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| **Design and Technology** | | |
| **EYFS**  **Characteristics of Effective Learning:**  **Playing and Exploring/Engagement**   * Finding out and exploring * Playing with what they know * Being willing to 'have a go'   **Active Learning/Motivation**   * Being involved and concentrating * Keeping trying * Enjoying achieving what they set out to do   **Creating and Thinking Critically/Thinking**   * Having their own ideas * Making links * Choosing ways to do things | | |
| **Intent** | **Implementation** | **Impact** |
| **At Girnhill:**  Design & Technology is taught through the National Curriculum by setting high ambitions and expectations for all pupils ensuring strong cross curricular links are made. Through subject specific teaching children will develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. Children will be encouraged to research, interpret and present themselves as a designer/technician whilst building and applying a high level of knowledge, understanding and skills in order to design and make high-quality purposeful and functional products for a wide range of users. Children will learn to explore, evaluate and test their ideas and products and the work of others whilst being encouraged to talk like a designer/technician and use subject specific vocabulary with accuracy.  **Rationale:**  The Design and Technology curriculum at Girnhill Infant School aims to promote curiosity, creativity and love for learning. We want our children to be ambitious and have no limits when designing and making their own innovative products. Within Design and Technology lessons one of our main purposes is to enable children to learn how to empathise with others by using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. Our pupils love creating products they can see, touch- and even taste for themselves and by learning Design and Technology, pupils will develop the perseverance needed to design, make, test, evaluate and amend their creations, seeing the rewards of sticking at something for its entirety. Design and Technology helps to bring learning to life, it is a motivating context for discovering literacy, mathematics, science, computing, PSHE and art. Pupils learn how to take and manage risks, become resourceful, innovative, enterprising and capable citizens. Design and Technology gives our pupils the core skills and abilities to engage positively with the designed and made world which supports them as they get older whilst also helping them to harness the benefits of the latest technology. They learn how products and systems are designed and manufactured and how to make creative use of a variety of resources including digital technologies, to improve the world around them. With regards to cooking and nutrition education, it is important for our pupils to learn where their food comes from, what makes a balanced diet as well as how to prepare simple meals for themselves such as, fruit salads, soups and sandwiches.  **Planning:**  Design and Technology is planned using Early Years Foundation Stage Development Matters, Chris Quigley Key Skills and Design and Technology progression grids. This is to ensure a considered sequence of experiences including subject specific vocabulary, knowledge, skills of making, ideas and evaluation.  **Curriculum:**   * They experiment with ways of changing media. * They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. * To design purposeful, functional, appealing products for themselves. * To generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and where appropriate to include technology.   **Research:**  Closing the vocabulary gap:   * Between birth and 48 months, professional parents speak 32 million more words to children than those from disadvantaged families – herein lies the vocabulary gap. * Vocabulary size at 28 months equates to linguistic and cognitive ability at age 8. * Vocabulary at 5 – 7 is a direct predictor of comprehension 10 years later. * **Language and vocabulary are vital skills in enabling children to understand Design and Technology concepts and to critically evaluate their designs/creations and the work of others.**   Rosenshine’s principles in action:   * Conceptual information initially enters our working memory. Working memory is rather small and only small amounts of information can be absorbed at once. New information is only moved from working memory to long-term memory if we can connect it to knowledge that we already have (our schema). As a result of this, prior knowledge is a major factor in our capacity to learn new information therefore a specific teaching sequence needs to be implemented based upon daily, weekly and termly review. | Our Design and Technology curriculum enables children to become a developing designer or technician through high quality provision, which includes:  **Teaching sequence:**  Planning and delivery follows Rosenshine’s Principles in action –   1. Daily review 2. Present new material in small steps 3. Ask questions 4. Provide models 5. Guide student practice 6. Check for pupils understanding 7. Obtain a high success rate 8. Provide scaffolds for different tasks 9. Independent practice 10. Weekly and monthly review   **Teaching:**  Children are taught a range of art techniques under the principles of the six main Design and Technology skills (cutting, shaping, joining and finishing.) in explicit taught sessions.  