

Newquay Primary Academy – Design and technology Autumn Term Sequence



YEAR 3

Prior knowledge...

I associate a structure with a building.

I can measure, cut and attach materials with some accuracy.

Materials can be fixed to each other in different ways and can be temporary or permanent.

Decoration improves a products finish.

YEAR 4

Prior knowledge...

I associate a structure with a building.

I can measure, cut and attach materials with some accuracy.

Materials can be fixed to each other in different ways and can be temporary or permanent. • Decoration improves a products finish.

YEAR 5

Prior knowledge...

Pupils can:

Work independently to produce an accurate, functioning car chassis.

Design a shape that is suitable for the project.

Attempt to reduce air resistance through the design of the shape.

Produce panels that will fit the chassis and can be assembled effectively using the tabs they have designed.

Construct car bodies effectively.

Conduct a trial accurately and draw conclusions and improvements from the results.

YEAR 6

Prior

knowledge... Understand how beef gets from the farm to our plates.

Present a subject as a poster with clear information in an easy to read format.

Contribute ideas as to what a 'healthy meal' means.

Notice the nutritional differences between different products and recipes.

Recognise nutritional differences between two similar recipes and give some justification as to why this is.

Work as a team to amend a bolognese recipe with healthy adaptations.

Follow a recipe to produce a healthy bolognese sauce.

Design packaging that promotes the ingredients of the bolognese.

INTENT

Structures: Constructing a Ziggurat

To design and make a Ziggurat

Structure: Pavilions (starting in 2025)

To design and make a stable pavilion

Electrical _____ systems: Electronic pop-up card

To design and make a electrical Christmas card with a pop-up element.

Food: Mince pies

Pupils will design and make a mince pie.

VOCABULARY / STICKY KNOWLEDGE

2D, 3D, Ziggurat, Design,
Key features, Net, Scoring,
Shape, Stable, Stiff, Strong,
Structure

3D shapes, Design criteria,
Innovative, Natural, Reinforce,
Structure

Aesthetic, design, design
brief, target audience
electricity, buzzer, battery,
cell, component,
conductor, LED, switch,
series circuit, pop-up

Consistency, crumb,
pastry, chill, glazing,
dusting, traditional, texture,
aesthetics.

SEQUENCE OF LESSONS

Lesson 1: Features of a
ziggurat

To recognise how multiple
shapes (2D and 3D) are
combined to form a strong
and stable structure.

Lesson 2: Designing a
ziggurat

To design a ziggurat

Lesson 3: Nets and
structures

To construct a ziggurat
using a net

Lesson 4: Building a
ziggurat

To construct and evaluate
my final product

Lesson 1: Features of a
ziggurat

To recognise how multiple
shapes (2D and 3D) are
combined to form a strong and
stable structure.

Lesson 2: Designing a
ziggurat

To design a ziggurat

Lesson 3: Nets and structures

To construct a ziggurat using
a net

Lesson 4: Building a ziggurat

To construct and evaluate my
final product

Lesson 1: Design brief To
identify a target audience
for a greetings card and
write a short specification.
To research a range of
cards to inform design
ideas.

Lesson 2: Design To
design an electrical
greetings card with a pop-
up element

Lesson 3: Making the circuit
To build an LED series
circuit

Lesson 4: Making the card
To make a card design
which includes an inside
pop-up element.

Lesson 1: Research

To research the origin of
mince pies and to compare
how the recipe and
ingredients have changed
over the years.

Lesson 2: Designing

To develop a simple design
specification by deciding
on user group, ingredients/
spices, decoration and
what might accompany the
mince pies.

To generate design ideas
through discussion and
detailed annotated
sketches.

Lesson 3: Making

3. To follow a set of
instructions (recipe)
independently one step at
a time.

To use the appropriate
tools and equipment to
measure, cut, roll and
decorate accurately.

Lesson 4: Testing and
Evaluating

4. To carry out a peer taste
test against the following
criteria: texture, aesthetics,

**OUTCOME /
COMPOSITE**

Pupils will have designed and made their own ziggurat using a net to use as an opening worlds display.

To have designed and made a stable pavilion which is aesthetically accurate.

Pupils will have designed and made an electrical pop-up greetings card to sell at the Christmas fayre.

Pupils will make their own mince pies taking into consideration the old and new recipes. To gift as a present to their targeted audience.

smell and taste.
To evaluate their mince pies against their design specification.