NEVILL ROAD JUNIOR SCHOOL CURRICULUM OVERVIEW – DESIGN AND TECHNOLOGY

OUR CURRICULUM AT NEVILL ROAD JUNIORS

- We **Aim High** by challenging ourselves in all aspects of school life.
- We are **Successful** learners by using our growth mind set to achieve.
- We **Persevere** by being resilient and trying our best in everything we do.
- We use our **Imagination** to produce creative work that we can be proud of.
- We show **Respect** by including everyone and making sure we all matter.
- We show **Enthusiasm** by approaching all learning with a positive attitude.

OUR CURRICULUM INTENT

- At Nevill Road Junior School, learning is fun and all of our children are supported and challenged to enjoy learning and reach their potential. Learning in Design Technology is applied to real life situations and jobs by referring to the product, user and purpose and also by being a practical subject. We want to help make learning accessible and motivate our pupils to achieve well and become lifelong learners, so we have a very positive approach to learning and children are encouraged and rewarded when they do their best, work hard and make good progress.
- Our curriculum is based on the statutory National Curriculum; it is knowledge and skills-based in design and intended to provide learning and teaching motivation for both children and teachers. We teach five areas of Design Technology: Mechanical Systems, Structures, Electrical Circuits and Programming, Textiles and Nutrition and Cookery). We aim to be as creative as possible with our approach to the curriculum, teaching and learning. The Design Technology topics we cover are linked to other areas of the curriculum such as Geography and History, for example by learning about the cuisine from a country of study and then designing and making a dish using ingredients they have learned about.

Pedagogy of Learning

Explanation, Modelling and Scaffolding

In lessons you will see:

- Clear and precise explanations given by teachers, with complex ideas broken down.
- Time given to practise and consolidate children's knowledge and understanding in new ways that stretches their thinking and allows them to consolidate key skills.
- Metacognition strategies used to help scaffold learning and develop independence.
- Use of sentence stems to help structure children's talk and thinking.
- Children know what is expected of them and how this can be achieved. This is done in a variety of ways including the use of a clear success criteria and examples eg a WAGOLL (What a good one looks like)
- Children evaluating their own work and improving their learning.

Pedagogy of Learning

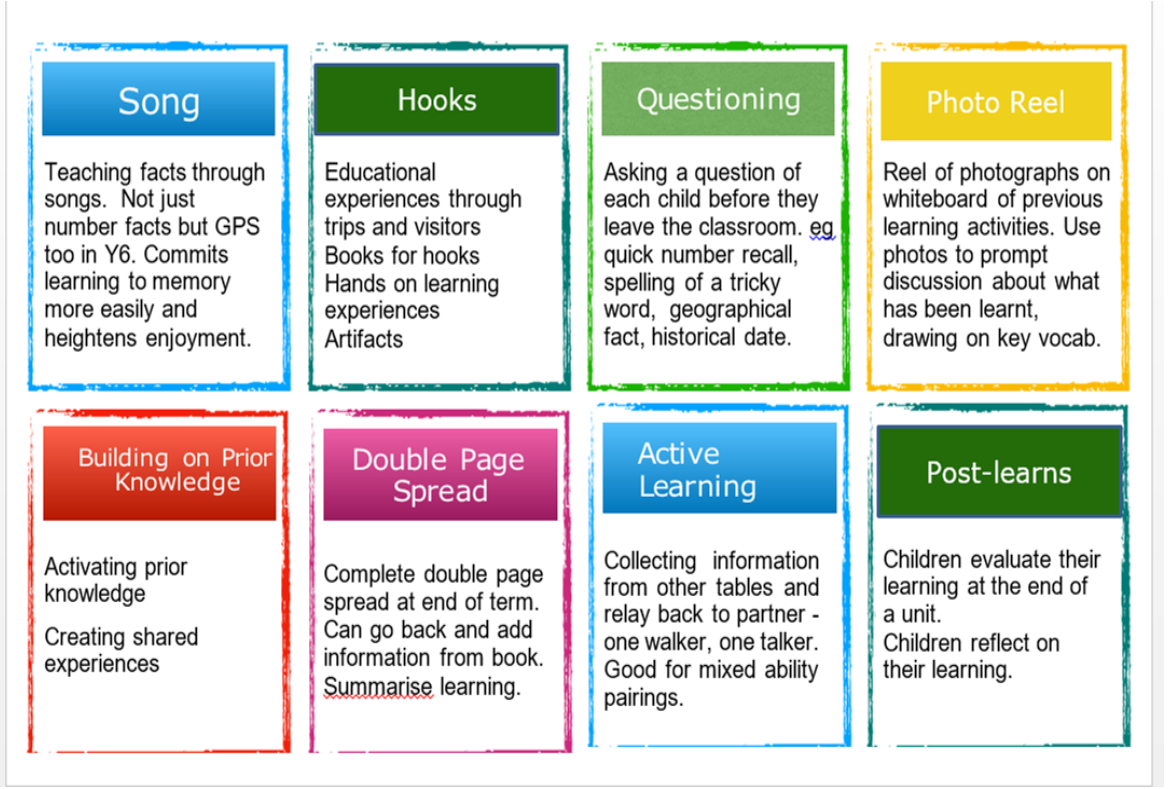
Questioning, Recall and Retrieval of Knowledge to make learning 'sticky'

