



SS John Fisher & Thomas More Catholic Primary School

A Voluntary Academy

"Journeying together with Jesus Christ, we learn to love and love to learn."



Design and Technology Planning

Year Group: Year 3 & Year 4	Topic: Packaging, Cooking and Nutrition	Term: Autumn 1 and Autumn 2 (Cycle A)
<p>National Curriculum Links (Ref: NC 2014) Pupils in Key Stage Two should be taught to:</p> <p><u>Design , Research , Make , Evaluation and Technical Knowledge</u></p> <ul style="list-style-type: none">• To 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.• To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design• To 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• To evaluate• To investigate and analyse a range of existing products• To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work• To understand how key events and individuals in design and technology have helped shape the world Technical knowledge• To apply their understanding of how to strengthen, stiffen and reinforce more complex structures <p><u>Cooking and Nutrition</u></p> <ul style="list-style-type: none">• To understand and apply the principles of a healthy and varied diet• To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques• To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.		
Knowledge and Skills Objectives	Teaching Input	Activities with Differentiation



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Lesson One

LO I can LO I can investigate a range of packaging.

Working Technically

I can investigate and analyse a range of existing products.

I can understand how key events and individuals in design and technology have helped shape the world.

I can apply their understanding of how to strengthen, stiffen and reinforce more complex structures

I can understand and use mechanical systems in their products such as 3D net tabs.

Resources

Hook:

Show children a video about packaging and how it has developed over the years and show and why it is used in everyday life now.

<https://www.youtube.com/watch?v=xz9UM9ZVvXY>

<https://www.youtube.com/watch?v=9oPg2g7TFIU>

Starter

Ask the chd the following questions and write don their ideas on the white board to share.

What do you already know about packaging?

What is packaging?

Why do we use packaging?

How many different types of packaging are there?

Main body

Industry says that there are four main reasons and benefits of packaging:

Protection – the items or the products do not get damaged.

Convenience- sometimes if items are in boxes they can be stacked on top of each other a bit easier and also its prevents the products from falling out or spilling everywhere.

Image- it can make people want to buy things.

Sustainability- using renewable items.

Marketing is a powerful tool that can make us think in certain ways and often make us thins we want or need things. – when do you think this might happen/ when have you seen this happen in everyday life?

Then discuss images such as this as found below with the children.

SEND:



- 1) You are to look at lots of different types of packaging and see if you can open and close it.
- 2) Then sketch what it looked like before and once you had opened it

Lowes in a group

Unfold a packaging box to see how it was put together. Sketch a picture of the unfolded box in the box below.

How many pieces of card were used to make this packaging?

How many tabs are used to join the pieces together?

How many different shapes can you see on this net and what are they?



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Different empty boxes
Worksheets
PPT
White boards and white board pens
Ipads



Then discuss with the children the words pros and cons and ask then children –w hat are the pros and cons of using packaging?

Then ask them and make sure they know what: 2D shapes, 3D shapes and Nets are?

Plenary

How can we be more stainable and eco-friendly?

Middles – independently

What are the similarities and differences between these two packaging boxes?

How many pieces of card were used to make this packaging?

How many tabs are used to join the pieces together?

How many different shapes can you see in this net and what are they?

Highers – independently

Unfold two packaging boxes to see how they were put together. Sketch a picture of the unfolded packaging in the box below:

How many pieces of card were used to make this packaging?

How many tabs are used to join the pieces together?

How many different shapes can you see in this net?

What are the similarities and differences between these two nets?

Challenge:

Research some different packaging and then answer the following questions.



