Key Content for Design Technology

Early Years Foundational Knowledge of Design Technology

EYFS:

- Starts making marks intentionally.
- Begins to give meaning to marks made.
- Explores using different materials and tools to create models.
- Make simple models which express their ideas.
- Use imagination as they consider what they can do with different materials.
- Develop their own ideas and decide which materials to use to express them.
- Join different materials and explore different textures.

Reception:

- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills.
- Discusses what they want to make.
- Discusses problems and how they might solve them.
- Join materials together using tape and different glues.
- Uses tools with care and precision.
- Discusses their creation.

Strand of DT	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design Technology strands to include in each unit.	• Think of their own ideas and say what to do next. • Describe designs (using pictures, models, diagrams, mock-ups etc) To know how to follow a criteria to design their own product. • Explain what is being made and why the audience will like it. • Choose appropriate tools and explain why they are being used. • Describe how their product works, evaluating what went well and what could be done differently	• Think of their own ideas and say what to do next. • Describe designs (using pictures, models, diagrams, mock-ups etc) • know how to follow a criteria to design their own product. • Explain what is being made and why the audience will like it. • Choose appropriate tools and explain why they are being used. • Describe how their product works, evaluating what went well and what could be done differently	• Gather information to help design a successful product (i.e. by asking others' views) and can suggest ideas for improving plans. • Produce a detailed plan with labelled diagrams, a written explanation and step-by-step guide. • Use a range of tools accurately. • Measure, mark out, assemble and join materials and components with some accuracy. • Evaluate the appearance and usability of their own product and pre-existing products. • Explain how the original design could be improved, considering the appearance and usability.	• Gather information to help design a successful product (i.e. by asking others' views) and can suggest ideas for improving plans. • Produce a detailed plan with labelled diagrams, a written explanation and step-by-step guide. • Use a range of tools accurately. • Measure, mark out, assemble and join materials and components with some accuracy. • Evaluate the appearance and usability of their own product and pre-existing products. • Explain how the original design could be improved, considering the appearance and usability.	• Use a range of information to inform a design (i.e. market research using surveys, interviews, questionnaires or web-based resources). • Produce a detailed plan, with cross-sectional diagrams and computer-generated designs). • Refine and justify plans as necessary. • Use a range of tools and equipment precisely. • Consider the aesthetic qualities and functionality of their product and refine details as necessary. • Evaluate the appearance and test the function of a product (own and pre-existing) against the original criteria, saying whether it is fit for purpose. • Suggest improvements that could be made, considering materials, methods, sustainability of the product and how much a product costs to make.	• Use a range of information to inform a design (i.e. market research using surveys, interviews, questionnaires or web-based resources). • Produce a detailed plan, with cross-sectional diagrams and computer-generated designs). • Refine and justify plans as necessary. • Use a range of tools and equipment precisely. • Consider the aesthetic qualities and functionality of their product and refine details as necessary. • Evaluate the appearance and test the function of a product (own and pre-existing) against the original criteria, saying whether it is fit for purpose. • Suggest improvements that could be made, considering materials, methods, sustainability of the product and how much a product costs to make.