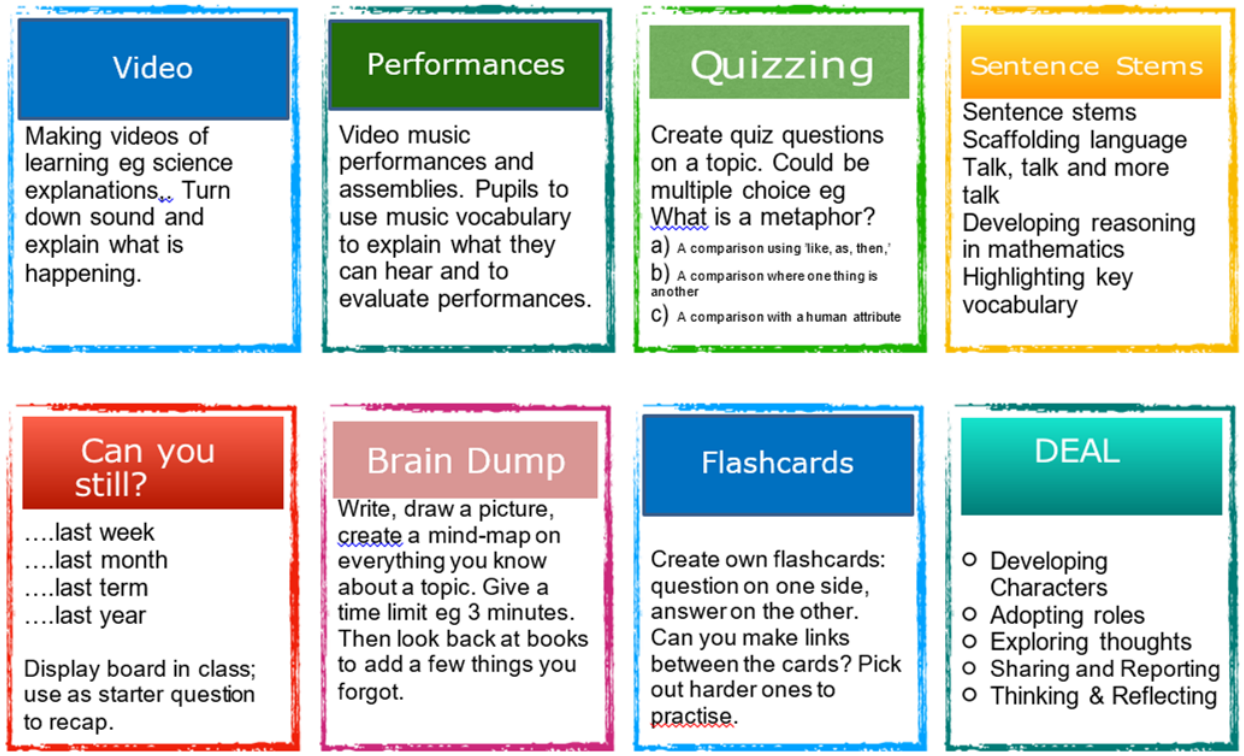
In lessons you will see:

- A mastery approach to learning.
- Every lesson starts with a 'Can you still..?' to recall previous knowledge
- Questions asked to children that encourage them to know more and think more.
- Teachers use carefully planned questions to probe children's responses, to reshape tasks and deepen understanding.
- Children are given 'thinking time' to allow for sufficient time for pupils to review what they are learning and to develop further.
- Children are given regular opportunities within lessons to recall previous knowledge. Questions are asked to reveal their understanding and recall how well they have remembered the content.
- Lollipop sticks used to select children to answer questions to encourage participation from all.
- Tasks from the 'Nevill Road Bare Necessities to Sticky learning' used to retrieve knowledge

Pedagogy of Learning

In order for our children to learn more and remember more, we promote 'sticky' learning through….





