TAS-Design and technology-section II transcript

(Duration: 11 minutes 20 seconds)

Hi, my name is Ms Rose, and today I'm going to take you through the HSC examination for design and technology and focus in the style of responses that are required in section two. Section two has short answer responses and these answers actually can equate generally to how many marks are awarded to the NESA key term.

So in any question, you may need to build your answer and take the following steps. In your step one, identify. In your step two, outline and define. In step three, describe and compare. Step four, examine, explain, evaluate, analyse, discuss, and step five, critically analyse and critically evaluate. Here we can see some of the most popular key terms. So, we have identify, which is to name, outline, to sketch in general terms. Describe, it's to list and explain the characteristics and features. And before you can describe, you must identify, then outline and then describe. Explain, this is to relate cause and effect and make the relationships between things evident. You need to provide the how and or why. Before you can explain, you must identify, outline, describe and then explain. Key words include the effect of all the results of. With discuss, you need to provide points for or against a topic. And before you can discuss you need to identify, outline, describe, explain and discuss. Some key words for discuss are positive aspects, benefits, pros, cons, negative aspects, against. And when we look at our design technology paper, often there is a scenario or a case study there and we need to apply these concepts to that scenario.

So if we have a look at some actual examples, we'll start to see this pattern. This is step one, an identify. ‘Identify two different methods of evaluation’. This is definitely an identity question and it's the first step of the NESA key terms hierarchy. So, ‘you will need to name, identify, two methods of evaluation with some detail or example’. Two sample answers are, making a model. Obviously a model exists before the final concept and you can use that to evaluate your project. Or surveying a niche market. Taking a survey gives you a chance to evaluate what the consumer or the customer would like. Here if you provide two different methods of evaluation, you would gain two marks.

So, if we apply another NESA key term this time, the question is going to be an outline question. ‘With reference to one of these cups, imagine some cups, outline how the designer could protect their intellectual property’. In this outline question, we can see that's the second step of NESA key terms hierarchy. So you'll need to name a method of protecting intellectual property. In step one, you're identifying how you can see the way of protecting intellectual property. But then the second sentence we'll explain and sketch in general terms, how a designer could then protect cup. A cup could be replaced with many other designed object. So the marking criteria shows what is required for two marks and what is going to only get you one out of two marks. A sample answer might be, a designer is able to protect the intellectual property of their cup design by ensuring they register their design through IP Australia. For example, the designer of the glass cup can register the designs of the rubber lid and band. Often these are used for insulating.

Let's look at a third question. This time, it's going to be the third step of the NESA key terms hierarchy and is an evaluation question. ‘Describe how evaluation can aid the design of a product’. So your first opening sentence, you will need to identify and name how evaluation can aid design. Then outline some main features of designing a product. Then provide characteristics and features of how evaluation aids design of the product. In the marking breakdown, we can see that you will not access three out of three months unless you provide characteristics and features of how evaluation aids the design of a product. If you only sketch in general terms how evaluation aids the final product, you will get two marks. And if you have unattempted the question and provide some relevant information, one mark. So a sample answer is, evaluation allows designers to test ideas prior to being put into full production. This can be achieved by the designers developing a prototype to see if the design works. This will then provide the opportunity for further modifications.

Let's have a look at a four mark question and this is a discuss question, the fourth step of the NESA key terms hierarchy. The question is, ‘discuss the influence that technology can have on the design process’. So your first sentence you'll need to identify or name how technology influences the design process. Then outline the influence of technology on the design process by sketching in general terms. Moving through to describing with example the impact of technology. And then concluding by providing points for and against the influence of technology on the design process. Here is a sample response. Technology like CAD/CAM, can improve the process used by designers. For example, whereas designers used to rely on paper based drawings, they can now use CAD/CAM technologies to 3D print a model of the object to be made. This is an improvement on the paper based technique as moving from 2D to 3D perspective of the object helps demonstrate the depth of detail that will allow the consumer to make educated decisions about the final design. However, the use of this technology may involve additional costs in resources and or staff training which can and may impact the design process. So here in this sample answer, you can see that there's points for or against the influence of technology. The reasons for it is because technology can speed up the process. The reason against it is because it may have additional costs that make it unobtainable.

Here is another sample question and this time it's an analyse question and it's the fifth step of the NESA key terms hierarchy. ‘To what extent have technological advancements in production techniques influenced changes in design? Support your answer with examples.’ So in your first sentence, you'll need to identify or name technological advancements in production. Then outline the influence of technological advancements in production by sketching in general terms. Then describe with example the impact of technology influencing changes in design. Provide characteristics and features of technological advancements in production. And then make the relationship evident why technological advancements in production techniques have influenced changes in design with relevant examples. Looking at the marking criteria, this is a six mark question. It's often the last question before you reach the extended response in section three. And to access the highest mark six out of six, you have to make sure that you explain the relationships and why technological advancements are linked to production techniques and that this has influenced change in design. Another important note is that you must provide examples.

So let's look at a six marks responses knowledge and what is required in terms of an answer. Technological advancements in modern production techniques give greater versatility in the way materials can be combined, formed, shaped and labelled. Hence the range of materials and function allows products to meet a broader social demand. For example, technological developments have affected and influenced the process in design and manufacture of products like the take-away coffee cup. Equipment and production techniques that can now be used to produce the rippled paper have allowed the designer to use the insulating rigid features in a simple cost effective mass produced process. Technological developments in laser cutting and automated production techniques have begun to change the way traditional production techniques are used to develop or produce a given design. For example, these advancements have led to a shift in the way products are designed for assembly. The design and development of flat pack products will reduce laser costs and cost to the consumer which will continue to stimulate the need for further design refinement. However, these advancements in production techniques often require the additional and necessary expense of equipment, staff training and increased demand for alternative and or additional resources. Hence, in some cases the advancements have not influenced changes in design as much or as quickly as they could have. So here in this response, you can see that there was argument presented in the for and against about technology when a plot design was expressed throughout the response using very explicit and specific examples of which there are many and a variety of correct answers for.

I hope that this presentation has helped in preparing for section two of the HSC exam for design and technology.

End transcript.