

Autumn Term: 2nd Half
Design and Technology



Stick in your
new title page.

Programme of study:

- **Design:** 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.
- **Design:** Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- **Make:** Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately.
- **Evaluate:** Investigate and analyse a range of existing products.
- **Evaluate:** Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- **Food:** Understand and apply the principles of a healthy and varied diet.
- **Food:** Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.
- **Food:** Understand seasonality, and know where and how a variety of ingredients are grown, reared, sought and processed.
- **Aims Breadth:** Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.



Design and Technology Knowledge Organiser - Year 3



Key Concepts / Knowledge

Biscuits are baked flour-based snacks, often sweet in flavour. They often contain special ingredients for added flavour.



Gingerbread



Sugar biscuit



Oat cookie

Key skills for making biscuits:

- measuring - using scales or measuring jugs to ensure you have the correct amount of each ingredient
- mixing - using a spoon to combine ingredients
- rolling - using a rolling pin to evenly flatten the dough.
- cutting - using equipment to create shapes out of the dough.
- baking - cooking the biscuits in an oven.

Nutritional information



Healthy eating



Design and Technology Knowledge Organiser - Year 3



Key Skills

IDEAs	Investigate	You will investigate a range of existing products and analyse the usefulness of their intended purpose.
	Disassemble	You will investigate products to understand how they work.
	Evaluate	Following investigation and disassembly you will assess whether the product fits its original purpose and make suggestions to adapt.
FPTs	Focused Practical Tasks	During the design process you will complete a series of small tasks intended to prepare you for your final make.
DME	Design	You will follow a design criteria, making informed choices and design decisions for your final make.
	Make	You will make your final product, following your design criteria.
	Evaluate	You will evaluate your own and your peers' final products. You will consider whether your product has achieved its intended purpose. Finally, you will suggest adaptations.

FOOD SAFETY BASICS FOR KIDS IN THE KITCHEN

- Clean all worktop and kitchen surfaces before and after cooking.
- Wash hands before and after cooking.
- Wash hands with soap, keep water warm and after handling food.
- Always use with adult supervision.
- Always use clean dishes.

Vocabulary	Definition	Question to consider
User	is person who uses or operates something	Have the needs of the user been identified and met (or was it designed with no one in mind?)
Purpose	the reason for which something is done or created or for which something exists	Does it have a clear purpose?
Function	work or operate in a proper or particular way	Does it work or function (or is it ornamental)?
Innovation	is a new method, idea, product	Is the product innovative and original?
Authentic	original	Is the product authentic or is it a gimmick?



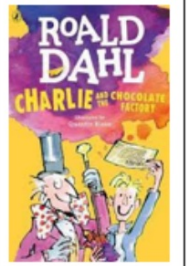
Stick in your new knowledge organisers.

What I know now

What I currently know



Our topic links with our class book because Willy Wonka uses design and technology to invent sweets in his chocolate factory.



Wednesday 3rd November

IDEAs- LO: to explore quirky
objects.

What is it?

Who is its
user?

How is it
used?



What is its
function?

Is it fit for
purpose?

Common Language - Design and Technology

Your understanding

Design

Make

*Focused practical
tasks (FTPS)*

Evaluate

Technical

<i>User</i>	
<i>Purpose</i>	
<i>Function</i>	
<i>Innovation</i>	
<i>Authentic</i>	

Draw your object here.

Thursday 4th November

Memorable Experience

Thursday 4th November

Memorable Experience: Katie's Kids' Kitchen



Today we _____

One thing I would like to find out more about is _____

The thing I enjoyed the most was _____

I would like to develop my _____

Wednesday 10th November

IDEAs - LO: to evaluate products.

Healthy Biscuits: 6 Big Questions

Who?

Where?

What?

Why?

When?

How?

