

Unit Title	Unit 1 – Design and Make Project – Takeaway food and packaging				
Subject group and discipline	Design: Design & Technology	MYP Year 9	3	Unit duration (hrs)	19

Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global context
Communities	Sustainability	Scientific and technical innovation

Statement of inquiry
Designers adopt existing products taking into consideration using more sustainable materials according to modern science and innovation

Inquiry questions
<p>Factual – Which innovative sustainable materials and components are available to us to use for producing disposable products? What sustainable modelling materials are available to produce models?</p> <p>Conceptual – Can sustainable materials be robust enough?</p> <p>Debatable – How sustainable really are innovative sustainable materials?</p>

Objectives	Summative assessment	
<p>A. Inquiring and understanding</p> <ul style="list-style-type: none"> i. Explain and justify the need for a solution ii. Develop a design brief which presents the analysis of relevant research <p>B. Developing Ideas</p> <ul style="list-style-type: none"> i. Develop a design specification which outlines the success criteria for the design of a solution based on the data collected ii. Present a range of feasible design ideas, which can be correctly interpreted by others iii. Develop accurate planning drawings/diagrams and outline requirements for the creation of the chosen solution 	<p>As part of this assessment, you will need to produce:</p> <p>Goal To design and make takeaway packaging that is functional and disposable</p> <p>Role You are a designer within IVC-a design and organisation and your team have been asked to research and investigate information that will help you design and make takeaway packaging that is functional and disposable</p> <p>Audience You are to create a customer profile based on the target audience that will use the disposable sustainable packaging for food, staff and members of the local community.</p> <p>Situation</p>	<p>Relationship between summative assessment task(s) and statement of inquiry:</p> <p>Students will need to use the knowledge of environmental impact on communities to adapt a product using materials and processes that are used in a sustainable way around the globe.</p> <p>As part of this summative assessment, students will need to produce the following material in order to demonstrate the methods undertaken:</p>

<p>C. Creating the solution</p> <p>i. Construct a logical plan, which outlines the efficient use of time and resources, sufficient for peers to be able to follow to create the solution</p> <p>ii. Follow the plan to create the solution, which functions as intended</p> <p>D. Evaluating</p> <p>i. Describe detailed and relevant testing methods, which generate accurate data, to measure the success of the solution</p> <p>ii. Outline the impact of the solution on the client/target audience</p>	<p><i>Something here quoting recent environmental issue....</i></p> <p>Purpose</p> <p>To design and make sustainable packaging that organisations could use to serve food in that are sustainable and disposable and bio-degradeable</p>	<p>Sub-task 1: Analysis of research on the impact of using fossil fuel plastics and more recent new materials such as seaweed</p> <p>Sub-task 2: To demonstrate using sustainable materials, tools, equipment and processes to create a final 3D outcome that works</p>
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Approaches to learning (ATL)

Researching - Research Skills -

Students must research elements that are relevant to the materials and techniques

Students must analyse the research and use it to create a design specification

Self-management skills -

Students must practice and apply skills using tools, equipment and processes

Students must create and use systems to help manage their time effectively

See ATL sheet for greater detail

Action: Teaching and learning through inquiry

	Learning objectives <i>(lesson by lesson/ week/ week/ fortnightly depending on your faculty)</i>	Learning experiences and teaching strategies <i>Space for you to develop approaches to learning and teaching. (There should be a range of learning experiences e.g. discussion, extended writing, quiz, performance, practical, presentation, debate, research, spaced practice, independent practice, questioning, scaffolding, review of previous learning, modelling, etc)</i>	ATL Skills	Formative assessment <i>Peer assessment, self assessment, oral feedback, teacher marked</i>	Differentiation and challenge	Resources
1	1. Refresh expectations and Health & Safety – Identifying hazards and risks in the workshop environment and	<p>Starter: What knowledge and skills have I acquired fill in checklist</p> <ul style="list-style-type: none"> Refresh of class and workshop expectations Teacher illustrates how to identify hazards and on how to reduce the risks <p>Main Task:</p>	<p>SM-5.Reflection</p> <p>Students reflect on what was previously learnt in Y7 with regards to H&S and</p>	<p>Quiz during plenary: Answering questions on key technical language, differences between hazards and risks and reducing risk</p>	<p>Differentiation: Health and safety sheets with keywords to circle or colour-in the hazards and multiple choice of how to reduce risks</p>	<p>Unit PowerPoint for core teaching</p> <p>Articles and websites containing</p>