

Making Fire Engines : DT : Year 2

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To explore modern fire engines.	Children will explore modern fire engines and their features, looking at what features are common to all vehicles and which are specific to fire engines. There is also the opportunity to look at a 17th century fire engine to compare how they are similar and different to modern fire engines.	<ul style="list-style-type: none"> Can children name the main features of a fire engine? Can children describe the functions of various parts of a fire engine? Can children label the main features of a fire engine? 	Slides Worksheet 1A/1B/1C/1D/1E Label Cards Picture Card 1A/1B (FSD? activity only)
Lesson 2	To investigate wheels, axles and chassis.	Children will explore how wheels, axles and chassis work together to create the base of a fire engine. They will explore different ways of attaching the chassis to the axles.	<ul style="list-style-type: none"> Do children know what wheels, axles and chassis are? Do children know that there are two different ways of attaching wheels to axles? Can children experiment with a range of materials and techniques to combine wheels, axles and chassis? 	Slides Challenge Sheet Worksheet 2A/2B Wheels and axles (and/or materials that can be used as such) Card and cardboard boxes
Lesson 3	To be able to investigate ways of creating the body of a fire engine.	Children will investigate different ways of creating the body of a fire engine, using materials such as cardboard boxes, lolly sticks and other craft materials. They will explore how to create features such as ladders and fire hoses, considering which materials and tools are best suited for different tasks.	<ul style="list-style-type: none"> Can children identify different ways of combining materials to create the body of a fire engine? Can children explore ways of making different parts of a fire engine, such as the ladder? Can children make decisions about appropriate materials and tools to use for different tasks? 	Slides Challenge Cards 3A/3B Worksheet 3A/3B/3C Variety of materials, e.g. cardboard boxes, card, wheels, lolly sticks, matchsticks, pipe cleaners, dowelling, etc. Variety of tools, e.g. scissors, sticky tape, glue, etc.
Lesson 4	To be able to design a fire engine.	Children will design their own fire engines, based on the learning they have undertaken so far. They will consider which materials and tools they will need, noting their design ideas using notes and diagrams. Children can design a modern or a 17th century fire engine to specific design criteria.	<ul style="list-style-type: none"> Can children design a fire engine to include wheels, axles, chassis and bodies? Can children describe which materials and tools they will need to make their fire engines? Can children discuss their designs and say what they think and feel about them? 	Slides Worksheet 4A/4B/4C/4D/4E/4F Picture Card 4A Picture Card 4B (FSD? activity only)
Lesson 5	To be able to make a fire engine based on a design.	Children will follow their designs to create their fire engines, using a range of different materials, tools and techniques.	<ul style="list-style-type: none"> Can children follow a design to create a fire engine? Can children use a variety of materials and tools safely and effectively to create a fire engine? Can children identify ways in which they could improve their products and amend accordingly? 	Slides Designs from lesson 4 Variety of materials dependent on designs, e.g. cardboard boxes, cartons, card, lolly sticks, paper, etc. Variety of tools e.g. scissors, masking tape, glue, etc. Materials for decoration, e.g. paint, crayons, scraps of shiny paper, etc.
Lesson 6	To be able to evaluate a finished product.	Children will evaluate their own fire engines, as well as fire engines made by their peers. They will consider what went well, what could be improved upon and what they could do differently if they were to make their fire engines again.	<ul style="list-style-type: none"> Can children evaluate a finished product by identifying what they did well? Can children evaluate a finished product by identifying what could be improved? Can children identify ways in which they could improve their work in the future? 	Slides Completed fire engines Worksheet 6A/6B Digital cameras (FSD? activity only) A4 paper (FSD? activity only) Question Cards (FSD? activity only)