Design Technology Knowledge						
Cycle A - Unit 1 Food and nutrition	• Demonstrate good hygiene. • Knows how to cut, mix and mould foods (with supervision). • Knows how to hold a knife correctly and cut safely. • Knows how to make a salad. • Knows how to make bread rolls. (What can they add to their salad / bread roll to make it theirs).	• Demonstrate good hygiene. • Knows how to cut, mix and mould foods (with supervision). • Knows how to hold a knife correctly and cut safely. • Knows how to make a salad. • Knows how to make bread rolls. (What can they add to their salad / bread roll to make it theirs).	• Demonstrate good hygiene. • Knows how to cut, grate, mix. (With supervision) • Knows how to hold a knife correctly and cut safely. • Knows how to use a grater safely. • Knows how to make toast using a grill safely. • Knows how to cook a potato/sweet potato in the microwave. • Knows how to use a microwave safely and can set a timer. (What can they add to their potato / toast to make it theirs).	• Demonstrate good hygiene. • Knows how to cut, grate, mix. (With supervision) • Knows how to hold a knife correctly and cut safely. • Knows how to use a grater safely. • Knows how to make toast using a grill safely. • Knows how to cook a potato/sweet potato in the microwave. • Knows how to use a microwave safely and can set a timer. (What can they add to their potato / toast to make it theirs).	• Demonstrate good hygiene. • Knows how to peel, grate, cut, mix, mould. • Knows how to use a range of tools safely when cooking. • Knows how to turn on, set temperature and heat food safely using hobs and ovens (with supervision) • Knows how to set a timer and observe food cooking. • Know how to cook Italian bread. • Know how to cook an Italian dish. (What can they add to their bread / dish to make it theirs).	• Demonstrate good hygiene. • Knows how to peel, grate, cut, mix, mould. • Knows how to use a range of tools safely when cooking. • Knows how to turn on, set temperature and heat food safely using hobs and ovens (with supervision) • Knows how to set a timer and observe food cooking. • Know how to cook Italian bread. • Know how to cook an Italian dish. (What can they add to their bread / dish to make it theirs).
Cycle A - Unit 2 Textiles	• Knows how to cut and join textiles using over-stitch sewing or glue. • Knows how to sew a purse.	• Knows how to cut and join textiles using over-stitch sewing or glue. • Knows how to sew a purse.	• Knows how to cut and join textiles using a running stitch, over-stitch sewing. • Knows how to fasten thread. • Knows how to thread a needle. • Knows how to sew a shopping bag.	• Knows how to cut and join textiles using a running stitch, over-stitch sewing. • Knows how to fasten thread. • Knows how to thread a needle. • Knows how to sew a shopping bag.	• Knows how to pin and tack fabrics. • Use a range of seams to join fabrics.(over-stitching, running stitch) • Knows how to fasten thread.(knotting/back-stitching) • Knows how to thread a needle. • Knows how to sew a soft toy.	• Knows how to pin and tack fabrics. • Use a range of seams to join fabrics.(over-stitching, running stitch) • Knows how to fasten thread.(knotting/back-stitching) • Knows how to thread a needle. • Knows how to sew a soft toy.
Cycle A - Unit 3 KS1 - Construction LKS2 - Circuits UKS2 - Control	• Use sheet materials and construction tools with appropriate supervision. • Know how to make freestanding structures stronger, stiffer and more stable. • Know and apply basic technical vocabulary relevant to the project correctly. • Know how to follow a basic method to make a structure with support(Knows how to construct a photo frame)	• Use sheet materials and construction tools with appropriate supervision. • Know how to make freestanding structures stronger, stiffer and more stable. • Know and apply basic technical vocabulary relevant to the project correctly. • Know how to follow a basic method to make a structure with support(Knows how to construct a photo frame)	• Design and create a purposeful product that uses a simple circuit. • Create an informed detailed design of their product using an electric circuit. • Create a good quality, functional product, refining detail as necessary. • Understand that mechanical and electrical systems have an input, process and an output.(Knows how to build a functioning torch)	• Design and create a purposeful product that uses a simple circuit. • Create an informed detailed design of their product using an electric circuit. • Create a good quality, functional product, refining detail as necessary. • Understand that mechanical and electrical systems have an input, process and an output.(Knows how to build a functioning torch)	• Understand and use electrical systems in their products linked to science coverage. • Apply understanding of computing to program, monitor and control products. • Construct functioning circuits to power the product. (Use Crumble kits to build a functioning set of traffic lights) (Use Crumble kits to build a controllable buggy	• Understand and use electrical systems in their products linked to science coverage. • Apply understanding of computing to program, monitor and control products. • Construct functioning circuits to power the product. (Use Crumble kits to build a functioning set of traffic lights) (Use Crumble kits to build a controllable buggy
Cycle B - Unit 1	• Demonstrate good hygiene.	• Demonstrate good hygiene.	• Demonstrate good hygiene.	• Demonstrate good hygiene.	• Demonstrate good hygiene.	• Demonstrate good hygiene.

