when we say that this must be planned, it may well be the case that a student was changing their processes that they're going to use during the undertaking of the School-assessed Task, and that would be reflected in the re-planning in activities that students would undergo as an ongoing concern throughout their response

**Simon Van Dillen:** Product Design and Technology. Similar to what Colin has spoken about the Systems Engineering. There are other requirements to students who outsource any parts of the project, their product that they've documented this and documented this efficiently and effectively. And it's very clear when marking the student that this has been done.

A couple other points just to, to raise as well as when students are working at home or away from school. Perhaps some the SAT that they've demonstrate safe work practises as well in each of these environments. And it's the responsibility of the, the teacher that this is appropriate. It makes a lot.

My next point, teachers must authenticate safe work practises, and risk management may need to be carried out earlier in the design process before the SAT criteria require it. For an example, you know, if students are doing process or material testing in the research stage of the design process, there's an expectation. There's was an expectation that requirement the students would have undertaken risk assessment and risk management to do that as well. So our risk criteria, the actual SAT criteria stipulates risk assessment further on but earlier on in the piece most students would undertake. this form of processes or materials that have a level of risk.

And any further information or questions that you might have please contact Dr. Leanne Compton and Leanne's address is below there, her email address is below.

Thank you everyone.

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