Teacher(s)	DeBord	Subject group and discipline	Design/Technology		
Unit title	Learning the UNITY Game Engine	MYP year	1	Unit duration (hrs)	5 hours

Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global context
Systems - Sets of interacting or independent components. Systems provide structure and order in human, natural and built environments. Systems can be static or dynamic, simple or complex.	Adaptation - incorporating ideas found in one product into the development of a new product.	Orientation in Space and Time

Statement of inquiry
Once a system is identified, it can be adapted to fit the needs of design for a specific time and place.

Inquiry questions

Factual	Conceptual	Debatable
What is a virtual environment? What is a Game Engine? What is terrain? What are textures? What is a shaping Tool?	How is a virtual environment created? What design features are present in creating a virtual environment?	What are the possibilities for Virtual Reality? What consequences could there be for using only virtual models? How could students use VR in the classroom?

Objectives	Summative assessment	
Criterion C (Creating the Solution) i. Outline a plan, which considers the use of resources and time, sufficient for peers to be able to follow to create the solution. **Criterion C (Creating the Solution) ii. Demonstrate excellent technical skills when making the solution.** **Criterion C (Creating the Solution) iii. Follow the plan to create the solution, which functions as intended, list changes made to the chosen design and plan when making the solution.** **Criterion C (Creating the Solution) iv. Present the solution as a whole.**	**TSW document their progress with the following:** **Creating the environment as the teacher progresses and showing the main elements to the teacher. (Elements will either be completed or incomplete based on their comparison to the tutorial examples)**	**In this tutorial, students will be shown the basics for creating a virtual environment using the Unity game engine. Students will use this tutorial to build a larger class project.** **This project will require students to learn basic operation systems within UNITY to recreate a basic virtual environment.**

Approaches to learning (ATL)
Self Management - ORGANIZATION SKILLS - Use appropriate strategies for organizing complex information., Self Management - AFFECTIVE SKILLS - Demonstrate persistence and perseverance., Self Management - AFFECTIVE SKILLS - Practice 'bouncing back' after adversity, mistakes, and failure., Thinking Skills - CRITICAL THINKING - Troubleshoot systems and applications.

Action: Teaching and learning through inquiry

Content	Learning process

(No Academic Standards for subject)	**Learning experiences and teaching strategies** **TSW learn how to generate a terrain 3D object.** **TSW learn how to position the FPS.** **TSW learn how to find free textures.** **TSW learn how to import textures into Unity.** **TSW learn how to Sculpt Terrain.** **TSW learn how to Paint Terrain textures.** **TSW learn how to import SketchUp objects.** **TSW learn how to adjust object scale in Unity.**
	Formative assessment **TSW document their progress with the following:** **- Creating the environment as the teacher progresses and showing the main elements to the teacher** **TTW assess student work by:** **- One on one questioning for every student as the teacher moves through the class.**
	Differentiation **TTW provide feedback to individuals and groups through one on one conversations about tasks, objectives, tools, and design procedures.** **Students with a High proficiency for this work will be able to add more features to their environment.** **Students with Low proficiency will only be accountable by the teacher for one or two landscape elements.**

Resources
Computer **Google Classroom** **Unity** **Internet** **Google SketchUp tutorial completed** **Google SketchUp**

Reflection: Considering the planning, process and impact of the inquiry

Prior to teaching the unit	During teaching	After teaching the unit
Making sure the class stays on track with the tutorial will be a challenge. However, the larger challenge will be getting students caught up that miss due to being pulled for academic intervention.		