



DT – Year 6 Spring 2
Mechanical system -
Working Drawbridge
 (Previous mechanical systems knowledge
 – Year 3 Moving Monsters)

Vocabulary		
Tier 1	Tier 2	Tier 3
Air raid shelter	Blast resistance	reinforcement
Anderson Shelter	Durability	framework
Morrison shelter	Stability	prototype
Materials	Joining	Model testing
Tools	Strengthening	modroc
design	function	chicken wire
structure	clamp	construction
protection	handsaw	components

This half term, we will create models of WW2 Shelters. We will:

- research different types of shelter and evaluate their designs.
- develop the skills of choosing materials and equipment which are suitable for the construction
- learn about the joining of different components how to strengthen and reinforce 3D structures
- build our own shelter, using a range of tools and equipment safely and connect materials using different joining techniques to make joints strong and stable.
- evaluate our shelters by testing them out during an 'air raid'.

Health and Safety - using a handsaw

- Wear Goggles to protect eyes from sawdust.
- Use clamps to hold materials steady.
- Use a Stable Surface
- Cut slowly and steadily in a controlled way to prevent slipping.
- Always keep hands away from the blade.

Historical context:

World War Two began in 1939, involving the Allied Forces, which included Britain, France, the United States, China, and the Soviet Union, fighting against the Axis Powers of Germany, Japan, and Italy. In 1940, London and other British cities suffered devastating attacks from the German Luftwaffe (German Air Force). To protect themselves during these air raids, citizens sought refuge in various shelters.

Anderson Shelters

Anderson shelters were distributed to British households during World War II to provide protection from air raids. Constructed from curved sheets of corrugated steel, these shelters were bolted together to create sturdy, bomb-resistant structures. Designed to be partially buried in gardens and covered with soil for added safety, each shelter typically housed up to six people. Around 3.5 million shelters built throughout the country.

Morrison Shelters

Morrison 'Table' Shelters were introduced for those without gardens. Morrison shelters came as assembly kits that could be bolted together inside homes. They featured a solid 3mm steel plate for the "table" top, welded wire mesh sides, and a metal lath "mattress" type floor, providing a safe haven during air raids while serving a dual purpose as a dining table during the day.

Key Designers

The Anderson shelter was designed in 1938 by William Paterson and Oscar Carl Kerrison in response to a request from the government to help save lives. It was named after Sir John Anderson, who was responsible for preparing Britain for air raids, just before the start of World War 2.

The Morrison shelter was designed by John Baker, an engineer, in 1940. It was named after Herbert Morrison, the Minister of Home Security at the time, who commissioned its development

don't know
 I know this word
 I can use it in a sentence

 Research	 Design	 Make	 Evaluate
--------------	------------	----------	--------------