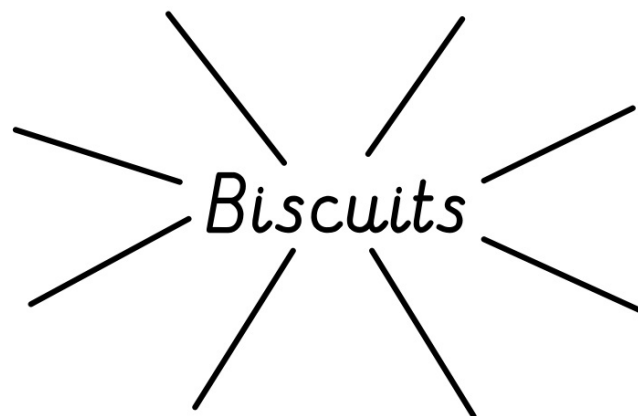


What is a biscuit?



When do we eat them and why?

How many different types of biscuit can you and your partner think of?





*Which of these biscuits
have you tried before?*

Let's have a go at collecting the relevant information from the packaging...

Product name																					
Weight																					
Price																					
Special ingredients																					
Nutritional information	<table border="1"> <thead> <tr> <th colspan="5">Each serving contains</th> </tr> <tr> <th>Energy</th> <th>Fat</th> <th>Saturates</th> <th>Sugars</th> <th>Salt</th> </tr> </thead> <tbody> <tr> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> </tr> <tr> <td colspan="5">of your guideline daily amount</td> </tr> </tbody> </table>	Each serving contains					Energy	Fat	Saturates	Sugars	Salt	%	%	%	%	%	of your guideline daily amount				
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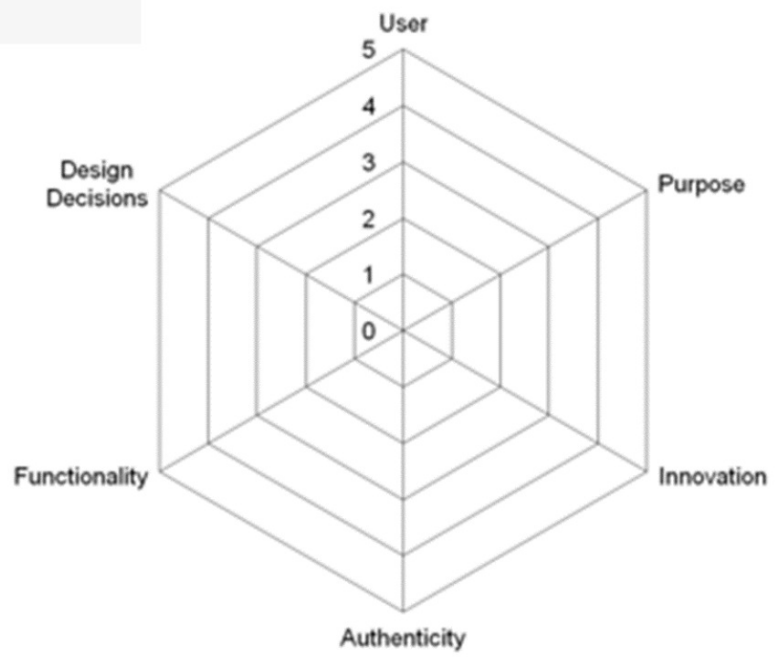


Now it's your turn...

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Which was your favourite biscuit? Why?



Wednesday 17th November

FPT - LO: to safely follow a
recipe.

Keeping Food Safe and Clean



Sugar Biscuits



Gingerbread



Carrot and nutmeg cookies





Which biscuits are the healthiest? Why?



Ingredients

- 200g unsalted butter, softened
- 200g golden caster sugar
- 1 large egg
- 1 lemon, zested
- 400g plain flour, plus extra for dusting



350g/2½ cups plain (all-purpose) flour, plus a little extra for dusting
1 tsp bicarbonate of soda (baking soda)
2 tsp ground ginger
100g/1 stick butter
175g/1 cup light muscovado sugar or soft brown sugar
1 medium egg
4 tbsp golden (light corn) syrup

Ingredients

- 1 small carrot, grated
- 100g rolled porridge oats
- 90g plain flour
- 1½ tsp baking powder
- 1½ tsp ground nutmeg
- pinch of salt
- 30g unsalted butter, softened
- 1 large egg
- 1 tsp vanilla extract
- 120g runny honey



Thursday 18th November

IDEAs - LO: to create design
criteria.