Pedagogy of Learning

Check understanding throughout the lesson and provide feedback.

In lessons you will see:

- We use a variety of mechanisms to assess children's understanding throughout lessons and ensure that misconceptions are picked up quickly.
- Verbal feedback given to children throughout the lesson in order to build on pupils' strengths.
- Our marking system ensures that feedback is purposeful and children's responses enable them to practise, consolidate or stretch their learning.
- Metacognition strategies are used to motivate children to improve their learning.
- Children respond to feedback and this is captured through the use of purple pen in their books.
- In the moment marking gives immediate feedback.
- Use of mini plenaries to address any misconceptions.

Questioning, Recall and Retrieval of Knowledge to make learning 'sticky'

In lessons you will see:

-A mastery approach to learning.

- Every lesson starts with a 'Can you still..?' to recall previous knowledge

-Questions asked to children that encourage children to know more and think more

-Teachers using carefully planned questions to probe children's responses, to reshape tasks and deepen children's understanding.

-Children given 'thinking time' to help give sufficient time for pupils to review what they are learning and to develop further.

- Children given regular opportunities within lessons to recall previous knowledge. Questions are asked to reveal their understanding and recall how well they have remembered the content.

- Lollipop sticks used to select children to answer questions

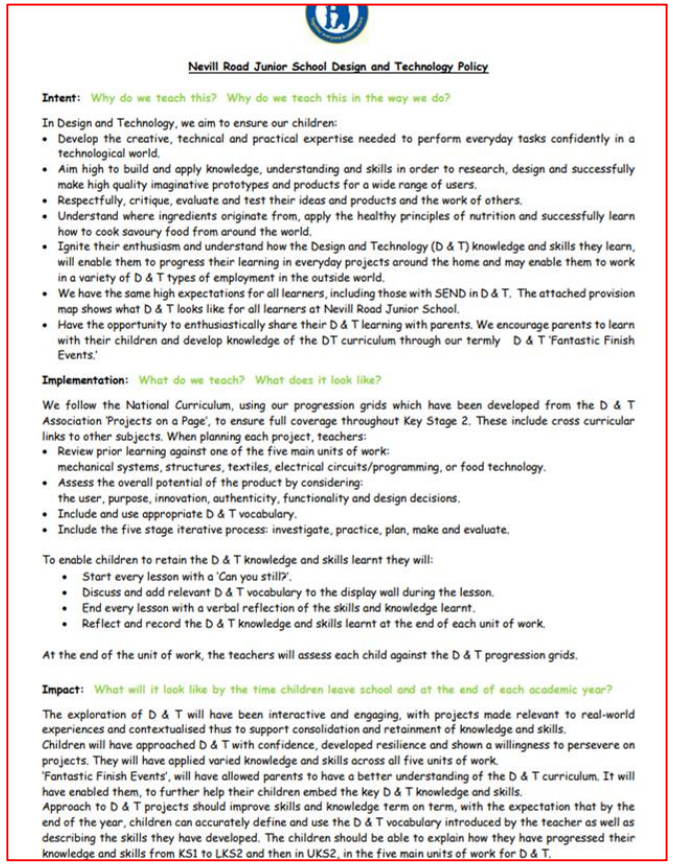
- Tasks from the 'Nevill Road Bare Necessities to Sticky learning' used to retrieve knowledge

CURRICULUM LEADER – HAYLEY NEWBOULD
(LEADER FROM 2022 – CURRENT)

INTENT

- At Nevill Road Juniors, we want our children to develop the creative, technical and practical expertise needed to perform everyday tasks confidently in a technological world.
- We aim high to build and apply knowledge, understanding and skills in order to research, design and successfully make high quality imaginative prototypes and products for a wide range of users.
- The children respectfully critique, evaluate and test their ideas and products and the work of others.
- They understand where ingredients originate from, apply the healthy principles of nutrition and successfully learn how to cook food from around the world.
- We want to ignite their enthusiasm and help them understand how the Design and Technology (D & T) knowledge and skills they learn, will enable them to progress their learning in everyday projects around the home and may enable them to work in a variety of D & T types of employment in the outside world.
- We have the same high expectations for all learners, including those with SEND in D & T. The attached provision map shows what D & T looks like for all learners at Nevill Road Junior School.

POLICY



Nevill Road Junior School Design and Technology Policy

Intent: Why do we teach this? Why do we teach this in the way we do?

