|  |  |  |
| --- | --- | --- |
| **Make papyrus** | | |
|  |  |  |
| Making ‘papyrus’ from paper | | |
| **Subject(s):** Design and Technology, Art, History  **Approx time:** 1 hour (excluding soaking and drying time) |  | **Key words / Topics:**   * Papyrus * Hieroglyphics * Pharaoh * Writing |
| 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: ⚠ | | |
| **Suggested Learning Outcomes** |  |  |
| * To know what Papyrus is and to be able to make a version of it * To know what Hieroglyphics are and to use them | | |
| **Introduction** |  |  |
| This is one of a set of resources designed to allow learners to use practical methods to support the delivery of key topics within design & technology, history, and art. This resource is based on Ancient Egyptian use of Papyrus, an early type of paper made from crushed reeds..  This activity involves making simulated ‘papyrus’ from paper and its manufacture. It should be noted that time is needed for the papyrus to soak up the sugar water and to dry out fully (overnight ideally). | | |
| **Purpose of this activity**  In this activity learners will discover the one method of making papyrus and how it was made in Ancient Egyptian times. They will know how to create the paper using a weaving technique, using a natural glue similar to that created by the reeds.  This activity could be used as a main lesson activity, to teach learners about the works of the ancient Egyptians contributing to learning in D&T, Art and History or as a precursor to investigating how paper is made in D&T. It could also be used in conjunction with the other activities in this theme, ‘Write in hieroglyphics’, to write authentic hieroglyphics, and ‘Count using hieroglyphics’. | | |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Activity** |  | **Teacher notes** |
| **Introduction (5-10 minutes)**  Teacher to introduce the activity, explaining why papyrus was important, how it was made and for what it was used.  **Making Papyrus (40-60 minutes plus soaking and drying time)**  Teacher to demonstrate the steps shown in the teacher presentation and listed below:   * Step 1 – Cut the white paper into 20 strips, each about 1½ cm wide, evenly and straight as possible ⚠ * Step 2 – lay out first 10 vertically and fasten top to table with a piece of masking tape. * Step 3 – Weave the remaining 10 pieces through the original 10. Once complete tape the other edges. * Step 4 - Mix the sugar and water in a bowl or tray until the sugar has dissolved. Place the weaving into the water/sugar mix. Leave for 2 hours so that the paper absorbs some of the sugar water. * Step 5 – Carefully remove the weaving from the bowl/tray and put on the wax paper/foil. Sandwich the weaving between two sheets of wax paper/foil and, using a rolling pin, press out excess water and flatten the weaving. Allow to dry overnight. * Step 6 - Remove weaving from wax paper/foil and cut off any excess from the sides. ⚠   Learners to complete each step to conduct the activity for themselves. The teacher presentation could be left on the whiteboard as a supporting guide as they do this. |  | This can be a messy activity and a suitable area may need to be set up for the use of water, sugar and paper.  Step 3 – the masking tape round the edges will hold the papyrus together when removing from the work surface.  Steps 4 and 5 - An alternative method of producing the papyrus is instead of using the sugar water solution, glue sticks could be used to stick the edges of the strips together. This will give the same effect and will be much quicker, however the principle of using sugar is to replicate the effect of sugary sap of the papyrus reeds originally used by the Egyptians.  Step 5 - a drying rack or another suitable method of leaving to dry (similar to drying painting after use) could be used. |

|  |  |  |
| --- | --- | --- |
| **Differentiation** |  |  |
| **Basic** |  | **Extension** |
| * Provide learners with pre-cut strips of paper |  | * Write friends a message on the papyrus – this could even be done using hieroglyphics!. |
|  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Resources** |  | | **Required files** icon-docicon-pdficon-ppt |
| Per learner:  1 sheet of A3 paper (or 2 of A4)  4 strips of masking tape  1 Cup of sugar  2 Cups of water  Scissors  Tape  Large bowl  Rolling pin  Aluminium foil or wax paper |  | | icon-ppt Make papyrus presentation |
| **Additional websites** |  | |  |
| * Video showing **how to make papyrus from brown paper bags**: <https://www.youtube.com/watch?v=ApQfEBLdI08> * <https://en.wikipedia.org/wiki/Papyrus> * **World history encyclopaedia – Ancient Egyptian Science & Technology**: An explanation of the scientific and technological achievements of the ancient Egyptians. <https://www.worldhistory.org/article/967/ancient-egyptian-science--technology/> * National Geographic website with **facts about hieroglyphics**: <https://www.natgeokids.com/uk/discover/history/egypt/hieroglyphics-uncovered/> | | | |
|  |  | |  |
| **Related activities (to build a full lesson)** |  | |  |
| **Starters** (Options) Ask learners to list all the different methods they can think of to send written information to someone else – i.e., carvings on rock, painted signs, texts, emojis, codes/symbols, flags. | | **Extension** (Options)   * Write friends a message on the papyrus – this could even be done using hieroglyphics!   **Plenary**   * Learners to evaluate their finished papyrus – how easy is it to use? How is it different to modern paper? | |
|  |  | |  |

|  |
| --- |
| **The Engineering Context** film |
| Apart from a writing material, ancient Egyptians employed papyrus in the construction of other [artefacts](https://en.wikipedia.org/wiki/Artifact_(archaeology)), such as [reed boats](https://en.wikipedia.org/wiki/Reed_boats), [mats](https://en.wikipedia.org/wiki/Mat), [rope](https://en.wikipedia.org/wiki/Rope), [sandals](https://en.wikipedia.org/wiki/Sandals), and [baskets](https://en.wikipedia.org/wiki/Basket). Modern paper uses fibres from another type of plant to make paper – wood. |

|  |  |  |
| --- | --- | --- |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Curriculum links** | | |
| **England: National Curriculum**  Design and Technology KS2   * select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately   History KS2   * the legacy of Greek or Roman culture (art, architecture or literature) on later periods in British history, including the present day | | **Northern Ireland Curriculum**  KS2 – Art and Design   * Respond to the world around them * Develop and use their imagination |
| **Scotland: Curriculum for Excellence**   * Presenting using visual concepts   EXA 2-03a   * Accuracy of representation   EXA 3-04a | | **Wales: National Curriculum**   * Design and Technology KS2   Learners should be made aware of human achievements and the big ideas that have shaped the world. |
|  |  | |

|  |  |  |
| --- | --- | --- |
| **Assessment opportunities** | | |
| * Formative assessment of the finished papyrus. | | |
|  |  |  |