Foxford Learning Plan

Design and Technology
Year: 7 - Rotation
Topic: Digital Design

Key Skills	Over the course of this topic, I will be able to:
	• Navigate Tinkercad confidently, using tools to create and modify 3D shapes.
	• Design a key fob that meets specific size, style, and functional requirements.
	• Prepare their digital design for 3D printing by exporting files in the correct format (e.g., .STL).
	• Being able to understand the basics of a 3D printer and know how the setup and monitoring work.
	• Evaluate their finished key fob, considering accuracy, aesthetics, and durability.

I will understand:
1. How CAD (Computer-Aided Design) software works and why it's used.
2. The difference between 2D and 3D design, and how shapes combine to form complex objects.
3. The importance of dimensions, tolerances, and measurements in ensuring a correct fit.
4. The importance of prototyping and iterative testing during the design process.
5. How to assess a design's success and suggest improvements for future iterations.

Key Vocabulary	
CAD (Computer-Aided Design) – software used to create digital models.	**Extrude** – to extend a 2D shape into a 3D form.
Tinkercad – an online 3D design and modelling tool.	**STL File** – a common file format for 3D printing.
Filament – the material (often PLA or ABS) used in 3D printing.	**Additive Manufacturing** – the process of building an object layer by layer.

End of Topic Test	
Score:	
Pathway:	