In Design and Technology, we aim to ensure our children:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently in a technological world.
- Aim high to build and apply knowledge, understanding and skills in order to research, design and successfully make high quality imaginative prototypes and products for a wide range of users.
- Respectfully, critique, evaluate and test their ideas and products and the work of others.
- Understand where ingredients originate from, apply the healthy principles of nutrition and successfully learn how to cook savoury food from around the world.
- Ignite their enthusiasm and understand how the Design and Technology (D & T) knowledge and skills they learn, will enable them to progress their learning in everyday projects around the home and may enable them to work in a variety of D & T types of employment in the outside world.
- We have the same high expectations for all learners, including those with SEND in D & T. The attached provision map shows what D & T looks like for all learners at Nevill Road Junior School.
- Have the opportunity to enthusiastically share their D & T learning with parents. We encourage parents to learn with their children and develop knowledge of the DT curriculum through our termly D & T 'Fantastic Finish Events.'

Implementation: What do we teach? What does it look like?

We follow the National Curriculum, using our progression grids which have been developed from the D & T Association 'Projects on a Page', to ensure full coverage throughout Key Stage 2. These include cross curricular links to other subjects. When planning each project, teachers:

- Review prior learning against one of the five main units of work:
  mechanical systems, structures, textiles, electrical circuits/programming, or food technology.
- Assess the overall potential of the product by considering:
  the user, purpose, innovation, authenticity, functionality and design decisions.
- Include and use appropriate D & T vocabulary.
- Include the five stage iterative process: investigate, practice, plan, make and evaluate.

To enable children to retain the D & T knowledge and skills learnt they will:

- Start every lesson with a 'Can you still?'.
- Discuss and add relevant D & T vocabulary to the display wall during the lesson.
- End every lesson with a verbal reflection of the skills and knowledge learnt.
- Reflect and record the D & T knowledge and skills learnt at the end of each unit of work.

At the end of the unit of work, the teachers will assess each child against the D & T progression grids.

Impact: What will it look like by the time children leave school and at the end of each academic year?

The exploration of D & T will have been interactive and engaging, with projects made relevant to real-world experiences and contextualised thus to support consolidation and retainment of knowledge and skills.
Children will have approached D & T with confidence, developed resilience and shown a willingness to persevere on projects. They will have applied varied knowledge and skills across all five units of work.
'Fantastic Finish Events', will have allowed parents to have a better understanding of the D & T curriculum. It will have enabled them, to further help their children embed the key D & T knowledge and skills.
Approach to D & T projects should improve skills and knowledge term on term, with the expectation that by the end of the year, children can accurately define and use the D & T vocabulary introduced by the teacher as well as describing the skills they have developed. The children should be able to explain how they have progressed their knowledge and skills from KS1 to LKS2 and then in UKS2, in the five main units of work for D & T.

To find out more about our Design Technology policy, please click the link below:

http://www.nevillroad-jun.stockport.sch.uk/page/design-technology/63844

SEQUENCE OF LEARNING – WHOLE SCHOOL PLAN

The children revisit the different areas of Design Technology as they progress through the school, in order to build on their skills and knowledge. We cover three units of work in each year group.

Nevill Road Junior School Long Term Plan for Design & Technology 2022-2023

	Mechanical Systems	Structures	Nutrition and Cookery	Textiles	Electrical Circuits/ Programming
Year 3	Spring 1: History Stone, Bronze and Iron Age Mechanical Systems - Bronze Age Carriage		Autumn: Geography UK Nutrition and Cookery - Afternoon Tea from the UK	Summer: History Egypt Textiles: Pencil case decorated with Egyptian hieroglyphics	
Year 4		Autumn: RE Christmas Structures – Gift Box using NETS.	Summer: History Romans Nutrition and Cookery - Savoury Dishes from Italy		Spring: History Geography Europe Electrical Circuit: Light up countries on a 3D Map
Year 5	Summer: History Saxons/Vikings Mechanical Systems - Viking boat using CAMS		Spring: Geography North America Nutrition and Cookery - Savoury Dishes from North America	Autumn: Bramhall Tudor Christmas/RE Textiles- Fabric Advent Calendar using CAD	
Year 6		Autumn: RE Christmas Structures - Christmas Box	Spring: History World Wars Nutrition and Cookery- Savoury Dishes from VE Day		Summer: Geography South America Programming-Make and control a carnival float using programming.

