Springfield School

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| Blackbirds Class Medium Term Planning for D&T |
| Topic: Pioneers |

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| **Lesson 1**  **Introducing Pioneers Flight (link it)**  Exposition – PPT- What do you know about Pioneers?  Let’s think about flight. What do we know about aeroplanes?  Group 1- Design and aeroplane model  Plenary - share pictures and discuss | **Lesson 2**  **The Wright brothers (learn it)**  Exposition – PPT- What can do we remember about The Wright brothers?  Let’s think about flight. What do we know about aeroplanes?  Group 1- Make an aeroplane model  Plenary - share pictures and discuss | **Lesson 3**  **How have aeroplanes changed. (learn it)**  Exposition – PPT- What can do we remember about The Wright brothers?  Let’s think about flight. What do we know about aeroplanes?  Group 1- Evaluate your aeroplane model  Plenary - share pictures and discuss | **Lesson 4**  **Space (link it)**  Exposition – PPT-  Let’s think about Space What do we know about astronauts and space? What do they eat in space?  Group 1- Design some food that can be eaten in space.  Plenary - share pictures and discuss |
| **Lesson 2**  **Neil Armstrong (learn it)**  Exposition – PPT-  Let’s think about Space What do we know about astronauts and space? What did Neil Armstrong eat in space?  Group 1- Make some food that can be eaten in space.  Plenary - share pictures and discuss | **Lesson 6**  **Neil Armstrong (learn it)**  Exposition – PPT-  Let’s think about Space What do we know about astronauts and space? What did Neil Armstrong eat in space?  Group 1- Evaluate the food you have made for space.  Plenary - share pictures and discuss |  |  |

Take the objectives for the LO stickers from this section

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| Substantive Knowledge (Content) | Disciplinary Knowledge (Skills) |
| KS2 Design and Technology National Curriculum  Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing.  They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].  Children use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.  They generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.  **Make**  Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of making.  Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.  They select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.  **Evaluate**  Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.  Children investigate and analyse a range of existing products.  They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.  They understand how key events and individuals in design and technology have helped shape the world. | **Design Children can:**  a identify the design features of their products that will appeal to intended customers;  b use their knowledge of a broad range of existing products to help generate their ideas;  c design innovative and appealing products that have a clear purpose and are aimed at a specific user;  d explain how particular parts of their products work;  e use annotated sketches and cross-sectional drawings to develop and communicate their ideas;  f when designing, explore different initial ideas before coming up with a final design;  g when planning, start to explain their choice of materials and components including function and aesthetics;  h test ideas out through using prototypes;  i use computer-aided design to develop and communicate their ideas (see note on p. 1);  j develop and follow simple design criteria;  k work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.  **Make Children can:**  Plan  a with growing confidence, carefully select from a range of tools and equipment, explaining their choices;  b select from a range of materials and components according to their functional properties and aesthetic qualities;  c place the main stages of making in a systematic order;  Practical skills and techniques  d learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;  e use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components;  f with growing independence, measure and mark out to the nearest cm and millimetre;  g cut, shape and score materials with some degree of accuracy;  h assemble, join and combine material and components with some degree of accuracy;  i demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product;  j join textiles with an appropriate sewing technique;  k begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.  **Evaluate Children can:**  a explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;  b explore what materials/ingredients products are made from and suggest reasons for this;  c consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product;  d evaluate their product against their original design criteria;  e evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world. |

Progression of Learning

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| ‘Link It’ | ‘Learn It’ | ‘Check It’ | ‘Show It’ | ‘Know It’ |
| Previous learning of pupils   * Knowledge of aeorplanes and space * Skills in designing and making | Activities provided during lesson  Resources  **PPTs**  **Pictures**  Activities to explore famous pioneers - The Wright brothers, Neil Armstrong.  Practice design make and evaluate.  Practice different making techniques techniques | Independent activities linked to lesson  Resources  **PPTs**  **Books**  **Pictures**  Explore work- can it be improved. | How will the pupils share knowledge during or end of lesson  **Explore and discuss photographs of lessons**  Share and compare work. | Retrieve or generalization of learning after lesson   * Discuss different pioneers * Use their knowledge of design make and evaluate to create other work. * Use modelling to create * Prepare and cook using a range of tools * Evaluate work of others |