Unit Title	What are computers				
Subject group and discipline	Year 8 Digital design	MYP year	2	Unit duration (hrs)	12

Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global context
Systems	Adaptation	**Scientific and technical innovation** What is the technology behind making computers work.
Statement of inquiry		
New innovative systems may require adaptation to new contexts.		
Inquiry questions		
Factual— What is binary? What is memory? What is a CPU? What is storage? What are logic gates? **Conceptual—** What is a computer system? Why do we use binary? How are instructions stored and executed in a computer system? **Debatable—** Can computers be made that think for themselves?		

Objectives	Summative assessment	
Objective A: Inquiring and analysing i. explain and justify the need for a solution to a problem ii. state and prioritize the main points of research needed to develop a solution to the problem iii. describe the main features of one existing product that inspires a solution to the problem iv. present the main findings of relevant research. **Objective B: Developing ideas** i. develop a list of success criteria for the solution ii. present feasible design ideas, which can be correctly interpreted by others iii. Present the chosen design iv. Create a planning diagram	Goal To design a computer system, to be sent to space to gather data. Role You are a computer system architect. Audience The European space agency who want a new computer they can send up in the next space station delivery. Situation You will present your research and design as a couple of slides included in this presentation. Purpose You are creating a proposal of a new computer system based on your knowledge and research of what is required in a modern day computer. Standards and criteria You should be able to justify the need for every part of your design.	Relationship between summative assessment task(s) and statement of inquiry: In presenting their design students will justify and explain the need for binary in computer systems. Which is how information from input devices (also specified in the assessment by the student) is adapted and processed by the computer system. The need for memory and a processor should also be explained.
Approaches to learning (ATL) ***These can be listed or you could offer some explanation of how they will be developed***		
In order for students to justify the need for binary they must be able to revise their understanding based on new information and evidence **Explicitly taught and practiced skill or strategy: Provide evidence and examples of new techniques (Why binary – examples)**		