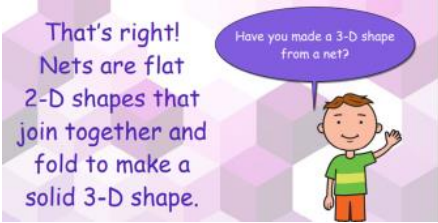
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		<table border="1"> <tr> <td>What material is this packaging made from?</td> <td>Could this packaging be made from a net?</td> <td>What information can you find out from the packaging?</td> </tr> <tr> <td>What 3D shape is this packaging?</td> <td>Who do you think this packaging is aimed at?</td> <td>Is all the packaging necessary?</td> </tr> <tr> <td>What is the purpose of the packaging?</td> <td>What product is this packaging for?</td> <td>Do you like the packaging? Why or why not?</td> </tr> </table>	What material is this packaging made from?	Could this packaging be made from a net?	What information can you find out from the packaging?	What 3D shape is this packaging?	Who do you think this packaging is aimed at?	Is all the packaging necessary?	What is the purpose of the packaging?	What product is this packaging for?	Do you like the packaging? Why or why not?
What material is this packaging made from?	Could this packaging be made from a net?	What information can you find out from the packaging?									
What 3D shape is this packaging?	Who do you think this packaging is aimed at?	Is all the packaging necessary?									
What is the purpose of the packaging?	What product is this packaging for?	Do you like the packaging? Why or why not?									
<p>Lesson Two <u>LO I can construct and design nets for 3D shaped packages.</u></p> <p><u>Working Technically</u> I can investigate and analyse a range of existing products.</p> <p>I can understand how key events and individuals in design and technology have helped shape the world.</p> <p>I can apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>I can understand and use mechanical systems in their products such as 3D</p>	<p><u>Starter- Recap</u> What does the word packaging mean? Why do we use packaging and what's its purpose? – When have you seen it before? What are Nets? What are 3D shapes? What are 2d shapes?</p> 	<p><u>Activity 1</u> <u>SEND-</u> group or with an adult if this is not available. Select three different 3D shapes. You are to put together different 3D shapes. Then state where you can find them and what you may find inside them.</p> <p><u>Lower- paired work</u> You are to put together each net and then state what the 3D shape is called. Then state where you might find them and what you may find inside them.</p> <p><u>Middles – paired work</u> You are to put together each net and then state what the 3D shape is called. Then state where you may find them and what foods you could</p>									



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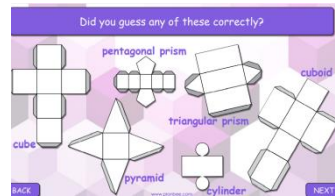
net tabs.

I can 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

Resources

Worksheets
Nets

Main body



Then go through some examples:

find in them. Then you are to work out which statements go with which 3D shape.

Highers – individual work

You are to cut out together each net and then state what the 3D shape is called. Then you are to work out which statements go with which 3D shape.

Cuboid

Triangular Prism

Pyramid

Pentagonal Prism

Cylinder

Cube

1. I have 6 square faces.

2. I have 12 edges and 8 vertices.

3. I have 5 faces: 4 triangles and 1 square.

4. I have 6 faces: 2 pentagons and 4 rectangles.

5. I have 2 circular faces and 1 curved surface.

6. I have 6 faces: 6 squares.

7. I have 5 faces: 1 square and 4 triangles.

8. I have 6 faces: 2 hexagons and 4 rectangles.

9. I have 6 faces: 2 hexagons and 4 rectangles.

10. I have 6 faces: 2 hexagons and 4 rectangles.

Activity 2 – based around a pizza.

PACKAGING FOR A PRODUCT

Product

Shape net

3-D shape



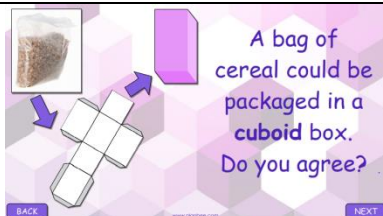
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	 <p>What are your favourite foods and why? What does diet mean to you? What is a balanced diet? What does the word healthy mean? What are healthy foods to you? Is it ok to eat 'unhealthy foods' and what are unhealthy foods to you? Are all unhealthy foods unhealthy? What happens to our bodies if they become unhealthy- and how can we stop this from happening?</p> <p>By the end of this unit we will have made a vegetable pizza. Now we are to think of some designs that we could use to package this cake. What is a pizza? What does a pizza contain? Have you ever had pizza? How would you describe this to our friends?</p>	<p>Challenge What could the other options be and which is the best and why?</p>
<p>Lesson Three <u>LO I can explore the use of graphics on packaging.</u></p>	<p>Starter What is a 2D shape What is a 3D shape? What is a net? What is packaging and why is it useful?</p>	<p>All chd There is a booklet of fonts and graphics to help chd come up with their ideas. Chd are to first draft their ideas with pencils and colours and then invite them to use word on the computers.</p>



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Working Technically:

I can 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

I can generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

I can investigate and analyse a range of existing products

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

I can understand how key events and individuals in design and technology have helped shape the world.

