Example case study - structures

EYFS
Red: design
Green: make
Blue: evaluate
Yellow: tech knowledge

Year 1
Constructing a windmill

Year 2 Baby bear's chair Year 3
Constructing
a castle

Year 4
Pavilions

Year 5 Bridges Year 6
Playgrounds

Material choices Verbal plans Junk modelling Fine motor skills

Fine motor skills
Joining materials
Describing models and
how they want to put
it together
Evaluating – describing
favourite and least
favourite part

Waking simple chan
suggestions to fix mate
models stren
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Learning importance of clear design criteria Individual preference

Making stable structures from card/tape and glue Following instructions to cut and assemble Making a functioning turbine and axle Evaluate Suggest points for

To understand you can change the shape of materials to improve strength To understand that

improvement

structure
To understand that axel

Generating and communicating ideas using sketching and modelling Learning about different types of structures

Following design criteria Creating joints and structures from card Building strong and stiff structures by folding paper Comparing structures

Identifying weaknesses
To understand what
shapes makes a stable
structure

Testing strength

Shape affects strength
To know strong and stiff
mean cannot break or



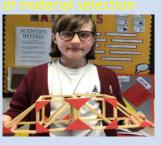
Designing a castle for a purpose
Draw and label a
design using 2D
shapes
Construct a range of
3D shapes using nets
Making facades
Suggest points for
modification
To test stability
To understand wide
flat based objects are
more stable
To understand the
importance of
strength and stiffness



Designing a stable structure that is aesthetically pleasing Building a frame to support weight Select appropriate materials to build frame and cladding Create a design in accordance with a plan Evaluate structures and characteristics of structures To know what a frame



Design a structure that can support weight Design using triangulation Make truss bridges Build wooden structure Measure, mark and cut wood accurately. Use correct methods to saw safely. Adapt and improve own bridge structure. To evaluate aesthetics



Design a playground with different structures Build a range of play apparatus. Mark, measure and cut wood. Select a range of materials based on qualities Improve a design based on peer evaluation. Test and adapt. Identify what makes it successful



Example case study - Food

EYFS Pancakes, biscuits, vegetable soup	Year 1 Fruit and vegetables	Year 2 A balanced diet	Year 3 Eating seasonally	Year 4 Adapting a recipe	Year 5 What could be healthier?	Year 6 Come dine with us
Food choices Verbal plans Ingredient choices Chopping plastercine and play doh safely Chopping with support Evaluating – describing favourite and least favourite taste. What does it look like, feel like, smell like, taste like. Choosing favourite packaging design and explaining why To know soup in ingredients blended together To know vegetables are grown To know vegetables taste different	Learning importance of clear design criteria - packaging Individual preference Chopping safely Tasting and evaluating different food combinations Describing appearance, taste and smell To understand difference between fruit and vegetables To understand some vegetables are fruits To know a fruit has seeds but a vegetable does not. To know fruits grow on vines or trees TO know vegetables grown below ground	Designing a healthy wrap based on food combinations that work well together Slicing food safely Constructing a wrap that meets the brief Describing taste, texture and smell Taste testing different combinations Describing information on labels Evaluating grip To understand the term "diet To understand what makes a balanced diet To know where to find nutritional info on packaging To know the 5 main food groups	Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients Knowing how to prepare themselves and their workspace to cook safely. Follow instructions of a recipe Adapting a recipe to improve it. Test and review dishes Describe benefits of seasonal fruits and veg To know not all fruit and veg can be grown in the UK Climate affects growth Fruit and veg grown in certain seasons	Designing a biscuit within a given budget based on previous taste testing judgements Follow a basic recipe Cook safely following basic hygiene rules Adapt a recipe Evaluate a recipe considering taste, smell texture and appearance To understand the term quantity as an amount of an ingredient Important to use gloves when removing hot food from the oven To understand: sieving, creaming, rubbing and cooling	Adapt a traditional recipe understanding the nutritional values when you add/remove Design appealing packaging Cut and prepare vegetables safely Use equipment safely including ovens, hot pans and hobs etc Follow method to make a recipe Identify the nutritional differences between products and recipes Describe benefits of healthy food	Write a recipe showing clear key steps, methods and ingredients Include facts Cut and prepare vegetables safely Adapt a recipe based on research Work to a timescale Work safely and hygeinically Improve a design based on peer evaluation. Test and adapt. Identify what makes it successful To improve a design based on peer evaluation based on peer evaluation. Test and adapt as its developed ID what makes a successful structure