Children are taught to practise, use and apply these skills independently and collaboratively throughout their learning environment.  Children develop their subject specific vocabulary (generic and content based) through explicit teaching of vocabulary and definitions.  Children develop understanding of key concepts and vocabulary through exposure to a range of fiction and non-fiction subject specific texts.  In Design and Technology we look at the ways that things work and the jobs that they do.  In EYFS, early design and technology content is found in:  **Expressive arts and design:**   * Exploring and Using Media and Materials (e.g Mixing colours, exploring and describing different textures) * Being Imaginative (e.g. how can we fix problems, what looks/sounds/feels good together and what makes things fun and interesting.   **Understanding the world:**   * Technology - Technological toys (e.g pushing buttons to take a photo or typing letters by pushing keys on the keyboard.   **Physical Development:**   * Moving and handling (e.g using scissors and using other simple tools such as:   Arts and crafts – pencil, felt tip, paint brush, tape  Cooking – wooden spoon, spatula, peeler …….rolling pin  **Learning Environment:**  Learning environments and working walls focus on the skills and subject specific vocabulary. Children use these to support their learning and development. Reach questioning enables children to be challenged and ensures teaching and learning is planned and pitched appropriately.  **Provision & Resources:**  Children have a range of design and technology materials readily available to explore and investigate within their environment.  **Staff Knowledge:**  Staff have produced and developed EYFS skills continuums for Design and Technology. These are evident in provision and support staff in resourcing, enhancing and providing children with necessary learning opportunities to move learning forwards.  **Assessment:**  Children are assessed against the Expressive Arts and Design Early Learning Goals. Children are assessed at ‘Emerging’, ‘Expected’ or ‘Exceeding’ standard. | **Outcomes:**  Children demonstrate their understanding of key vocabulary through pupil voice evident during lesson observations and working folders. Pupil voice focuses on the ‘knowing more and remembering more’ principle. |

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| **Design and Technology.** | | |
| **KS1**  **Aims:**   * To provide a Design and Technology curriculum which follows the national curriculum and is enhanced through children’s classroom experience. * For all children to enjoy and participate in individual and collaborative learning. * To promote a Design and Technology curriculum which provides engagement, challenge and support for all children. * To enable learning experiences which promote independence, co-operation. * To have a developing awareness, appreciation and understanding of social, moral, spiritual and cultural. * To enhance learning opportunities through appropriate use of ICT. * To promote opportunities for children to further develop skills through an extended curriculum. | | |
| **Intent** | **Implementation** | **Impact** |
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Children will learn to explore, evaluate and test their ideas and products and the work of others whilst being encouraged to talk like a designer/technician and use subject specific vocabulary with accuracy.  **Rationale:**  The Design and Technology curriculum at Girnhill Infant School aims to promote curiosity, creativity and love for learning. We want our children to be ambitious and have no limits when designing and making their own innovative products. Within Design and Technology lessons one of our main purposes is to enable children to learn how to empathise with others by using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. 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With regards to cooking and nutrition education, it is important for our pupils to learn where their food comes from, what makes a balanced diet as well as how to prepare simple meals for themselves such as, fruit salads, soups and sandwiches.  **Planning:**  Design and Technology is planned using KS1 National Curriculum programmes of study, Paul Carney Skills and Design and Technology progression grids. This is to ensure a considered sequence of experiences including subject specific vocabulary, knowledge, skills of making, ideas and evaluation.  **Research:**  Closing the vocabulary gap:   * Between birth and 48 months, professional parents speak 32 million more words to children than those from disadvantaged families – herein lies the vocabulary gap. * Vocabulary size at 28 months equates to linguistic and cognitive ability at age 8. * Vocabulary at 5 – 7 is a direct predictor of comprehension 10 years later. * **Language and vocabulary are vital skills in enabling children to understand Design and Technology concepts and to critically evaluate their designs/creations and the work of others.**   Rosenshine’s principles in action:   * Conceptual information initially enters our working memory. Working memory is rather small and only small amounts of information can be absorbed at once. 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Weekly and monthly review   **Teaching:**  Children are taught a range of Design and Technology techniques under the principles of skills (cutting, shaping, joining and finishing) in explicit taught sessions.  