	• Knows how to cut, mix and mould foods (with supervision). • Knows how to hold a knife correctly and cut safely. • Knows how to make a fruit salad. • Knows how to make bread rolls. • (What could they add to the bread/ What shape- to make it their own)	• Knows how to cut, mix and mould foods (with supervision). • Knows how to hold a knife correctly and cut safely. • Knows how to make a fruit salad. • Knows how to make bread rolls. • (What could they add to the bread/ What shape- to make it their own)	• Knows how to cut, grate, mix. (With supervision) • Knows how to hold a knife correctly and cut safely. • Knows how to use a grater safely. • Knows how to make toast using a toaster safely. • Knows how to make mug cakes. • Knows how to use a microwave safely and can set a timer. • (What can they add to their cake/ toast to make it their own)	• Knows how to cut, grate, mix. (With supervision) • Knows how to hold a knife correctly and cut safely. • Knows how to use a grater safely. • Knows how to make toast using a toaster safely. • Knows how to make mug cakes. • Knows how to use a microwave safely and can set a timer. • (What can they add to their cake/ toast to make it their own)	• Knows how to peel, grate, cut, mix, mould. • Knows how to use a range of tools safely when cooking. • Knows how to turn on, set temperature and heat food safely using hobs and ovens (with supervision) • To set a timer and observe food cooking. • Knows how to make a cooked breakfast. • Knows how to cook a pasta dish. • (What could they add to their cooked breakfast/pasta to make it their own)	• Knows how to peel, grate, cut, mix, mould. • Knows how to use a range of tools safely when cooking. • Knows how to turn on, set temperature and heat food safely using hobs and ovens (with supervision) • To set a timer and observe food cooking. • Knows how to make a cooked breakfast. • Knows how to cook a pasta dish. • (What could they add to their cooked breakfast/pasta to make it their own)
Cycle B - Unit 2	• Know how simple mechanisms such as levers and sliders work. • Know how to create a lever • know how to create a slider • To create a pop up/slider card. • (dino out of egg)	• Know how simple mechanisms such as levers and sliders work. • Know how to create a lever • know how to create a slider • To create a pop up/slider card. • (dino out of egg)	• Know how simple mechanisms such as levers and linkages work. • Know how to create a lever with at least two pivot points • Know how to create a linkage mechanism • To create a moving zoo.	• Know how simple mechanisms such as levers and linkages work. • Know how to create a lever with at least two pivot points • Know how to create a linkage mechanism • To create a moving zoo.	• Create an informed detailed design of their product using an electric circuit. • Create a good quality, functional product, refining detail as necessary. • Use a circuit to move a weight off the floor	• Create an informed detailed design of their product using an electric circuit. • Create a good quality, functional product, refining detail as necessary. • Use a circuit to move a weight off the floor
Cycle B - Unit 3	• Can begin to use sheet materials and construction tools with appropriate supervision. • Know how to make freestanding structures stronger, stiffer and more stable. • Know and apply basic technical vocabulary relevant to the project correctly. • Know how to follow a basic method to make a structure with support • Make a wooden character.	• Can begin to use sheet materials and construction tools with appropriate supervision. • Know how to make freestanding structures stronger, stiffer and more stable. • Know and apply basic technical vocabulary relevant to the project correctly. • Know how to follow a basic method to make a structure with support • Make a wooden character.	• Can begin to use sheet materials and construction tools with appropriate supervision. • Develop and use knowledge of how to construct strong, stiff shell structures. • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Define technical vocabulary relevant to the project. • Know how to follow a basic method to make a structure independently • Construct a box.	• Can begin to use sheet materials and construction tools with appropriate supervision. • Develop and use knowledge of how to construct strong, stiff shell structures. • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Define technical vocabulary relevant to the project. • Know how to follow a basic method to make a structure independently • Construct a box.	• Can use sheet and construction materials appropriately. • Explain multiple ways to strengthen, stiffen and reinforce 3D frameworks • Evaluate constructions, looking at ways to improve using correct technical vocabulary. • Explain how to structure a construction process. • Create a clear method for constructing a structure independently. • Construct a bird box.	• Can use sheet and construction materials appropriately. • Explain multiple ways to strengthen, stiffen and reinforce 3D frameworks • Evaluate constructions, looking at ways to improve using correct technical vocabulary. • Explain how to structure a construction process. • Create a clear method for constructing a structure independently. • Construct a bird box.