

1. Year Groups

Years

5/6

2. Aspect of D&T

Food

Focus

Celebrating culture and seasonality

4. What could children design, make and evaluate?

bread pizza savoury biscuits
 savoury scones savoury muffin
 cereal snack soup other – specify

5. Intended users

themselves younger children parents
 older people grandparents visitors
 people with special dietary needs
 consumers from a variety of cultures
 other – specify

6. Purpose of products

festival celebration special event for sale
 food for travel picnic visit other – specify

16. Possible resources

information about food from around the world
 video clips of foods in the context of where they come from, used and eaten

17. Key vocabulary

ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs

7. Links to topics and themes

Festivals Cultures/Celebrating Diversity
 Celebrations Special Events Seasons
 Sustainability Food Our Local Community
 other – specify

8. Possible contexts

home school leisure culture
 traditions enterprise healthy eating
 local environment/community sustainability
 wider environment global citizenship
 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.

range of relevant examples of foods to taste and evaluate

basic recipes

suitable equipment and utensils to make and cook recipes such as: weighing scales, measuring jugs, bowls, spoons – various sizes, baking trays, parchment paper, plastic film

fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality

utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble

design specification, innovative, research, evaluate, design brief

3. Key learning in design and technology

Prior learning

- Have knowledge and understanding about food hygiene, nutrition, healthy eating and a varied diet.
- Be able to use appropriate equipment and utensils, and apply a range of techniques for measuring out, preparing and combining ingredients.

Designing

- Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.
- Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose.
- Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas.

Making

- Write a step-by-step recipe, including a list of ingredients, equipment and utensils
- Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.
- Make, decorate and present the food product appropriately for the intended user and purpose.

Evaluating

- Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams.
- Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.
- Understand how key chefs have influenced eating habits to promote varied and healthy diets.

Technical knowledge and understanding

- Know how to use utensils and equipment including heat sources to prepare and cook food.
- Understand about seasonality in relation to food products and the source of different food products.
- Know and use relevant technical and sensory vocabulary.

10. Investigative and Evaluative Activities (IEAs)

- Children use first hand and secondary sources to carry out relevant research into existing products to include personal/cultural preferences, ensuring a healthy diet, meeting dietary needs and the availability of locally sourced/seasonal/organic ingredients. This could include a visit to a local bakery, farm, farm shop or supermarket e.g. *What ingredients are sourced locally/in the UK/from overseas? What are the key ingredients needed to make a particular product? How have ingredients been processed? What is the nutritional value of a product?*
- Children carry out sensory evaluations of a variety of existing food products and ingredients relating to the project. The ingredients could include those that could be added to a basic recipe such as herbs, spices, vegetables or cheese. These could be locally sourced, seasonal, Fair Trade or organic. Present results in e.g. tables/graphs/charts and by using evaluative writing.
- Use a range of questions to support children's ability to evaluate food ingredients and products e.g. *What ingredients help to make the product spicy/crisp/crunchy etc? What is the impact of added ingredients/finishes/shapes on the finished product?*
- Research key chefs and how they have promoted seasonality, local produce and healthy eating.



12. Focused Tasks (FTs)

- Demonstrate how to measure out, cut, shape and combine e.g. knead, beat, rub and mix ingredients.
- Demonstrate how to use appropriate utensils and equipment that the children may use safely and hygienically.
- Techniques could be practised following a basic recipe to prepare and cook a savoury food product.
- Ask questions about which ingredients could be changed or added in a basic recipe such as types of flour, seeds, garlic, vegetables. Consider texture, taste, appearance and smell.
- When using a basic dough recipe, explore making different shapes to change the appearance of the food product e.g. *Which shape is most appealing and why?*



14. Design, Make and Evaluate Assignment (DMEA)

- Develop a design brief and simple design specification with the children within a context that is authentic and meaningful. This can include design criteria relating to nutrition and healthy eating.
- Discuss the purpose of the products that the children will be designing, making and evaluating and who the products will be for.
- Ask children to generate a range of ideas encouraging innovative responses. Agree on design criteria that can be used to guide the development and evaluation of the children's product.
- Using annotated sketches, discussion and information and communication technology if appropriate, ask children to develop and communicate their ideas.
- Ask children to record the steps, equipment, utensils and ingredients for making the food product drawing on the knowledge, understanding and skills learnt through IEAs and FTs.
- Evaluate the work as it progresses and the final product against the intended purpose and user reflecting on the design specification previously agreed.



