

1. Year Groups Years 3/4

2. Aspect of D&T Food Focus Healthy and varied diet

3. Key learning in design and technology

Prior learning

- Know some ways to prepare ingredients safely and hygienically.
- Have some basic knowledge and understanding about healthy eating and *The eatwell plate*.
- Have used some equipment and utensils and prepared and combined ingredients to make a product.

Designing

- Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose.
- Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.

Making

- Plan the main stages of a recipe, listing ingredients, utensils and equipment.
- Select and use appropriate utensils and equipment to prepare and combine ingredients.
- Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.

Evaluating

- Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs.
- Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.

Technical knowledge and understanding

- Know how to use appropriate equipment and utensils to prepare and combine food.
- Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.
- Know and use relevant technical and sensory vocabulary appropriately.

4. What could children design, make and evaluate?

sandwiches wraps rolls pitta pockets
blinis rice cakes toasties snack bar
salad snacks other – specify

7. Links to topics and themes

Stories Picnics Healthy Eating School Fair
Religious Festival Eco-Fair/Green Days
Cultural Focus day
other – specify

5. Intended users

themselves older children
younger children parents grandparents
friends family visitors
other – specify

8. Possible contexts

home school off-site educational visits
leisure culture enterprise industry
wider environment health
other – specify

6. Purpose of products

celebration picnic lunch boxes
sports day religious festival off-site visits
healthy living other – specify

9. Project title

Design, make and evaluate a _____ (product) for _____ (user) for _____ (purpose). To be completed by the teacher. Use the project title to set the scene for children's learning prior to activities in 10, 12 and 14.

11. Related learning in other subjects

- **Mathematics and computing** – making use of mathematical and computing skills to present results of sensory evaluations graphically.
- **Spoken language** – developing relevant vocabulary e.g. sensory descriptors. Ask relevant questions to extend their knowledge.
- **Science** – using and developing skills of observing and questioning. Humans get nutrition from what they eat. Discuss changes of state if heat is used.

13. Related learning in other subjects

- **Mathematics** – mass kg/g.
- **Spoken language** – developing relevant technical vocabulary e.g. names of utensils and techniques. Ask relevant questions to extend their knowledge.

15. Related learning in other subjects

- **Mathematics** – mass kg/g.
- **Art and Design** – using and developing drawing skills.
- **Writing** – new vocabulary. Use non-fiction texts such as description, explanation and instructions e.g. recipes. Organise their work using e.g. headings, subheadings.
- **Spoken language** – consider and evaluate different viewpoints. Use discussion to develop understanding through exploring ideas.

16. Possible resources

information about foods from around the world, basic recipes

range of relevant example foods to taste and evaluate

suitable equipment and utensils such as: knives, chopping board, weighing scales, measuring jugs, bowls, baking trays, spoons – various sizes, parchment paper, plastic film

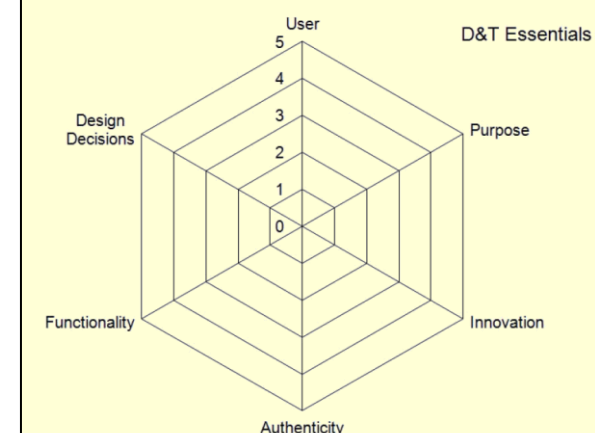
18. Key competencies

problem-solving teamwork negotiation
consumer awareness organisation motivation
persuasion leadership perseverance
other – specify

19. Health and safety

Pupils should be taught to work safely and hygienically, using tools, equipment, techniques and ingredients appropriate to the task. Prior to undertaking this project risk assessments should be carried out, including identifying whether there are children who are not permitted to taste or handle any food ingredients or products.

20. Overall potential of project



10. Investigative and Evaluative Activities (IEAs)

- Children investigate a range of food products e.g. the content of their lunchboxes over a week, a selection of foods provided for them, food from a visit to a local shop. Link to the principles of a varied and healthy diet using *The eatwell plate* e.g. *What ingredients have been used? Which food groups do they belong to? What substances are used in the products e.g. nutrients, water and fibre?*
- Carry out sensory evaluations on the contents of the food from e.g. a variety of bought food products such as a range of wraps or sandwiches. Record results, for example using a table. Use appropriate words to describe the taste/smell/texture/appearance e.g. *How do the sensory characteristics affect your liking for the food?*
- Gather information about existing products available relating to your product. Visit a local supermarket and/or use the internet.
- Find out how a variety of ingredients used in products are grown and harvested, reared, caught and processed e.g. *Where and when are the ingredients grown? Where do different meats/fish/cheese/eggs come from? How and why are they processed?*

12. Focused Tasks (FTs)

- Learn to select and use a range of utensils and use a range of techniques as appropriate to prepare ingredients hygienically including the bridge and claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading and baking.
- Food preparation and cooking techniques could be practised by making a food product using an existing recipe.
- Discuss basic food hygiene practices when handling food including the importance of following instructions to control risk e.g. *What should we do before we work with food? Why is following instructions important?*