Autumn 2022

SEQUENCE OF LEARNING – CURRICULUM PROGRESSION PLANS

- Here is an example of a sequence of learning for Nutrition and Cookery from Years 3 to 6. For more detailed plans, please see the progression document on our website.

http://www.nevillroad-jun.stockport.sch.uk/serve_file/1035053

	Focus	Knowledge and skills
Year 3	Design, make and evaluate a healthy afternoon tea (e.g. sandwiches/ wraps/ cupcakes/ fruit kebabs)	Beginning to grate food, spread margarine/ butter, cracking eggs, beginning to mix/whisk, beginning to weigh/measure ingredients, presenting food, observing the use of an oven/heat source and learning about kitchen health and safety.
Year 4	Design, make and evaluate a healthy savoury Italian dish (e.g. pizza)	Beginning to follow a recipe, beginning to weigh and measure ingredients, beginning to mix, rest, knead, proof dough, grating and peeling, improve cutting techniques, using a food processor with supervision, beginning to present food attractively, using an oven/heat source with supervision.
Year 5	Design, make and evaluate healthy savoury Mexican dishes (e.g. fajitas, guacamole, salsa)	Following a recipe, weighing, measuring ingredients, mixing, kneading and resting, rolling dough, seasoning with spices, using a food processor, frying-using a heat source (hob) with adult supervision, using appealing food presentation techniques.
Year 6	Design, make and evaluate savoury English War dishes (e.g. carrot scones, cheese and Marmite rolls, corned beef fritters)	Independently: Following a recipe, weighing, measuring ingredients, peeling, mashing, making breadcrumbs using a food processor, using a rubbing technique, using a greasing technique, using hob and oven with adult supervision, using appealing food presentation techniques.

SEQUENCE OF LEARNING- UNIT AND LESSON PLANS

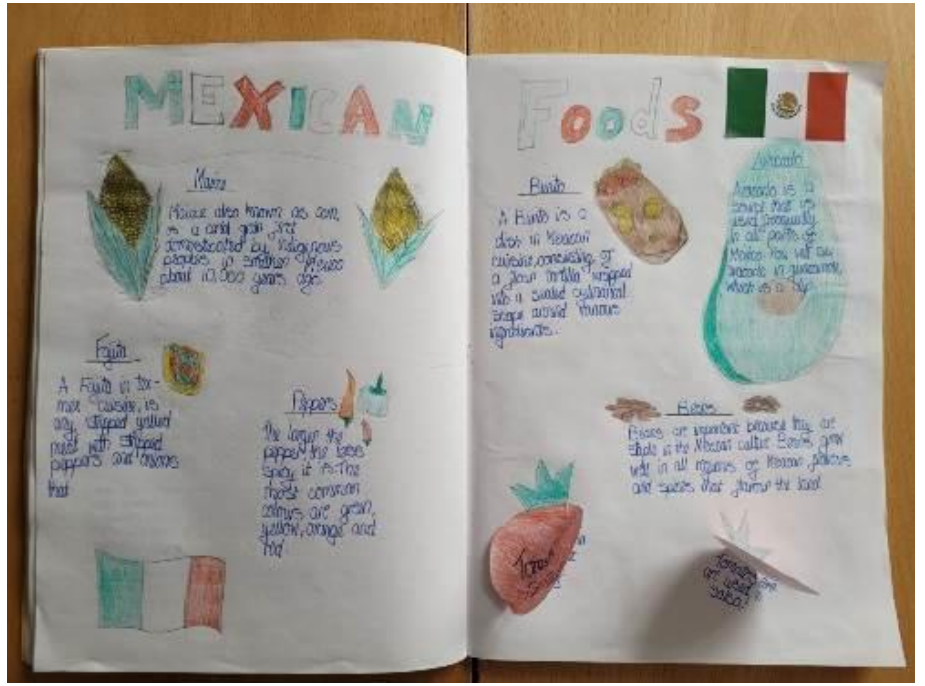
- The units are carefully planned in a sequence of steps. They build on previous work and new knowledge and skills are introduced over time.

- Each child has a design technology book to plan and record their ideas.

- Lessons are structured tin the same sequence for each unit:

- **Lesson 1** – Investigate
- **Lesson 2** – Practise
- **Lesson 3** – Plan
- **Lesson 4** – Make
- **Lesson 5** – Evaluate

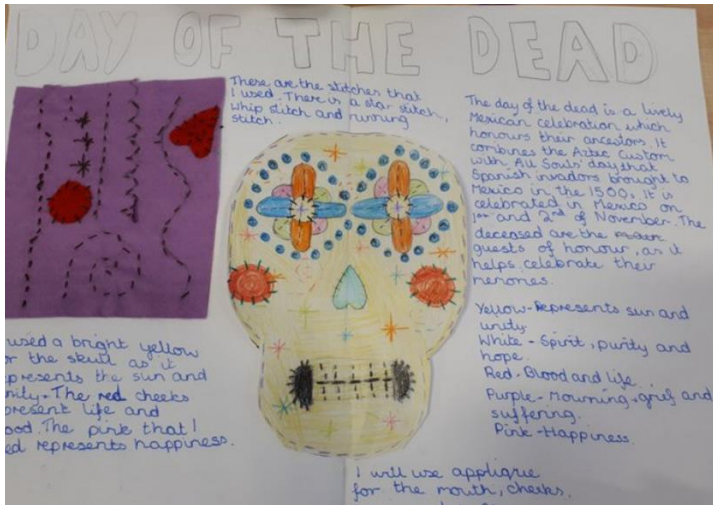
We ask the children to design something (a product) for someone (the user) for some reason (the purpose).