Tasting Time!



Which biscuits are
your favourite? Why?

Design Criteria



What are design
criteria?

Project title: Healthy Biscuits

Idea - what are you designing?

Who is the intended outcome for?

What is the intended purpose of your design?

What are the three most important design elements?



How could we make the biscuits healthier?



Ingredients

- 200g unsalted butter, softened
- 200g golden caster sugar
- 1 large egg
- 1 lemon, zested
- 400g plain flour, plus extra for dusting

350g/2½ cups plain
(all-purpose) flour, plus
a little extra for dusting

1 tsp bicarbonate of soda
(baking soda)

2 tsp ground ginger

100g/1 stick butter

175g/1 cup light muscovado
sugar or soft brown sugar

1 medium egg

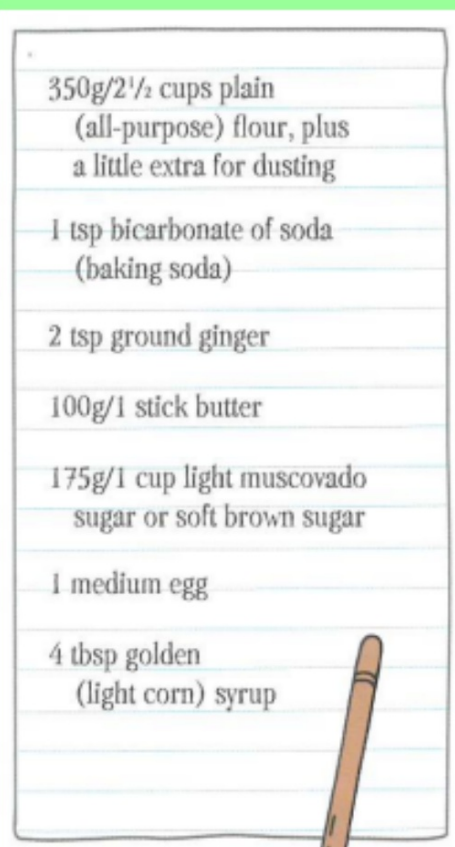
4 tbsp golden
(light corn) syrup



What substitutions shall we make next week to make healthier biscuits?

Ingredients

- 200g unsalted butter, softened
- 200g golden caster sugar
- 1 large egg
- 1 lemon, zested
- 400g plain flour, plus extra for dusting



Wednesday 24th November

FPT - LO: to make healthy
biscuits.

Let's use our adapted ingredient lists to make healthier versions of these biscuits...

Sugar Biscuits



Gingerbread



Did anything seem different compared to last time?

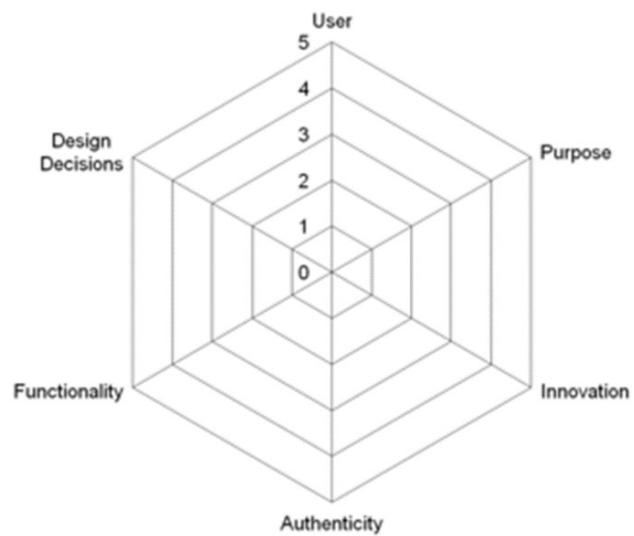
What are your predictions about the healthier biscuits?

Thursday 25th November

IDEAs - LO: to evaluate against
design criteria.



Let's evaluate the biscuits...



What are your thoughts about our recipe adaptations?

Which biscuit did you prefer, the original or healthier version?

Why?