**Newquay Junior Academy - Summer Sequence – Design and Technology. Kapow Scheme of Work**

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| Logo  Description automatically generated |  | **YEAR 3****Prior knowledge.** Pupils can:Name the main food groups and identify foods that belong to each group.Describe the taste, texture and smell of a given food.Think of four different wrap ideas, considering flavour combinations.Construct a wrap that meets the design brief and their plan. |  | **YEAR 4****Prior knowledge...**Pupils can:Explain that fruits and vegetables grow in different countries based on their climates.Understand that ‘seasonal’ fruits and vegetables are those that grow in a given season and taste best then.Know that eating seasonal fruit and vegetables has a positive effect on the environment.Design their own tart recipe using seasonal ingredients.Understand the basic rules of food hygiene and safety.Follow the instructions within a recipe. |  | **YEAR 5****Prior knowledge.** Pupils can:Produce a range of free-standing frame structures of different shapes and sizes.Design a pavilion that is strong, stable and aesthetically pleasing.Select appropriate materials and construction techniques to create a stable, free-standing frame structure.Select appropriate materials and techniques when constructing |  | **YEAR 6****Prior knowledge...**Pupils can:Design to meet a brief and develop ideas.Understand that a mechanism is a system of parts working together to control a motion.Work safely when handling toolsMeasure accuracy using mm.Cut with a good degree of accuracy.Finish a product to a good standard. |
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| **INTENT** |  | **Food: Eating seasonally**Pupils will understand the term ‘seasonal’ and understand that eating seasonal fruit and vegetables has a positive effect on the environment. Students will design their own seasonal recipe using seasonal ingredients. |  | **Food: Adapting a recipe - Sushi****Pupils will explore the different categories of sushi and its historical roots. Pupils will design and make their own sushi.** |  | **Structures: Bridges****Pupils will learn and investigate the different types of bridges and what features allow them to support a large amount of weight. Children design, make and evaluate their own truss bridge.**  |  | **Textiles: Stuffed toys****Pupils will design and make a stuffed toy using blanket stitches and applique.** |
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| **VOCABULARY / STICKY KNOWLEDGE** |  |  **Climate, exported, imported, mediterranean climate, nationality, nutrients, polar climate, recipe, seasonal food, seasons, temperate climate, tropical climate** |  | **Sushi, traditional, Japanese, vinegared rice, seasoned, seafood, raw, toppings, fillings** |  | **beam bridge, arch bridge, truss bridge, strength, technique, corrugation, lamination, stiffness, rigid, stability, visual appeal, aesthetics, joints** |  | **Accurate, annotate, appendage, blanket-stitch, design criteria, detail, evaluation, fabric, sew, shape, stuffed toy, stuffing, template** |
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| **SEQUENCE OF LESSONS** |  | **Lesson 1: Where in the world?**To know that climate affects food growth**Lesson 2: British seasonal foods**To understand the advantages of eating seasonal foods grown in the UK**Lesson 3: Rainbow food**To create a recipe that is healthy and nutritious using seasonal vegetables**Lesson 4: Making tarts**To safely follow a recipe when cooking |  | **Lesson 1: What is sushi?**To learn the different categories of sushi and explore its historical roots.**Lesson 2: Design**To design sushi following a design brief**Lesson 3: Making sushi**To prepare a sushi recipe using traditional techniques**Lesson 4: Evaluation**To evaluate sushi against relevant criteria |  | **Lesson 1: Arch and beam bridges**To explore how to reinforce a beam (structure) to improve its strength**Lesson 2: Spaghetti truss bridges**To build a spaghetti truss bridge**Lesson 3: Building bridges**To build a wooden truss bridge**Lesson 4: Finalising bridges**To complete, reinforce and evaluate my truss bridge |  | **Lesson 1: Designing a stuffed toy**To design a stuffed toy.**Lesson 2: Blanket stitch**To sew a blanket stitch.**Lesson 3: Details and appendages**To create and add decorations to fabric.**Lesson 4: Stuffed toy assembly**To use a blanket stitch to assemble the components of a stuffed toy. |
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| **OUTCOME / COMPOSITE** |  | **To have made a seasonal meal using fruit. To celebrate and share their meal with a friend or family member.** |  | **To make sushi using traditional techniques. To share their sushi meal.** |  | **Children make a truss bridge out of softwood. Children test and evaluate their structure.** |  | **Children make their own stuffed toy which will be gifted as a present to their targeted user, or as an item to sell at the Summer fayre.** |

**Newquay Junior Academy - Summer Sequence 2 – Design and Technology. Kapow Scheme of Work**

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| Logo  Description automatically generated |  | **YEAR 3****Prior knowledge...** |  | **YEAR 4****Prior knowledge. Pupils can:****Draw accurate diagrams with correct labels, arrows and explanations.****Correctly identify definitions for key terms.****Identify five appropriate design criteria.****Communicate two ideas using thumbnail sketches.****Communicate and develop one idea using an exploded diagram.****Select appropriate equipment and materials to build a working pneumatic system.****Assemble their pneumatic system within the housing to create the desired motion.****Create a finished pneumatic toy that fulfills the design brief.** |  | **YEAR 5****Prior knowledge...** |  | **YEAR 6****Prior knowledge...** |
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| **INTENT** |  |  |  | **Mechanical systems: making a slingshot car.****Pupils will design and make their own slingshot car** |  |  |  |  |
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| **VOCABULARY / STICKY KNOWLEDGE** |  |  |  | **Chassis, energy, kinetic, mechanism, air resistance, design, structure, graphics, research, model, template** |  |  |  |  |
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| **SEQUENCE OF LESSONS** |  |  |  | **Lesson 1: Chassis and launch mechanism**To build a car chassis**Lesson 2: Designing the car body**To design a shape that reduces air resistance**Lesson 3: Making the car body**To make a model based on a chosen design**Lesson 4: Assembly and testing**To assemble and test my completed product |  |  |  |  |
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| **OUTCOME / COMPOSITE** |  |  |  | **To design and make an aerodynamic slingshot car** |  |  |  |  |