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| **Wonderful Weaving** |
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| Using wool to make a woven product |
| **Subject(s):** Design & Technology**Approx time:** 60 - 100 minutes |  | **Key words / Topics:** * Ramadan
* fibres
* threads
* ‘under and over’ method
* warp
* weft
* weaving
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| **Suggested Learning Outcomes**  |  |  |
| * To understand what is meant by weaving
* To be able to use the ‘under and over’ method to create a piece of weaving
* To be able to work safely within a textiles manufacturing environment
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| **Introduction** |  |  |
| This is one of a set of resources designed to allow learners to use seasonal themes to support the delivery of key topics within design & technology, maths and science. This resource is based on the Islamic period of Ramadan, which is a holy month of fasting, reflection and prayer for Muslims. |
| **Purpose of this activity**In this activity learners will use the theme of Ramadan to create a piece of weaving. There is a strong tradition of weaving and in particular carpet making in Islamic cultureThis activity could be used as a main lesson activity to teach about the skills and techniques associated with making textile products using weaving. It could also be used as part of a wider scheme of learning focussing on manufacturing processes, tools and equipment used within textiles. |
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| **Activity** |  | **Teacher notes** |
| **Introduction (10-20 minutes)**Teacher to explain that learners are going to make a piece of weaving.Teacher to introduce and hand out resources required for the task to learners.**Producing the weaving (50-80 minutes)**Teacher to demonstrate the steps shown in the presentation and listed below:* Step 1 - Measure and mark out slits for warp threads on the shortest edges of cardboard, 1 cm apart. Cut slits 1 cm deep.
* Step 2 - Wrap the wool around alternate slits. Stick the ends with masking tape.
* Step 3 - Thread blunt needle with wool.

Leave tail when begin weaving - *‘*Under and Over’.* Step 4 - Change colour when wool runs out. Leave tail when changing colour.
* Step 5 - Continue weaving until approximately 3 cm from the bottom.
* Step 6 - Thread the tails into the looped ends of the weft.
* Step 7 - The weaving is complete.
* Step 8 - Turn the card over and remove tape. Cut warp across the middle.
* Step 9 - Turn the loom over to the front. Pull 2 adjacent warp threads from the slits and knot together. Repeat with each pair of warp yarns.
* Step 10 - Remove the weave from the loom.
* Step 11 - Weaving can be displayed as a wall hanging. Use loom to create display point.

Learners to complete each step for themselves. The teacher presentation could be left on the whiteboard as a supporting guide as they do this. |  | **Resources and equipment**Learners could learn about recycling and re-using materials through using cardboard from postal packaging, paper boxes etc.A5 sized piece of card can be used, approximately 15 x 21cm – larger sizes can be used for complexity or ease of use.Masking tape will be needed to secure warp threads. Warp threads are the threads that run along the length of a woven material. The threads that run in-and-out across the material are called weft threads.Instead of using new wool, learners can use fabric strips, ribbons or other suitable materials.**Producing the weaving**In step 1, ensure there are an even number of warp threads. Warp threads can be spaced up to 1.5 cm apart to help with dexterity of required.In step 2 use alternating colours for the warp threads – this assists with under and over. Numbering the warp strings can help, 1212.For step 3, if using numbered warp threads, remind them ‘12121212’. Possible extension: design a pattern that can be woven in, for example equal sized stripes or a shape.During step 4, try and get all tails on the same side. This makes the neatening process easier at the end.Check the tension of the weaving when completing step 5, otherwise the material with narrow as in the example.Step 7 – The completed weaving can be displayed on the loom or be cut from the loom and used as a wall hanging. Continue with Step 8 onwards if removing from the loom. |
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| **Differentiation** |  |  |
| **Basic** |  | **Extension** |
| * Lengths of wool and looms could be cut be pre-cut in advance.
* Shorter lengths of card could be used for the ‘loom’.
* Distance between warp threads can be increased to 1.5 cm to make weaving easier.
 |  | * Design a pattern that can be woven in, for example equal sized stripes or shapes.
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| **Resources** |  | **Required files** icon-docicon-pdficon-ppt |
| * Cardboard
* Wool
* Large eye blunt needle
* Masking tape
 |  | icon-ppt Teacher presentation – Weaving |
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| **Additional websites** |  |  |
| * **BBC Bitesize – What is Ramadan:** https://www.bbc.co.uk/bitesize/topics/zpdtsbk/articles/zjc2bdm
* **BBC Bitesize – Weaving and knitting:** Revision notes explaining what is meant by woven fabric. <https://www.bbc.co.uk/bitesize/guides/z6t26yc/revision/2>
* **YouTube – Weaving for beginners:** Video demonstrating basic weaving for learners new to this process. <https://www.youtube.com/watch?v=hCy3Crq7fYs>
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| **Related activities (to build a full lesson)** |  |  |
| **Starters** (Options) * Discuss Ramadan and introduce with **BBC Bitesize** – What is Ramadan; https://www.bbc.co.uk/bitesize/topics/zpdtsbk/articles/zjc2bdm
* List and discuss different products that are made using weaving, such as rugs, carpets and wall hangings.
* Discuss the importance of following safety procedures when using textiles-based tools and equipment.
 | **Extension** (Options)* Design a pattern that can be woven into the weaving, for example equal sized stripes or shapes.

**Plenary*** Quick fire quiz recapping the basic steps used to produce the weaving and how to use the ‘under and over’ method.
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| **The Engineering Context** film |
| * Weaving is used to create the majority of fabrics used in everyday life, from clothing to wall hangings to rugs and carpets. An understanding of this process is therefore essential when designing textile-based products.
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| **Curriculum links** |
| **England: National Curriculum**Design & Technology * KS3 2a, b

**GCSE D&T**AQA D&T* 3.1.6.1, 3.2.5, 3.2.8, 3.3.6, 3.3.11

Edexcel D&T* 1.11.3, 6.2.3, 6.7.1

Eduqas D&T* Core: 12
* Textiles: 6

OCR D&T* 5.1e, 7.2a
 | **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.
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| **Scotland: Curriculum for Excellence**Technologies* TCH 3-04b
 | **Wales: National Curriculum** Design and Technology* KS3 Skills: Making 1, 2
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| **Assessment opportunities** |
| * Informal teacher assessment of practical skills through observation of learners.
* Formal teacher assessment of completed weavings.
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