A series of lessons will follow a specific teaching sequence that allows children to focus on a specific Designer and skill, considering the subject specific vocabulary, practising the taught skill, applying the taught skill and evaluating learning using the subject specific vocabulary.  Children develop their subject specific vocabulary (generic and content based) through explicit teaching of vocabulary and definitions.  Children develop understanding of key concepts and vocabulary through exposure to a range of fiction and non-fiction subject specific texts.  **Learning Environment:**  Learning environments and working walls focus on the skills and subject specific vocabulary. Children use these to support their learning and development. Children will access learning in both whole class and small group tasks**.**  The Design technology working wall will mirror the knowledge organiser clearly displaying subject specific vocabulary, which is clearly defined, key facts and reach questioning.  Reach questioning enables children to be challenged and ensures teaching and learning is planned and pitched appropriately.  Fiction and non-fiction texts are available throughout the provision and key texts are chosen to be a focused book of the week to build vocabulary and knowledge.  **Knowledge Organisers** :  These provide a clear guide to key vocabulary and facts both to use in school and at home.    **Class Learning Journey Big Book :**  Regular opportunities to revisit learning through the class learning journey books are planned to recall knowledge and make connections on a regular basis.  **Enrichment:**  Enrichment opportunities are carefully selected to enhance learning opportunities for children by demonstrating real life contextual understanding of design and technology to enable children to become designer, creator and technician.  **Resources:**  Children have access to a range of design and technology materials to develop and enhance their art and design skills in line with the Design and Technology progression grids. In addition to this, children have access to a wide range of subject specific texts to support key concepts and ideas.  **Assessment:**  Children are assessed by their use of the subject specific vocabulary (video footage, pupil voice and child’s use of language), evidence of the making process and evidence of the final piece of work. | **Outcomes:**  Children demonstrate their understanding of key vocabulary through pupil voice evident during lesson observations and working folders. Pupil voice focuses on the ‘knowing more and remembering more’ principle and this is also evident through learning journey books. |
| **Curriculum:** | | |
| * Design - To generate, develop, model and communicate through talking, drawing and templates and different experiences and imagination | Children practise these skills plus drawing. Children have opportunities to use their ideas, experiences and imagination as starting points and stimuli throughout. | |
| * Make - To select from and use a range of tools and equipment to perform practical tasks.- using skills like- cutting, shaping, joining and finishing. | Adults to model the skills of cutting, shaping, joining and finishing in exciting projects which enable children to use different skills in various activities and projects. | |
| * Design/Make - To use drawing, painting and sculpture to share their ideas, experiences and imagination | Final pieces of work practise these skills. | |
| * Make - To develop a wide range of Design and Technology techniques using cutting, shaping, joining | The formal elements of Design and technology can be built into all work and, where appropriate and are taught discreetly. | |
| * Evaluate - To learn about the work of a range of artists, craft makers and designers | Children are introduced to a range of designers and technicians who work in a variety of media | |
| * Evaluate - To describe the differences and similarities between different practices and disciplines | Work and lessons link to a range of key skills, in a variety of disciplines. The children participate in discussions and practical work inspired by them. | |
| * Evaluate - To make links between different practises and disciplines and their work. | The children produce their practical work in response to these key skills; making links through the concept, material, technique or subject. | |
| * Make - To select from and use a wide range of materials and components, including construction materials and textiles. | The children will look at different designers and select appropriate materials and components according to the designer’s skill, collaborating ideas and skills in taught lessons. | |
| * Evaluate/Technical Knowledge - To evaluate their ideas and finish products and discuss how to develop creations further. To evaluate their ideas and products against design criteria. | Children to discuss the design criteria at the start of the session and evaluate their own and peers skills by linking to the criteria and being able to give constructive criticism and praise other children’s designs and products. | |
| * Technical Knowledge - To explore and use mechanisms – levers, sliders, wheels and axels | Children to use various mechanisms in their learning- designing, discussion and making products which include various mechanisms throughout the year and incorporated at special events- eg- using the sliding mechanism to design an Easter card. | |