

Design & Technology

YEAR 5	AUTUMN FOCUS The Olympics DT Cooking and Nutrition – Greek Cuisine	SPRING FOCUS Invaders and Traders DT Mechanical Structures – toys: levers, linkages and cams	SUMMER FOCUS Sail Away! DT Construction (Photo Frames) <i>Picture used comes from Art previous half term</i>
	<p>VISIT/TRIP: Souvlaki City Greek Restaurant</p> <p>Final Product: A Greek salad and portion of tzatziki</p> <p>Opportunities for Exploring Diversity:</p> <ul style="list-style-type: none"> • Comparing European cuisine • Food as a major part of Greek culture • Gender Equality & Democracy. 	<p>VISIT/TRIP: British Museum to see the King's Treasure from Sutton Hoo and take part in a digital story-telling workshop</p> <p>Final Product: A moving toy</p> <ul style="list-style-type: none"> • Opportunities for Exploring Diversity: Fair Trade <ul style="list-style-type: none"> • How are moving toys marketed? • Do toys today represent our diverse community? 	<p>VISIT/TRIP/DISPLAY: Wow Day – Viking Workshop TRIP: PGL Residential (May)</p> <p>Final Product: A picture frame</p> <p>Opportunities for Exploring Diversity:</p> <ul style="list-style-type: none"> • Link to picture inspired by culturally diverse artists. • Using sustainable materials.
Artist/Texts/websites	<p>https://www.bbcgoodfood.com/recipes/collection/greek-recipes</p> <p>Local Greek restaurant: https://www.suvlakicity.co.uk/</p>	<p>A range of cams:</p> <p>http://www.hyperstaffs.info/work/physics/Muirhead/website/main.htm</p> <p>https://www.theschoolrun.com/homework-help/history-toys</p>	<p>https://www.youtube.com/watch?v=2ZfKPpucr5w</p> <p>Lolly pop sticks - http://www.smilingcolors.com/2012/07/make-it-with-kids-monday-4-popsicle-photo-frames/</p>
Skills	<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet; • prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques; • understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 	<p>Design</p> <ul style="list-style-type: none"> • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. <p>Make</p> <ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately; • select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. • <p>Technical Knowledge</p> <ul style="list-style-type: none"> • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]; <p>Evaluate</p> <ul style="list-style-type: none"> • Investigate and analyse a range of existing products • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work; understand how key events and individuals in design and technology have helped shape the world. 	<p>Design</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups;</p> <p>Identify how a frame stands freely Identify how a frame holds a photograph Accurately sketch a frame shape Discuss the similarities and differences between photograph frames Understand and can discuss sustainable materials Choose a relevant theme (with a person in mind.) Produce a final design with accurate labels</p> <p>Make</p> <p>Find suitable materials to make an outdoor frame. Join materials together by tying knots. Identify and create regular and irregular shapes.</p> <p>Technical Knowledge</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures;</p>

