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| **Easter diorama box project** | | | |
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| A graphics project that makes an Easter box diorama | | | |
| **Subject(s):** Design & Technology, Mathematics  **Approx time:** 50 - 80 minutes |  | | **Key words / Topics:**   * Diorama * Net * Template * Fold |
| **Stay safe**  Whether you are a scientist researching a new medicine or an engineer solving climate change, safety always comes first. An adult must always be around and supervising when doing this activity. You are responsible for:    • ensuring that any equipment used for this activity is in good working condition  • behaving sensibly and following any safety instructions so as not to hurt or injure yourself or others    Please note that in the absence of any negligence or other breach of duty by us, this activity is carried out at your own risk. It is important to take extra care at the stages marked with this symbol: ⚠ | | | |
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| **Suggested Learning Outcomes** |  | |  |
| * To know how nets are used to make Easter boxes. * To be able fold and glue parts together to make an Easter diorama box. | | | |
| **Introduction** |  | |  |
| This is one of a series of resources designed to allow learners to use Easter themes to develop their knowledge and skills in Design & Technology and Mathematics. This resource focusses on the making of Easter boxes using folded card. Nets are used for the box and egg designs. Nets are important as they allow 3D objects to made when folded. | | | |
| **Purpose of this activity**  In this activity learners will use net templates to make card parts to allow them to assemble an Easter box.  This activity could be used as a main lesson activity, to teach learners how to use nets to make useable objects.  It could also be used as one of several activities within a wider scheme of learning focussing on the use of maths to understand the use of nets. Alternatively, it can be used as a part of a wider group of resources that use the Easter theme to build knowledge and skills in D&T. | | | |
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| **Activity** |  | | **Teacher notes** |
| **1. Introduction (5-10 mins)**  Teacher to explain that learners are going to work with net templates to make an Easter box.  Teacher to hand out equipment needed for the task to learners and activity handouts 1 and 2.  **2. Making the Easter box (40-60 minutes)**  Teacher to demonstrate the steps shown in the teacher presentation and listed below:   * Step 1 – Safely cut out the box net then score and fold the dotted lines. Glue the tabs and make the box. * Step 2 – Safely cut out the lid and fold in half. Safely cut out the egg shaped viewing hole. * Step 3 – Safely cut the tabs on the solid lines then score and fold the dotted lines. Glue the tabs to make the lid. Test the lid fits the box correctly. * Step 4 – Safely cut out the Easter box parts and score and fold the dotted lines. Glue the eggs, bunny, and chick to the stands. * Step 5 – Create the Easter scene in the box gluing the parts into place. Add the lid to finish the box.   Optional Extension: Activity sheet 3, Steps 6-10   * Step 6 – Safely cut out the egg base net then score and fold the dotted lines. Glue the inner tabs and make the egg base. * Step 7 - Safely cut out the egg top net then score and fold the dotted lines. Glue the smaller tabs and make the egg top. * Step 8 – Glue the side tabs and join the egg top together. Glue the tabs on the top cover then close. * Step 9 – The egg parts may be kept separate or joined together as required. * Step 10 – Create the Easter scene using the egg.   **3. Plenary (5-10 minutes)**  Peer review of selected completed dioramas. What are their good features? What went well during the making? How could they be improved. |  | | This activity could be carried out individually or in pairs.  Step 5 – Learners may place the parts where they wish.  Steps 6 -10 may be used as an extension task as the egg shaped net is more complex to assemble.  Learners could decorate the Easter box and parts or create their own diorama if time allows. |
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| **Differentiation** |  | |  |
| **Basic** |  | | **Extension** |
| Provide learners with pre-cut net templates. |  | | Learners to create and add their own diorama to the box.  Learners to make the egg on activity handout sheet 3, steps 6-10. |
| **Resources** |  | | **Required files** icon-docicon-pdficon-ppt |
| * Projector/whiteboard * Scissors * Glue sticks * Card * Rulers |  | | icon-ppt Easter Box Nets Teacher Presentation  icon-pdf Easter Box Nets Activity Handout sheets 1-3. |
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| **Additional websites** |  | |  |
| * **BBC Bitesize** – What are nets? - <https://www.bbc.co.uk/bitesize/topics/zt7xk2p/articles/z247tv4> | | | |
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| **Related activities (to build a full lesson)** |  | |  |
| **Starters** (Options)   * Discuss how maths techniques can be used to make nets of 3D objects. Watch BBC Bitesize video about nets.   **Main**   * ACTIVITY: Making an Easter box | | **Extension** (Options)   * Learners to create and add their own diorama to the box. * Learners to make the egg on activity handout sheet 3, steps 6-10.   **Plenary**   * Peer review, identifying good features and opportunities for improvement. | |
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| **The Engineering Context** film |
| Understanding how nets are used is considered in the making of products and is an important part of the new GCSE courses in Design and Technology and Engineering.  Engineers are required to use mathematics knowledge and skills regularly as part of their everyday job. It is therefore essential that they are able to use nets to allow them to make scale models of buildings and other structures. |

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| **Curriculum links** | |
| **England: National Curriculum**   * Design & Technology   KS3 2a, 2b, 3c | **Northern Ireland Curriculum**  Technology & Design   * KS3 Knowledge, understanding and skills: Manufacturing – selecting and using materials fit for purpose; safe use of a range of tools and processes appropriate to materials, demonstrating accuracy and quality of outcome. |
| **Scotland: Curriculum for Excellence**  Technologies   * TCH 3-10a, TCH 4-09a | **Wales: National Curriculum**  Design and Technology   * KS3 Skills: Making 1, 2, 3, 4 |
| **GCSE D&T**  AQA D&T   * 3.1.6.1, 3.2.2, 3.2.4, 3.2.5, 3.2.8, 3.3.9   Edexcel D&T   * 1.9, 1.1.7, 2.7.4, 3.2.1, 3.2.2, 3.6.3, 3.7.2, 3.7.3   Eduqas D&T   * 2.1 Core: 8 * 2.2 Core: 1, 2, 4   OCR D&T  5.1a, 5.4, 7.2, 7.5 | **GCSE Engineering**  AQA Engineering  3.4.2, 3.6 |
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| **Assessment opportunities** | | |
| * Regular questioning throughout the activity, formal teacher assessment of completed work, peer review of the Easter boxes produced. | | |
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