Resources

Ipads/ copters
Worksheets
PPT

What are the pros and cons?
Which nets can be used with which products?

Main body

Explain to the children when a company creates a new product they need to design the packaging so it will appeal to whoever wants to buy it. This can be done by using different graphics. Graphics are the pictures, fonts and overall design on the packaging.

Then show a basic video that explains marketing:

<https://www.youtube.com/watch?v=a7VIINhITwU>

Then tell the chd to have a close look at the fonts and graphics on the packages on the next slides. Allow chd time to discuss what they notice about each product?

(This could also be used with real products rather than just PPT images.

Ask the chd why this company chose this kind of design?

What pictures have been used?

What kind of font has been used on the packaging and why?

What do you like and dislike about the packaging and why?

Then explain that companies are aimed at different people the different types of design attracts people?

Then ask them to think of ideas using of fonts and graphics for different types of product and go through this as a class.

LO I can use different fonts to create eye catching packaging. I

Name of your pizza	
The fonts for the name of your pizza	
The colours and patterns for the pizza	

SEND

Can use the booklet and cut out the ones they like.

Challenge

Now have a go at other ideas and see which is your favourite and why? Try could discuss this with your friends. Ow can your fonts and graphics be improved. Why have you chosen the those particular ones.




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<p>Booklets containing graphics and fonts</p>		
<p>Lesson Four <u>LO I can design a packaging for purpose.</u></p> <p><u>Working Scientifically:</u></p> <p>I can 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>I can generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<p><u>Starter</u> Recap What is a net? What is a 2D shape? What is a 3D shape? What does go mean and what are the different styles and why? What are graphics and why do we use them? Where have you seen different graphics used and why do you think you remember it? Why is marketing so powerful and why do people use it? What have we learnt about packaging so far and how to make a good packaging box?</p> <p><u>Main Body</u> Over the next few lessons you will be designing, making and evaluating your own packaging boxes for a particular purpose, and we are going to make a pizza and then make a package for it.</p> <p><u>Class discussion using white boardsTTYP</u></p>	<p><u>SEND and lowers:</u></p>  <p><u>Challenge</u></p>

Resources



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Plans
Ibids

The screenshot shows a vertical sequence of five question cards from a digital planning tool. Each card has a 'BACK' button on the left and a 'NEXT' button on the right. Below each question is a large white text area for writing, with a small yellow pencil icon in the top right corner of the text area. The questions are:

- Who could your packaging be aimed at?
- What kind of 3-D net will you use to make your box?
- What kind of graphics could you use?
- What materials and tools will you need?
- What will your success criteria be?

Discuss with your friends and see if they have come up with a similar idea. If you are the only one to finish then research ideas to see what other people have done.



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Lesson Five

LO I can make a packaging box by following a design.

Working Technically

I can select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

I can 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

Starter:

Recap the last lesson looking at each part with the chd.



Main Teaching:

Main

Explain to the chd they are going to physically making the package for their ideas. Tell the chd to get out your packaging design and read back through it carefully to remind yourself of what you need to do.

Discuss the following:

Think about what we need to think about before we start making our final products.

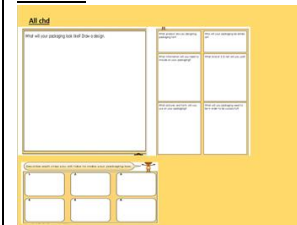
How will you make sure your finished product looks like your design?

What will you do if you come across any problems while you are making your packaging?

How will you make sure that your finished product is of a high standard?

Then allow time for chd to make their end product.

SEND:



Some chd may want already made Nets to help them.