DESIGN TECHNOLOGY LESSONS AT NEVILL ROAD

In lessons you will see:

- Teacher talk is kept to a minimum ensuring children have the chance to think, share their ideas, work collaboratively or independently and focus upon their learning.
- Lessons are carefully planned to engage learning.
- A range of learning opportunities are provided to allow children to learn in a variety of ways e.g. looking at and testing out real products, practising skills before making their final product and testing out their final product.
- Lessons begin with a recap of previous learning and with 'Can you still…. Questions.
- Vocabulary is explored throughout lessons.

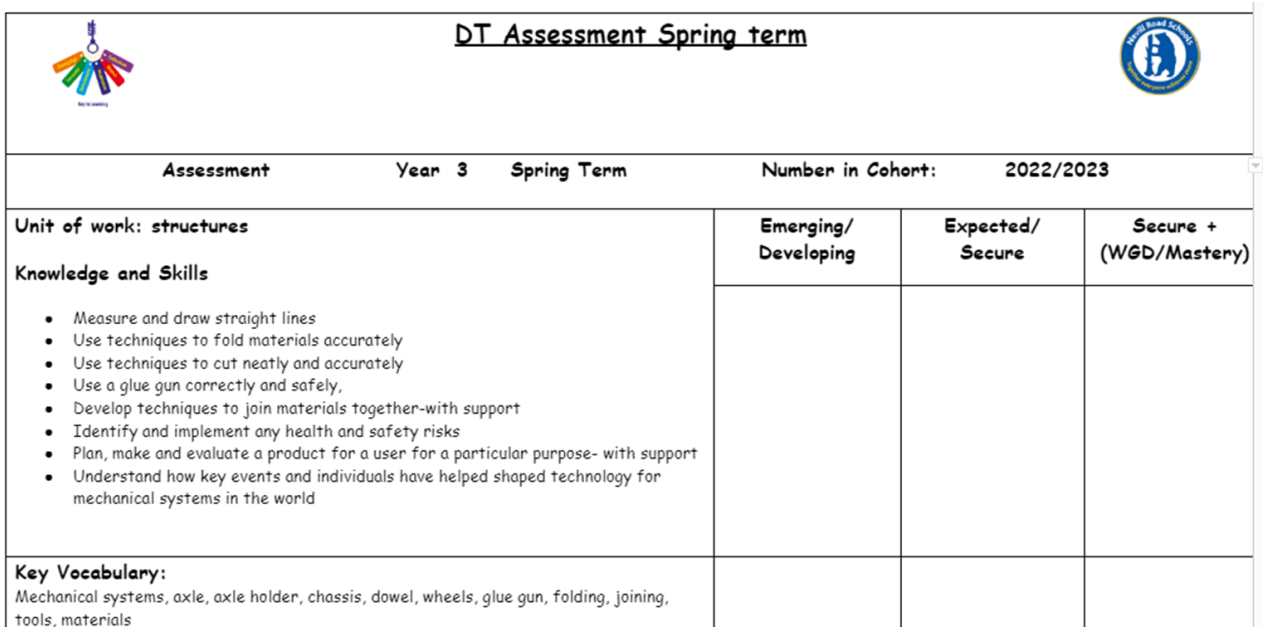


DESIGN TECHNOLOGY AROUND THE SCHOOL

- Most of our Design Technology lessons (Mechanical Systems, Structures, Electrical Circuits and Programming, Textiles) take place in the classrooms, with specialist equipment and resources brought in.
- For the Nutrition and Cookery lessons, we are very proud of our recently built kitchen, with work surfaces, fridge, freezer, three ovens, hobs, a food processor and enough cooking equipment that a whole class can prepare food and cook at the same time.

ASSESSMENT

For each unit of work completed, children are identified as either working towards the expected standards or meeting the expected standards.