			<p>Evaluate</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work;</p>
<p>Key Vocabulary (<u>new vocabulary in bold underlined</u>)</p>	<p><u>Greek cuisine, criteria, authentic</u>, investigate, analyse, <u>houmous, tzatziki, pitta bread</u>, salad, chop, slice, present.</p>	<p><u>Cam, follower, shaft drive technical drill</u>, accurate measurements, mm, sand paper, saw, <u>hacksaw, block</u>.</p>	<p>Picture frame, photograph, rectangular, square, 3 dimensional. 2 dimensional, sketch, measure, accurate, joins</p>
<p>Opportunities for Learning / Cross Curricular</p>	<p>History: Ancient Greece</p> <p>Geography: Locating Greece and cities where certain Greek dishes originated from.</p> <p>Home Learning: For family time, children will have the opportunity to try out a range of Greek recipes together.</p> <p>English Links:</p> <ul style="list-style-type: none"> Write an ingredient list and equipment list (using the basic recipe as a guide but adding their additional ingredients and any extra equipment they may need Write a method for their dish. Using the basic recipe as a guide but adding extra steps to include their new ingredients. These could include the following writing skills: <ol style="list-style-type: none"> Imperative verbs Sequencing conjunctions (next, after that, secondly) Paragraphs <p>Model how present their work using: organisational features (bullet points, numbers, steps), imperative verbs etc.</p> <p>Computing Links: Children could make a class recipe, Google Slideshow or iMovie of the process.</p> <p>Science/PSHE: What makes a healthy/balanced meal? Which foods are authentic Greek ingredients?</p>	<p>English: Link to characters from the story of Beowulf. Once the toys have been made, these can be used to re-tell the story.</p> <p>History: Anglo Saxons/Trade in Topic (Invaders and Traders) Look at how moving toys have changed over the years.</p> <p>Maths: Measurement</p> <p>PSHE: Are all ethnic groups represented in toys such as teddies and dolls? Discuss and follow up with Home Learning research.</p>	<p>Maths – Shape and measurement</p> <p>Science: Sustainable Materials</p> <p>Geography: Climate change and the importance of re-using and recycling materials</p> <p>English: Following instructions</p> <p>Art: Picture produced by children in previous half term’s Art unit inspired by artists from different cultures.</p>
<p>Learning Overview / WALTs</p>	<p>Lesson 1</p> <p>WALT: investigate and analyse existing products. What are typical Greek foods? What key ingredients are used in Greek dishes?</p> <p>National Curriculum Link</p> <p><i>Design – Use research and develop design criteria to inform the design of appealing products that are fit for purpose, aimed at particular individuals or groups</i></p> <p>Children will taste a range of Greek dishes (incorporated into the restaurant visit) focusing on souvlaki meats, dips, salads and vegetables. Chef to explain typical spices, flavours and ingredients used in traditional Greek dishes. Taste each dish as a</p>	<p>Lesson 1</p> <p>WALT: investigate toys with moving cam mechanisms. Can you work out what is making the toy move?</p> <p>Children will think of and investigate different moving toys. They will learn about cam mechanisms and explore different toys that use them.</p> <p>Lesson 2</p> <p>WALT: To investigate different types of cam mechanisms. create a technical drawing Can you work a cam? Can you create a design including a cam?</p>	<p>Lesson 1</p> <p>WALT: identify features of picture frames. Can you identify and label features of a typical picture frame?</p> <p>Children to sketch two frames of choice and label sketches showing how they stand freely and where the photograph goes in.</p> <p>Lesson 2</p> <p>WALT: make frames out of a range of materials</p> <p>Discuss the shape of the photograph frames we looked at last week. Were they all rectangles?</p>

whole class to support the vocabulary children are using to describe the flavours.

Lesson 2
WALT: design an appealing product based on design criteria
Can you design a healthy, Greek salad?
Can you include authentic Greek ingredients?

Recap the learning from the restaurant visit.

Main: Explain to children that in today's lesson they will be deciding which product they would each like to make and then go on to adapt a basic recipe in order to design their own dish. Divide the class into four groups depending on which dish they will be creating.

Activity 1: Ask children to work in pairs and look at the basic recipe sheets. What do they notice? Do they have any ideas about what they could add to the recipe and how and when they would add it?

Activity 2: Using the PowerPoint to go through the possible ingredients they could add to their dish. Can children recognise any of the ingredients before you reveal the names? Explain to children that these are the additional ingredients they have to choose from to make their dish more interesting. For those making the salad, they will be making a salad dressing by combining their chosen ingredients with olive oil. Tell the class that olive oil is a traditional dressing for Greek salads but adding flavour to the olive oil will make the salad more interesting. Adding herbs and spices also changes other foods.

Activity 3: Children will then taste each of the spices and herbs and discuss what they thought of each.

Activity 4: Using an enlarged copy of the Topic booklet, model how children will need to complete their design by;

- Giving their dish an interesting name and drawing a picture of how it will look (advise that it's sometimes best to name and draw your design last).
- Explaining how they plan to adapt their dish to make it their own
- Write an ingredients list and equipment list (using the basic recipe as a guide but adding their additional ingredients and any extra equipment they may need.
- Write a method for their dish. Using the basic recipe as a guide but adding extra steps to include their new ingredients.

Lesson 3
WALT: prepare a savoury dish using a range of techniques
Can you prepare salad ingredients?
Can you follow instructions to make tzatziki?

[National Curriculum Link](#)

Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

Children will explore and investigate different types of cam mechanisms and think about the shapes they will produce. They will be testing different shaped cams to see how they affect the linear movement of the follower.

Lesson 3
WALT: To investigate ways of strengthening structures for a moving toy.
Children to explore materials and investigate different ways of strengthening moving toy structures.
Can you make a strong structure for a moving toy?