14. Design, Make and Evaluate Assignment (DMEA)

- Discuss the purpose of the products that the children will be designing, making and evaluating and who the products will be for.
- Develop and agree on design criteria with the children within a context that is authentic and meaningful. This can include criteria relating to healthy eating and a varied diet e.g. *What do you need to consider to make it part of a balanced diet? How do we select the ingredients? How could we make it appealing to eat?*
- Ask children to generate a range of ideas encouraging realistic responses.
- Using discussion, annotated sketches and information and communication technology if appropriate, ask the children to develop and communicate their ideas.
- Ask children to consider the main stages in making the food product, before preparing/cooking the product including the ingredients and utensils they will need.
- Evaluate as the assignment proceeds and the final product against the intended purpose and user, reflecting on the design criteria previously agreed. Consider what others think of the product when considering how the work might be improved.

Instant CPD

- Tips for teachers
- ✓ When choosing bought products to evaluate, choose some with simple fillings (such as cheese) and others with more variety (such as bacon, lettuce and tomato). Include some with fillings from a variety of cultures.
 - ✓ Children may need help to develop design criteria for their product. You can model this by discussing what the design criteria may have been for an existing product that the children have previously evaluated before encouraging them to create their own.
 - ✓ If you grow edible plants in the school grounds such as herbs, lettuce or tomatoes, encourage the children to use these in their food product. When possible, use some ingredients which are seasonal and locally sourced.
 - ✓ It is advisable to have additional adult support when children are learning to prepare ingredients.
 - ✓ Use a range of fresh and processed ingredients.
 - ✓ Some ingredients can be cooked using a heat source with adult supervision to introduce children to techniques such as boiling an egg or roasting a pepper.
 - ✓ Hygiene: tie long hair back, wear aprons, cover cuts with blue plasters and wash hands thoroughly with soap and dry with a paper towel. More details on www.foodafactoflife.org.uk.
 - ✓ **Homework idea 1:** Ask children to collect pictures of related food products from magazines etc. Research which similar products are used around the world.
 - ✓ **Homework idea 2:** Ask members of the children's family which is their favourite lunch snack and why.

Useful resources at www.data.org.uk

- Dips and Dippers
- Chilled Food Association KS2 Hygiene
- CPD Resources Primary INSET Guides


Other useful web-based resources:

- www.foodafactoflife.org.uk


D&T Association publications

- Primary Helpsheets – Unit 3B Sandwich Snacks
- Primary Lesson Plans – Unit 3B Sandwich Snacks


Please note that these publications are based on previous National Curricula.



Wraps




Pitta bread sandwich




Sandwich


Skills and techniques




Grating cheese



Spreading butter on bread






Cutting using the bridge technique



Cutting using the claw technique

Investigating and Evaluating Activities
Children can analyse existing products related to their project using sensory evaluations and record their results in a table. Explain that tasting is not the same as eating. Provide kitchen towel so children can spit out food they do not like. Provide water to cleanse palette between tasting products.

Analysing existing products							
Filling	Appearance	Smell	Flavour/Taste	Texture	Dislike	Neither	Like
							
1							
2							
3							
4							
Word bank	Colourful Dark/pale Greasy Moist	Fruity Meaty Smoky Oniony Garlicky Fishy	Salty Herby Spicy Fishy Smoky	Crispy Crunchy Soft Chewy Sticky Smooth Hard			

Designing, making and evaluating a bread-based product with a filling for lunch, such as a wrap, a sandwich, a roll, a blini or a toastie

An iterative process is the relationship between a pupil's ideas and how they are communicated and clarified through activity. This is one example of how the iterative design and make process *might* be experienced by an individual pupil during this project:

THOUGHT

Who am I making the food product for?

How can I make it appealing for the range of users?

What kind of food product shall I make that can be carried easily?

What ingredients could it contain?

How will I make sure it looks appealing as well as tastes and smells good?

What techniques will I use to prepare the ingredients and what equipment do I need?

How long will it take?

What order will I work in?

More thoughts... appraising, reflecting and refining

Has the snack met the needs of the user and achieved its purpose?

ACTION

Discussing and communicating ideas, researching existing products, drawing annotated sketches, generating design criteria

Referring back to sensory evaluations carried out in IEAs

Discussing ideas and how the type of food product and way it is eaten will affect the design

Peeling, chopping, slicing, grating, spreading
Using tools such as round ended knives, vegetable peelers, apple corers, strawberry hullers and graters
Listing the equipment required

Planning the order of the activity and timescale

Acting on ongoing evaluation to make appropriate changes

Evaluating the food product against the design criteria including the user and purpose
Recording final product through an annotated sketch

Glossary

- **Appearance** – how the food looks to the eye.
- **Texture** – how the product feels in the mouth.
- **Sensory evaluation** – evaluating food products in terms of the taste, smell, texture and appearance.
- **Preference test** – trying different foods and deciding which you like best.
- **Strawberry huller** – tool to remove the stalk and leaves from a strawberry.
- **Processed food** – ingredients that have been changed in some way to enable them to be eaten or used in food preparation and cooking.