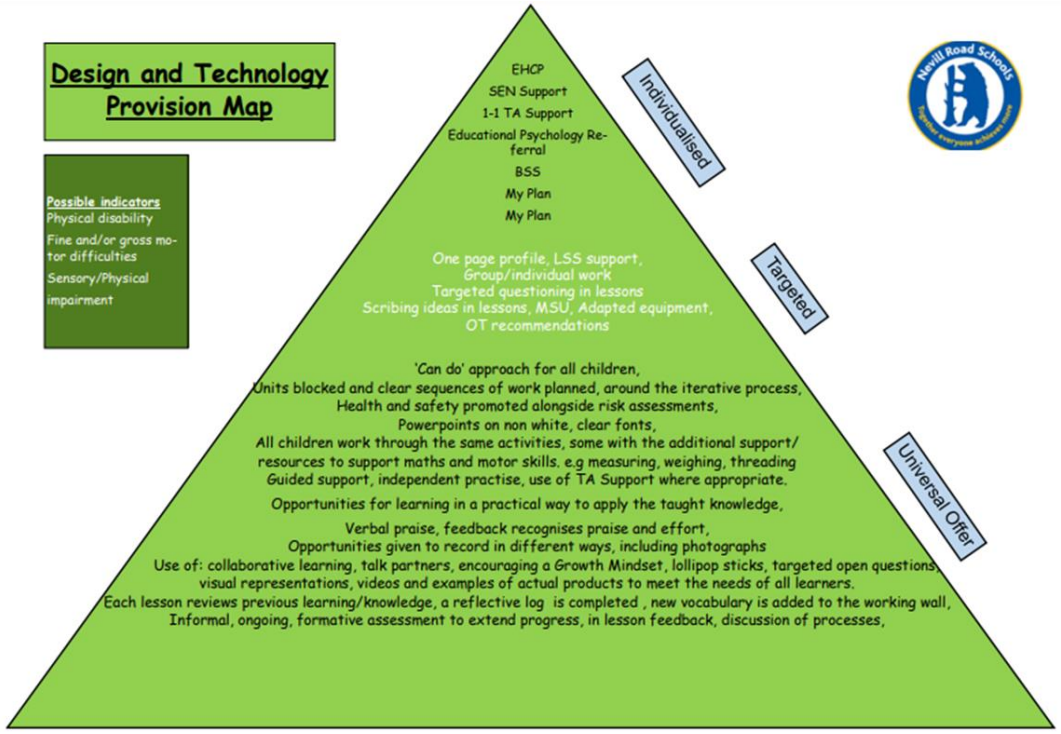
DT Assessment Spring term

Assessment	Year 3	Spring Term	Number in Cohort:	2022/2023

Unit of work: structures Knowledge and Skills	Emerging/ Developing	Expected/ Secure	Secure + (WGD/Mastery)
• Measure and draw straight lines • Use techniques to fold materials accurately • Use techniques to cut neatly and accurately • Use a glue gun correctly and safely, • Develop techniques to join materials together-with support • Identify and implement any health and safety risks • Plan, make and evaluate a product for a user for a particular purpose- with support • Understand how key events and individuals have helped shaped technology for mechanical systems in the world			
Key Vocabulary: Mechanical systems, axle, axle holder, chassis, dowel, wheels, glue gun, folding, joining, tools, materials			

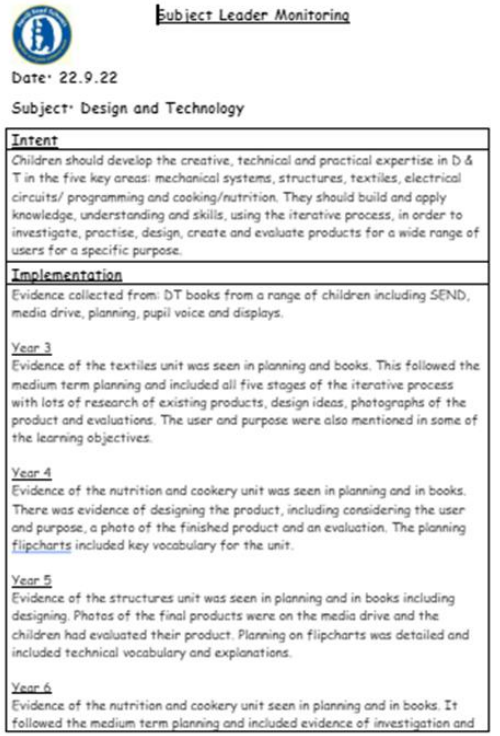
INCLUSION

- In all our subject areas, we have created a provision map of need that shows how all children are supported in order to enable them to access the full curriculum.
- The needs of all children are considered with a lens on provision for our SEND children and teaching is adapted as necessary. We believe that if we are getting it right for our children with additional needs, then we are getting it right for everyone.
- Learning is not capped by differentiation but stretched by enabling all pupils to deepen their learning through a range of skills.
- Some tasks are open ended and allow children to present their findings in a variety of creative and individuals ways.
- Staff check in regularly to check understanding.
- Metacognition strategies are used to encourage independent learning such as frames and sentence stems to ensure pupils do not suffer with cognitive overload.
- Teaching assistants are used effectively to help and supervise children with the practical parts of the subject.
- The growing diversity of our school community means that teachers are adapting lessons to support children who have English as a second language. Advice is sought from EDS.