Lesson 4
WALT: design a moving toy with a cam mechanism.
Who is your toy designed for?
What character will your toy be?
What shape will the cam be?
What other materials will you need to make your toy?

Children will use their previously learnt knowledge to design a moving toy with a cam mechanism. They will need to think about who the toy is for, what shape the cam will be, the structure, decoration and materials needed to construct it.

Lesson 5
WALT: follow a design to create a moving toy with a cam mechanism.
Can you assemble your toy?
How will you decorate your toy?

Children will refer to their designs from the previous lesson to create their moving toys. Once finished they can add colour/decoration.

Lesson 6
WALT: evaluate a finished moving toy.
How effective is your toy?
Can you evaluate your toy against success criteria?

Children will demonstrate their finished moving toys, then evaluate both their process and their finished product, either individually or with a partner.

Success Criteria:

- ◆ Create an accurate technical drawing and parts list
- ◆ Measure accurately
- ◆ Join my toy together
- ◆ Choose and fit a cam correctly
- ◆ Attach a handle
- ◆ Make a drawing for the top of my moving toy and attach securely
- ◆ Change my ideas if any difficulties arise

What might be difficult about an oval shaped frame?

Show ppt on different outdoor frames. Children to collect 'outdoor treasures' and experiment making frames from sticks / twigs / leaves / flowers / - show model example.

Lesson 3
WALT: generate ideas and design a photograph frame
What will be the theme of your picture frame?
What sustainable materials will you use to make it?

Examine frames made using outdoor materials. Discuss the benefits of re-using materials and recycling. Children to choose a theme for their photograph frame and produce a detailed final design.

Key Features examples: recycled / free-standing / rotating /

Lesson 4
WALT: make a picture frame
Children to follow steps to get 5 parts of their photograph frame.
What size of photograph are you making a frame for?

Display border around photo and discuss how that alters measurements.

How do you measure accurately?
What materials do you need?
Children to peer support each other to get outline of frames drawn on cardboard.

Lesson 5
WALT: decorate a picture frame
Children will then add detail and decoration to completed frame.
How can I make my picture frame attractive?

Lesson 6
WALT: evaluate picture frame
Can you evaluate your frame against success criteria?

Children will then complete a reflection and peer assess their finished product against the success criteria.

Success Criteria:

- ◆ Identify how a frame stands freely
- ◆ Identify how a frame holds a photograph
- ◆ Accurately sketch a frame shape
Discuss the similarities and differences between photograph frames
- ◆ Find suitable materials to make an outdoor frame.
Join materials together by tying knots.
- ◆ Identify and create regular and irregular shapes.

Make – Select from a wide range of materials and components, including ingredients, according to their functional properties and aesthetic qualities.

In the restaurant, children will have constructed a souvlaki pitta and selected appropriate accompaniments.

Back in the classroom:

Intro: Recap prior learning, particularly in relation to their design criteria and their product design / methods.

Main: Using the lesson PowerPoint to explore the importance of hygiene and to explore basic knife skills. Go on to model how to use the different pieces of kitchen equipment children will be using in your lesson e.g. grater, garlic peeler etc.

Activity: Explain to children that they will be working together as a group to create the basic recipe for their chosen dish. They will then share out the recipe amongst the group where they will then add their chosen extra ingredients.

Plenary: Take a photo of their completed dish. Children will taste each of the dishes from their group and discuss what they like and how they could be improved. Children will then write 3 stars and a wish for each of the dishes they taste.

Lesson 4

WALT: evaluate our product against our design criteria
Can you evaluate your finished product against the success criteria?

National Curriculum Link

Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Intro: Allow children to recap from last lesson which dishes they liked the most and why.

Main: Explain that in this lesson children will be evaluating their own dish using their design criteria and also the feedback they received from peers who tasted their dishes.

Activity: Children will write an evaluation of their dish and make suggestions on how they could improve it.

Plenary: Vote on the best four dishes in the class

Success Criteria:

- ◆ Create an individual portion of houmous/tzatziki/pitta bread/Greek salad
- ◆ Use healthy, authentic Greek ingredients
- ◆ Be attractively presented
- ◆ Be a creative and tasty adaptation of a basic recipe

◆ Evaluate my toy

◆ Understand and can discuss sustainable materials. Choose a relevant theme (with a person in mind.) Produce a final design with accurate labels.