

Preston Primary School Knowledge Organiser

DT - How can computer-aided design be used to solve practical problems?

Term: Spring 1

Unit 4 - Year 5 & 6

Duration: 6 Weeks

Electrical systems and IT



Computer Aided Design (CAD)



We will use the Tinkercad app to design our products

A design brief tells us how we can be successful.

Design brief

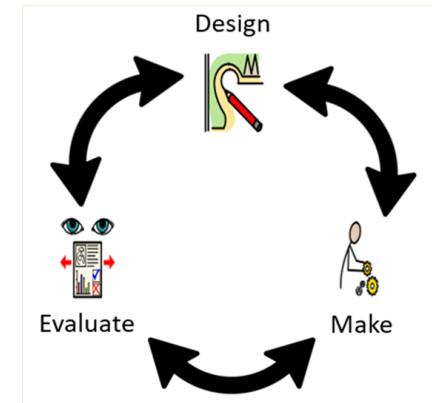
Aim: to use TinkerCad to design a flood defence system

Client: Torbay Council

Purpose: to solve the practical problem of coastal erosion

Design criteria

After researching the problem and looking at existing systems, we will create our own design criteria.



Dr Patrick Hanratty

The inventor of Computer Aided Design



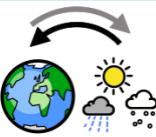
Some examples of existing coastal defences at Dawlish Warren

Groyne

Revetments



Key Vocabulary

Erosion		When rocks and soil are worn away by water, wind, or ice.
Coastal defences		Structures or methods used to protect land and buildings from the sea, like sea walls or sand dunes.
CAD: Computer Aided Design		Computer Aided Design is the use of computer software to design and edit ideas accurately.
Climate Change		Long-term changes in Earth's weather patterns caused by natural and human activities.
Revetment		A sloping structure built to protect shorelines from waves and erosion.
Rock Armour		Large rocks placed along coasts to absorb wave energy and prevent erosion.
Sea Wall		A strong wall built along the coast to stop waves from damaging land.