MONITORING AND EVALUATION

- Subject leaders are allocated time to have a 'Deep dive review' This can involve reviewing planning, lesson looks, book looks and pupil voice.
- This is then fed back to staff in staff meetings/emails or INSETS.



Subject Leader Monitoring

Date: 22.9.22

Subject: Design and Technology

Intent

Children should develop the creative, technical and practical expertise in D & T in the five key areas: mechanical systems, structures, textiles, electrical circuits/ programming and cooking/nutrition. They should build and apply knowledge, understanding and skills, using the iterative process, in order to investigate, practise, design, create and evaluate products for a wide range of users for a specific purpose.

Implementation

Evidence collected from: DT books from a range of children including SEND, media drive, planning, pupil voice and displays.

Year 3

Evidence of the textiles unit was seen in planning and books. This followed the medium term planning and included all five stages of the iterative process with lots of research of existing products, design ideas, photographs of the product and evaluations. The user and purpose were also mentioned in some of the learning objectives.

Year 4

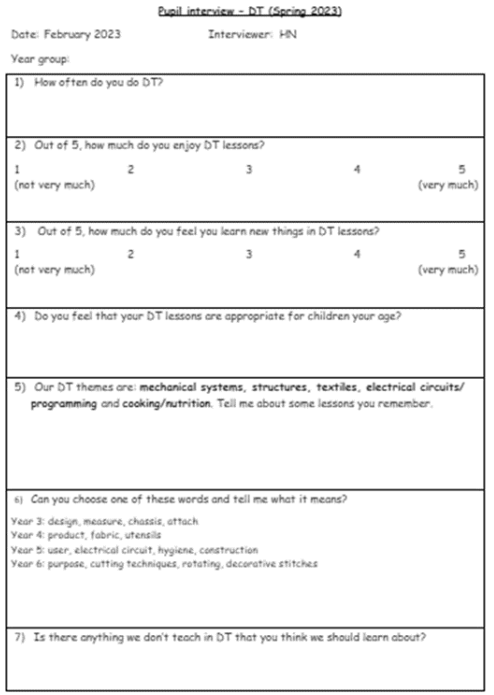
Evidence of the nutrition and cookery unit was seen in planning and in books. There was evidence of designing the product, including considering the user and purpose, a photo of the finished product and an evaluation. The planning flipcharts included key vocabulary for the unit.

Year 5

Evidence of the structures unit was seen in planning and in books including designing. Photos of the final products were on the media drive and the children had evaluated their product. Planning on flipcharts was detailed and included technical vocabulary and explanations.

Year 6

Evidence of the nutrition and cookery unit seen in planning and in books. It followed the medium term planning and included evidence of investigation and



Pupil interview – DT (Spring 2023)

Date: February 2023 Interviewer: HN

Year group:

1) How often do you do DT?

2) Out of 5, how much do you enjoy DT lessons?

1 (not very much) 2 3 4 5 (very much)

3) Out of 5, how much do you feel you learn new things in DT lessons?

1 (not very much) 2 3 4 5 (very much)

4) Do you feel that your DT lessons are appropriate for children your age?

5) Our DT themes are: **mechanical systems, structures, textiles, electrical circuits/ programming** and **cooking/nutrition**. Tell me about some lessons you remember.

6) Can you choose one of these words and tell me what it means?

Year 3: design, measure, chassis, attach
Year 4: product, fabric, utensils
Year 5: user, electrical circuit, hygiene, construction
Year 6: purpose, cutting techniques, rotating, decorative stitches

7) Is there anything we don't teach in DT that you think we should learn about?

PUPIL VOICE

- Year 5 pupil: “I enjoy DT because we get to spend time on a project. I enjoy designing, drawing and we use different skills. I am really proud of my Day of the Dead cushion.”

NEXT STEPS

- To continue to monitor Design Technology across school.
- To encourage children to individualise their designs more by identifying their own user, product or purpose wherever possible.
- To update the Design Technology display to showcase our latest designs and products.