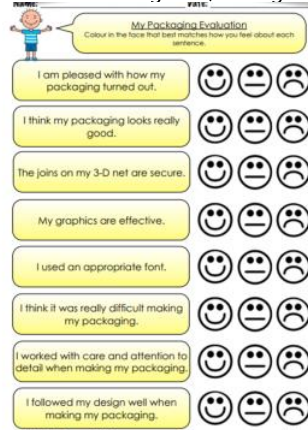
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<p>Resources</p> <p>Plans Nets Tape Scissors Glue Pegs Rulers</p>		
<p>Week six Lo I can evaluate my own product?</p> <p>Working Technically</p> <p><u>I can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</u></p> <p>Resources</p> <p>Evaluation sheets</p>	<p><i>This week chd will continue from the previous lesson. Once some of the chd have started to complete their work. Then begin in stages to go through each part. Then they can answer it on their own or in pairs or groups.</i></p>	<p>A.I chd <i>Chd are to use: green, orange and red.</i></p>  <p>My Packaging Evaluation Colour in the face that best matches how you feel about each sentence.</p> <ul style="list-style-type: none">I am pleased with how my packaging turned out. (Smiley face icons)I think my packaging looks really good. (Smiley face icons)The joins on my 3-D net are secure. (Smiley face icons)My graphics are effective. (Smiley face icons)I used an appropriate font. (Smiley face icons)I think it was really difficult making my packaging. (Smiley face icons)I worked with care and attention to detail when making my packaging. (Smiley face icons)I followed my design well when making my packaging. (Smiley face icons)



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SEND/ Lowers:

My Packaging Evaluation	
What did you enjoy most about making your packaging?	What did you enjoy least about making your packaging?
What was the most difficult part?	How did you overcome any problems you came across?
What changes did you have to make to your plan to make your packaging successful?	
How pleased are you with how your packaging looks? Why?	How pleased are you with the structure of your 3-D net?
What would you do differently if you were to make your packaging again?	

Middles/Highers:

Name:	Date:
	What do you like about the packaging?
	What do you think could be improved?
	How well does the packaging suit the purpose it was made for?
	What would you change about the packaging?
	How well has the 3-D net been constructed?
	Does the packaging meet all of its success criteria?

Challenge:

In pairs or by yourself if you are the only one that has finished. You are to pretend to be the interviewer and ask your friends these questions and then think of possible answers that you could say.



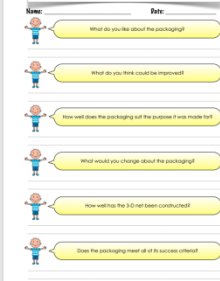
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<p>Lesson 7 <u>LO I can make my own vegetable pizza using farmed products.</u></p> <p><u>Working Technically</u> I can understand and apply the principles of a healthy and varied diet</p> <p>I can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>I can understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processes.</p> <p>Resources</p> <p>Apron</p>	<p>Starter: Remind chd what a healthy and balanced diet is? Ask the chd: What is your favourite food is and why? Which foods do you dislike and why? Is it ok to eat pizza, chocolate and sweets? Is pizza a healthy option and explain your answer?</p> <p>What are our senses? Why do we need our senses?</p> <p>Main input Bring some eady made pizza into school. Allow chd to feel it and eat it. Then ask chd what the pizza: Smells Looks Fells Sounds Tastes</p> <p>Allow chd time to TTYP and then write the ideas on the WB for activity.</p>	<p>The holding activity All chd are to make a mind map to describe a pizza. They are going to use their senses to do complete the activity.</p> <p>Send and lowers To use ideas from the board.</p> <p>Middles- paired</p> <p>Highers Chd are to use thesaurus and check spellings with the dictionary.</p> <p>The main activity All chd are going to make a pizza. This will be achieved as a focus group no more than five. Picollage</p>



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<p>Table cloth Knives Clock Oven Pitta bread Cheese Tomatoes Pineapples Pepper Tomato sauce</p> <p>Camera – to take pictures of the chd cooking</p>	<p>Before the chd begin to cook talk to chd about rules and being safe including washing hands and having everything they need prepared and organised. Explain to chd about tidying up as they go along.</p>	
<p>Lesson 8</p> <p>Instructions</p> <p>Resources</p>	<p>Starter:</p> <p>Main input</p>	<p>SEND</p> <p>Lowers</p> <p>Middles</p> <p>Hi</p>
<p>Applied Write Opportunities: Instructions of how to make a 'healthy' pizza. A description of a pizza using our senses.</p>		
<p>Homework Opportunities Making a cake Instructions of how to make a fruit cake</p>		
<p>Enrichment Opportunities: A trip to pizza factory or a farm where the ingredients are made.</p>		



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Key Vocabulary

Tier Two: net, 3D shape, 2D shape, box, packaging, paper, card, image, pictures.

Tier Three: consumers, media, graphics, font, sustainability, convenience, protection, eco-friendly, products,