**Department of Primary & Childhood Education**

| **Lesson plan** | | | |
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| **Date:** | **Class: Year 4** | **Subject/topic: D&T - Textiles** | **Time: 1:00-2:30pm** |
| **Prior knowledge:**  *how does this lesson fit in with a sequence of lessons-what components have previously been taught?*  This is the first in a series of lessons.  Product analysis of existing products in previous projects.  Designing using drawing and labelling.  Measuring, cutting and joining fabric using running stitch.  Evaluation of previous products using simple success criteria. | | | |
| **Outcomes:**  *what composite knowledge/ skills do you want children to achieve?*  Children will be able to research existing products and use their product analysis to then design a carrier belt to meet the needs of a specified user.  **Assessment:**  Through observation of children’s research and recording of essential design criteria.  Children will produce an annotated design of their intended product: clear labelling of types of stitch, materials, purpose of each component, finishing details such as decoration or embellishment. | | | |
| **Learning objectives:**  *Substantive & disciplinary knowledge*  1. To research existing products and gather information about their intended user’s needs and wants.  2. To describe how their product works and develop a design criteria.  3. To generate realistic ideas considering the availability of resources and time. | | | |
| **Key vocabulary:**  Iterative process Template  Design Pattern pieces  Research Back stitch  User Embellishment  Purpose Seam  Product Prototype  Carrier belt | | **Resources:**  Selection of money belts  Tool belts  Carrier belts  Rucksacks  Essential items to carry around: water bottle, mobile phone, pencil case, note-pad, tissues  Poster illustrating the iterative design cycle | |
| **Predicted misconceptions:**  Children may think their carrier belt can carry more weight than it is intended for. | | **Risk assessment:**  Expectations for children moving around their table group needs to be explained: Push chairs under tables when standing up,  If tool belts contain tools, demonstrate and monitor safe handling of these. | |

| **SEQUENCE OF TEACHING & LEARNING** | | | | |
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| **Timing:**  *consider pace of lesson.* | **Role of the teacher & support staff:**  *e.g. key questions, retrieval of prior learning, modelling and explanations, checking understanding, consider cognitive overload, effective use of additional adults, behaviour for learning.* | **Children’s steps in learning:**  *what will the children be doing? Learn, practise and apply component steps.* | **Adaptive teaching:**  *consider adaptive strategies to support all pupils (including stretch and challenge & SEND), consider resources.* | **Checking what children know, understand and can do:**  *Key questions inc. hinge and retrieval/recall, assessment of outcomes.* |
| 15 mins | Provide the context for the design brief.  A child in the class has broken their leg and needs to be on crutches for some time.  The child will need to carry some essential items around with them during the day – show tissues, pencil case, water bottle, purse etc.  We are going to design and make a carrier belt for the child so they have their hands free for using the crutches.  State expectations for behaviour for learning. Quiet discussion with a partner and everyone in each group must take turns to look at each example provided. | Children will discuss with a partner how they can help this child in the day-to-day life at school.  Look at a range of provided money belts, tool carrying belts, aprons, rucksacks and evaluate their suitability.  What are the pros and cons of each?  For example, large pockets might not be suitable for small items such as pencils or loose coins. | Support:  TA to scaffold discussion with CS and GF.  Key question: What will X need to carry around with him?  Can you carry the items discussed without using your hands? How? Consider a carrier belt with just one pouch or pocket.  Extend: Consider a pocket to accommodate an item of a specific size or shape for example a water bottle. | Question the children: Can you explain the purpose of the carrier belt?  Why is it important that the belt ties securely? |
| 10  mins | Retrieval: Revisit previous sewing activity – running stitch when making a felt puppet.  What do the children recall about this? Did they encounter any problems (threading needles, tying knots in thread etc.)  Show a carrier belt and highlight the seam.  Show two straps which are joined to the main carrier belt and the number of pockets sewn onto the front of the belt.  What sort of fabric is used in the carrier belts? Strong enough to maintain a shape but flexible enough to sew through.  Reiterate subject specific vocabulary – fabric is a material used to make bags. It is made from woven threads. Other materials may include plastic. | Look at the stitching on the commercially produced carrier belts. What do you notice compared to your stitching on the felt puppets? Hopefully they will say that the stitches are closer together and the seam is stronger.  Children examine the fabric and discuss its suitability.  Would another fabric or material such as plastic be suitable? | TA to work with CS and GF to maintain their focus and promote sharing of items to investigate. | Question children about the type of stitching – why do we need to make sure there are no gaps in the seams?  What fabrics would not be suitable?  What other fabrics/materials would be suitable? |
| 5 mins | Having looked at some examples of existing products, draw children together as a class and refer to the design process and cycle.  Why do we need to look at existing products? | Children think of some specific questions or actions for their intended user, such as measuring the straps to ensure they will go around the child’s waist and still have sufficient strap to tie securely.  What items will they need to carry? |  | Why is research so important?  How could we find out more about our intended user? (child with broken leg) |
| 30 mins | Having clarified the purpose of the product and the intended user, children are now going to design their carrier belts.  Draw up a list of criteria together  What features will the belt have?  How many pockets?  What materials will be used? Teacher to show children the resources available to them.  What tools will be needed? | On A4 paper, children to draw an annotated sketch of the completed belt.  Label: Stitching, straps, pockets and purpose of each section.  Indicate the fabric to be used and any decorative features | TA with CS and GF. Question children to ensure they are clear about the purpose of the product and can explain how it will work.  Challenge: Ensure the specified item pocket, for example a water bottle, is in proportion to the overall design. | Observation of designs and formative questioning.  EG, Why have you included a tall thin pocket here?  Have you thought about the strength of the straps?  Are the straps long enough? |
| 20 mins | In pairs, children will peer assess their designs using the success criteria below:  What are the pockets for?  Will the fabric be strong enough?  Will you be able to sew through it?  How do you know the belt will be the right size for the intended user?  How will you finish/decorate it?  What are you pleased about – done well?  What do you think you can improve or change? | Children will carry out their peer assessment.  Children will be able to explain what their next steps will be ( to cut the pieces of fabric/material and join them)  They should be able to explain the steps in a logical order. | TA to prompt CS and GF if necessary. | Observation of peer assessment.  Discuss strengths and areas to improve |
| 5 mins | Explain that in the next lesson, we will be making a prototype based on their initial designs.  Explain what a prototype is and why designers use them. |  |  | Check children have understood the stages covered today – product analysis and research, design of a specific product with a specific purpose for a specific user.  Check children are aware of the role of prototypes in designing and making. |

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| **EVALUATION** |
| **Evaluation of pupils’ learning:**  **Next steps:**  *e.g. how to address misconceptions, providing increased challenge or support, use of different resources or modelling techniques.* |