

# Design Technology Skills Ladder

## Pathfinders 1

- D11** Explore the sensory qualities of materials
- D12** Explore ways to construct models
- D13** Identify a target group for what they intend to design and make
- D14** Recognise how structures can be made stronger, stiffer and more stable
- D15** Generate and talk about their own ideas
- D16** Follow safe procedures
- D17** Take account of simple properties of materials when deciding how to cut, shape, combine and join them
- D18** Use tools and materials with help

## Pathfinders 2

- D19** Explore a range of existing products
- D110** Discover where foods come from in choosing, preparing and tasting different dishes
- D111** Identify a purpose for what they intend to design and make
- D112** Identify simple design criteria then plan what to do next, using a variety of methods
- D113** Observe and take account of properties of materials when deciding how to cut, shape, combine and join them
- D114** Identify what they could have done differently or how they could improve their work in the future
- D115** Evaluate a range of existing products
- D116** Communicate their ideas using a variety of methods e.g. drawing, making mock-ups, ICT
- D117** Measure, mark, cut out and shape a range of materials
- D118** Use mechanisms in their products e.g. wheels, sliders
- D119** Use simple finishing techniques
- D120** Talk about their ideas, saying what they like and dislike, and evaluate against their design criteria

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## Adventurers 1

**DT21** Generate, develop and explain ideas for products to meet a range of needs

**DT22** Explore ways of meeting design challenges with a food focus using a range of cooking techniques

**DT23** Identify a purpose and establish criteria for a successful product

**DT24** Evaluate work, adapting and improving where appropriate

**DT25** Communicate design ideas in different ways e.g discussion, annotated sketches, cross-sectional diagrams and prototypes

**DT26** Selecting appropriate tools and techniques, name and describe them

**DT27** Measure, mark, cut out and shape a range of materials and assemble, join and combine components and materials with some accuracy

## Adventurers 2

**DT28** Use research to inform their design

**DT29** Explore ways of meeting design challenges with a textile focus

**DT30** Evaluate work, adapting and improving through the views of others to improve their work

**DT31** Communicate design ideas in different ways e.g discussion, annotated sketches, cross-sectional diagrams and prototypes

**DT32** Select from and use a range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

**DT33** Join and combine materials and components accurately in temporary and permanent ways

**DT34** Measure, mark, cut out and shape a range of materials and assemble, join and combine components and materials with increasing accuracy



# Design Technology Skills Ladder

## Navigators 1

- D135** Investigate ways of meeting design challenges with a construction focus
- D136** Investigate how the work of individuals in design and technology has helped to shape the world
- D137** Identify users' views and take these into account
- D138** Analyse a range of existing products
- D139** Estimate and measure using appropriate instruments and units
- D140** Plan what they have to do, including how to use materials, equipment and processes
- D141** Communicate design ideas in different ways e.g. discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
- D142** Apply knowledge of mechanical and electrical control when designing and making functional products
- D143** Refine sequences of instructions to control events or make things happen

## Navigators 2

- D144** Explore alternative ways of making their product, if first attempts fail
- D145** Check work as it develops and modify as necessary
- D146** Evaluate their products, identifying strengths and areas for development, and make appropriate changes
- D147** Draw on and use various sources of information, including ICT sources
- D148** Generate and clarify ideas for products, considering intended purpose
- D149** Plan what they have to do, suggesting a sequence of actions and alternatives if needed
- D150** Choose how to communicate design ideas as they develop, considering use and purpose
- D151** Select from a wide range of tools and equipment to perform practical tasks accurately

