



Developing, planning and communicating ideas

Early Years

Nursery and Reception class will follow EYFS guidance, with the main Design and Technology-related areas being 'Understanding the World' and 'Expressive Art and Design'.

Children will be supported in areas such as:

- Developing their own ideas and then deciding which materials to use to express them.
- Exploring different materials freely, in order to develop their ideas about how to use them and what to make.
- Explore, use and refine a variety of artistic effects to express their ideas and feelings.

Year 3:

Can they show that their design meets a range of requirements?

Can they put together a step-by-step plan which shows the order and also what equipment and tools they need?

Can they describe their design using accurately labelled sketch and words?

How realistic is their plan?

Children choose the right ingredients for a product. They select the most appropriate tools and techniques to use for a given task.

Year 4:

Can they come up with at least one idea about how to create their product?

Do they take account of the ideas of others when designing?

Can they produce a plan and explain it to others?

Can they suggest some improvements and say what was good and not so good about their original design?

Children know what to do to be hygienic and safe. They can think about the presentation of their product. They can think about what other people would want.

YEAR A topics	Year B topics
Cooking and nutrition Textiles Electrical and mechanical components	Cooking and nutrition Stiff and flexible sheet materials Mouldable materials

Year 1:

Can they think of some ideas on their own?

Can they explain what they want to do?

Can they use pictures and words to plan?

Children can describe the texture of foods. They can think of interesting ways to decorate food they have made. They can describe how materials and textiles feel using different words. They can make simple plans before making objects.

Year 2:

Can they think of an idea and plan what to do next?

Can they choose the best tools and materials?

Can they give a reason why these are best?

Can they describe their design by using pictures, diagrams, models and words?

Children can describe properties of ingredients and explain what it means to be hygienic. They can add designs to their product. They can make sensible choices as to which materials to use.

YEAR A topics	Year B topics
Cooking and nutrition Textiles Mechanisms	Cooking and nutrition Use of materials Construction

Year 5:

Can they come up with a range of ideas after they have collected information?

Do they take a user's view into account when designing?

Can they produce a detailed step-by-step plan?

Can they suggest some alternative plans and say what the good points and drawbacks are about each?

Children can consider what the user would want when designing a product.

Year 6:

Can they use a range of information to inform their design?

Can they use market research to inform plans?

Can they work within constraints?

Can they follow and refine their plan if necessary?

Can they justify their plan to someone else?

Do they consider culture and society in their designs?

Children give thought to how their product could be sold. They can justify why they selected materials.

YEAR A topics	Year B topics
Cooking and nutrition Textiles Electrical and mechanical components	Cooking and nutrition Stiff and flexible sheet materials Mouldable materials



Working with tools, equipment, materials and components to make quality products

Early Years

- Join different materials and explore different textures.
- Use various materials to create their own mode of transport by joining pieces together using a variety of adhesives and using problem solving skills to find which works best
- Create collaboratively, sharing ideas, resources and skills.

Year 3:

Can they use equipment and tools accurately?

Children can use equipment and tools safely. They can join textiles in different ways. They can make a product which uses electrical and mechanical components. They can use a simple electrical circuit. They can work accurately to make cuts and holes. They can use a range of techniques to shape and mould.

Year 4:

Can they tell if their finished product is going to be good quality?

Are they conscious of the need to produce something that will be liked by others?

Can they show a good level of expertise when using a range of tools and equipment?

Children can make a template. They can explain how to join materials in different ways. Children can measure carefully.

Year 1:

Can they explain what they are making?

Which tools are they using?

Children can cut food safely. They can wash their hands and make sure surfaces are clean when cooking. They can make a product from textiles by gluing. They can cut materials using scissors. Children can strengthen models if needed. They can select appropriate resources and materials.

Year 2:

Can they join things together in different ways?

Children are hygienic in the kitchen. They can measure, join and cut textiles and materials. They can join materials in different ways. They can use joining, folding or rolling to make materials stronger.

Year 5:

Can they explain why their finished product is going to be of good quality?

Can they explain how their product will appeal to the audience?

Can they use a range of tools and equipment expertly?

Children can present their products well. They can make a strong and attractive product. They can incorporate an electrical switch/hydraulics/pneumatics into their product.

Year 6:

Can they use tools and materials precisely?

Do they change the way they are working if needed?

Children can grow their own products with a view to making a salad. They can use different types of electrical circuits. Their work is precise and accurate. They can hide joints so as to improve the look of a product.



Evaluating processes and products

Early Years

- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Respond to what they have made, expressing their thoughts and feelings.

Year 3:

What did they change which made their design even better?

Year 4:

Have they thought of how they will check if their design is successful?

Can they begin to explain how they will improve their original design?

Can they evaluate their product, thinking of both appearance, and the way it works?

Children can explain how they have altered their product after checking it. They can explain how they could make their product stronger. They take time to consider how they could have made their idea better.

Year 1:

**Can they describe how something works?
Can they talk about their own work and things that other people have done?**
Children can say why they have chosen materials and tools.

Year 2:

**What went well with their work?
If they did it again, what would they want to improve?**
Children can explain why they chose a certain textile. They can consider how to improve their construction.

Year 5:

**Do they keep checking that their design is the best it can be?
Do they check whether anything could be improved?**
Can they evaluate appearance and function against the original criteria?
Children can refine their product after testing it. They can reflect on how accurate their measurements were. They persevere and reflect throughout each stage of making the product.

Year 6:

**How well do they test and evaluate their final product?
Is it fit for purpose?
What would improve it?
Would different resources have improved their product?
Would they need more or different information to make it even better?**
Children can consider what would improve their product. They can justify why they selected certain materials. They can explain why their product meets the design criteria.