11. Related learning in other subjects

- **Mathematics and computing** – making use of mathematical and computing skills to present results of sensory evaluations graphically, handling and interpreting data.
- **Spoken language** – developing relevant vocabulary including sensory descriptors. Give well-structured explanations.
- **Science** – using and developing skills of observing, questioning, changing state of ingredients.
- **Geography** – distribution of natural resources i.e. food.
- **Computing** – use technology purposefully to retrieve digital content.

13. Related learning in other subjects

- **Science** – properties of materials and changes of state.
- **Mathematics** – measuring mass kg/g. Understand and use approximate equivalences between metric and imperial units.
- **Spoken language** – new technical vocabulary.

15. Related learning in other subjects

- **Mathematics** – measurement of mass kg/g; understand and use approximate equivalence of metric and imperial units.
- **Art and design** – using and developing drawing skills.
- **Spoken language** – articulate and justify answers and opinions. Listen and respond to adults and peers.
- **Writing** – purpose of writing e.g. for planning and evaluation.
- **Mathematics** – measurement of mass kg/g.
- **Science** – recognise the impact of diet on the way their bodies function.

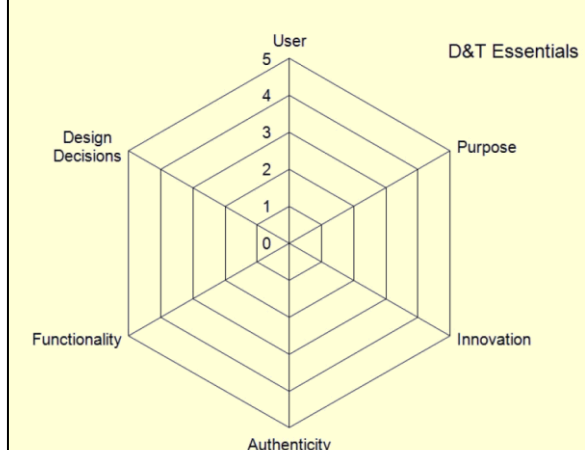
18. Key competencies

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



Instant CPD



Tips for teachers

- ✓ When rubbing in flour and fat, keep ingredients and hands cool.
- ✓ The purpose of kneading bread is to strengthen the gluten (the protein in grain such as wheat). It normally takes about 10-12 minutes by hand. When ready the dough will be smooth, elastic and hold its shape.
- ✓ When developing a product e.g. soup, that requires chopping and slicing of ingredients refer to the Y3/4 Food Project Planner.
- ✓ Limit the number of ingredients added to the basic recipe and discuss when is the best time to add the new or changed ingredient(s).
- ✓ Emphasise the importance of accurate weighing and measuring.
- ✓ Some supermarkets and bakeries will allow children to visit. This could be linked to an enterprise project with a class-based food company.
- ✓ Children could design packaging for their food products as part of work on structures linked to mathematics.
- ✓ Carry out a survey to find out which cultural/seasonal food products are preferred by family and friends.
- ✓ For homework, encourage children to grow edible plants such as herbs.

Useful resources at www.data.org.uk

- Christmas ginger biscuits
- CPD Resources Primary INSET Guides

Other useful web-based resources:

- <http://www.foodafactoflife.org.uk>

D&T Association publications

- Primary Helpsheets - Unit 5B Food - Bread; Unit 5D Food - Biscuits
- Primary Lesson Plans - Unit 5B Food - Bread; Unit 5D Food - Biscuits

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

Possible products



Biscuits



Savoury scones



Savoury muffins



Possible techniques that children could use



Mixing to combine ingredients if making savoury muffins or scones



Rubbing in to mix fat and flour if making a yeast based product



Kneading a bread dough

Sensory evaluation

When carrying out sensory evaluations of products and/or separate ingredients, begin with a whole class activity then use group work to develop ideas.

Example of a recording table:

Type of cultural/seasonal food product	Appearance	Smell	Texture	Taste
Savoury scone	Golden/rough	Fresh/baked	Crumbly	Cheesy

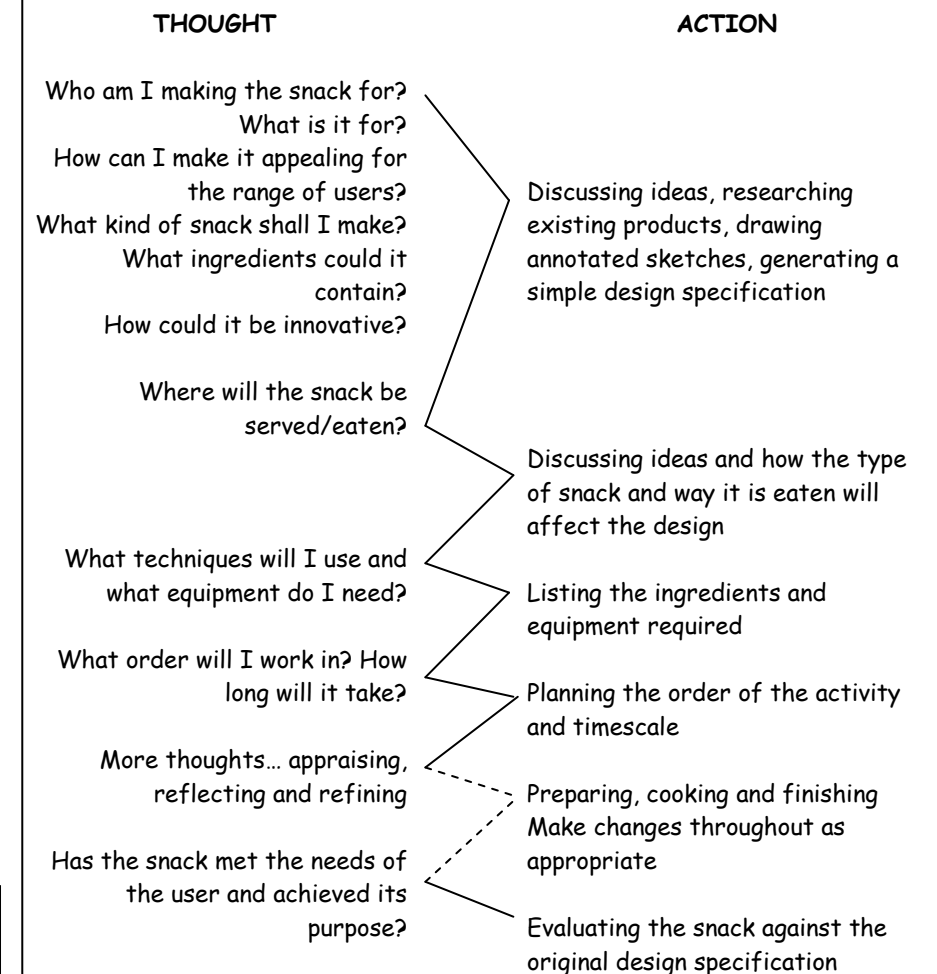
Children can also use simple ranking and rating tables as well as star diagrams.

Use packaging and/or the internet to find out about the nutritional content of the food products and the ingredients. Link this to the principles of a healthy and varied diet.

Edible plants grown in the school grounds can also be evaluated and considered as potential ingredients for products the children will later design, make and evaluate. The benefits/difficulties of selecting seasonal, organic and/or locally sourced ingredients can be discussed here.

Designing, making and evaluating a yeast-based snack for parents and children participating in the school sports day

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:



Glossary

- **Finishing** - related to the appearance of the product - shape, decoration and colour.
- **Rubbing in** - rubbing the dry ingredients together with the fat, lifting to put air into the mixture, so that it resembles fine breadcrumbs.
- **Knead** - pulling and squeezing dough to make it smooth.
- **Bran** - the hard protective shell of a grain of wheat.
- **Dough** - a mixture of flour, yeast and water before it is cooked.
- **Endosperm** - the store of food inside a seed.
- **Germ** - part of the seed where the root and shoots grow from.
- **Yeast** - a tiny plant which makes bubbles of carbon dioxide when mixed with flour and warm water.
- **Unleavened bread** - flat bread where yeast has not been added.