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| **Design a kit for a national sports team** | | | |
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| Consider smart or modern textile technologies when making a kit | | | |
| **Subject(s):** Design and Technology  **Approx time:** 50-80 minutes |  | | **Key words / topics:**   * Colour * Countries * Flags * Football kits * Smart and modern textiles * World Cup |
| **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 be able to design a football kit for a World Cup national team. * To apply understanding of smart and modern textiles in their designs. | | | |
| **Introduction** |  | |  |
| This is one of a series of resources designed to allow learners to use the theme of the men’s football World Cup to develop their knowledge and skills in Design and Technology. This resource focusses on designing a kit for a national team that will be playing at the 2022 men’s football World Cup.  32 countries will be represented at the 2022 Qatar World Cup. Can you design a modern, stylish kit for them to wear? | | | |
| **Purpose of this activity**  In this activity learners will use the theme of the World Cup to design a kit for a participating national team. They will consider the colours used in different national flags and existing kits. They will then produce their own design for a national team of their choice, which makes use of smart or modern textiles technologies.  This could be used as a one-off main lesson activity to develop designing skills in Design and Technology and Textiles. Alternatively, it could be used as a part of a wider scheme of work to develop designing and graphics skills in Design and Technology. | | | |
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| **Activity** |  | | **Teacher notes** |
| **Introduction and starter (5-10 minutes)**  Teacher to introduce the activity and the theme of the 2022 men’s World Cup.  Teacher to discuss Qatar as the host nation, its climate and location, and ask learners to locate where it is on the map. Discuss the countries at the World Cup and identify their flag designs and national colours.  **Smart and modern textiles (5-10 minutes)**  Teacher to explain different examples of smart and modern textiles and their purpose/function e.g. microencapsulation and Rhovyl. Discuss how these could be used in a sports kit design.  **Design brief (5-10 minutes)**  Teacher to introduce and discuss the design brief – to design a new kit for one of the teams involved in the 2022 World Cup. This must use the team’s national colours and include smart or modern textiles.  **Designing the kits (30-40 minutes)**  Learners to choose a World Cup team to design the kit for. Learners to use the template, and follow the steps and examples given on the presentation, to produce their own designs and a stand to display them:   * Step 1 – Design the kit * Step 2 – Label the main features of the kit * Step 3 – Cut out the kit and make the stand ⚠   **Evaluating the kit (5-10 minutes)**  Learners to use the questions given on the presentation to evaluate their kit. |  | | **Smart textiles information**  Microencapsulation - this involves encapsulating liquid or solid substances in tiny thin-walled bubbles. These gradually release active agents when rubbed, which rupture the thin-walled membrane. This can cover body odours in sports clothing.  Rhovyl - ‘Wicks’ quickly moving sweat to the fabric’s outer surface. An antibacterial material that has antibacterial agents integrated into the fibre itself. This prevents the formation of bacteria and does not wash out.  If available, handling samples of smart textiles could be used.  **Design brief**  Questions to ask learners:  Which country will you design the kit for?  What colours do you need to use?  Which smart textiles are you going to use?  **Producing designs on the template**  The template can be resized for additional needs on to A3 or bigger and printed on card or paper. When each student has coloured/designed their ‘kit’ this sheet can be photocopied/photographed before they cut it out, so they can make notes/annotations on the design about why they have picked the colour/textiles etc. |
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| **Differentiation** |  | |  |
| **Basic** |  | | **Extension** |
| * Produce cut outs of existing football kits that can be used to create a final design. * Answer only selected questions on the evaluation slide in the presentation. |  | | * Produce designs for additional team clothing, such as an ‘away kit’ and a team/supporter’s hoodie. * Produce designs for a range of additional World Cup related products. E.g. Winners medal and official match balls. |
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| **Resources** |  | | **Required files** icon-docicon-pdficon-ppt |
| * Paper * Card * Pens, pencils and coloured pencils/pens * Scissors |  | | icon-ppt Design a kit for a national sports team – presentation  icon-pdf Design a kit for a national sports team – handout  icon-pdf Design a kit for a national sports team – extension handout |
| **Additional websites** |  | |  |
| * **FIFA – World cup 2022** Official website for the FIFA men’s world cup 2022 in Qatar. <https://www.fifa.com/tournaments/mens/worldcup/qatar2022> * **Wikipedia –** **Qatar** Information about the host country for the world cup. <https://en.wikipedia.org/wiki/Qatar> * **YouTube - Official world cup soundtrack** <https://www.youtube.com/watch?v=vyDjFVZgJoo> * **Footy headlines – World Cup kits overview** <https://www.footyheadlines.com/2021/11/2022-world-cup-kits-overview.html> * **World cup soundtrack** <https://www.youtube.com/watch?v=vyDjFVZgJoo> | | | |
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| **Related activities (to build a full lesson)** |  | |  |
| **Starters** (Options)   * Discuss Qatar as the host nation, its climate and location, and ask learners to locate where it is on the map. * Discuss the number of countries at the World Cup and identify their flag designs and national colours. | | **Plenary**   * Produce a class display of the kit designs. * Self/peer assess designs produced. | |
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| **The Engineering Context** film |
| * The football world cup will require engineers of a wide range of disciplines to make sure that it runs smoothly and effectively. From structural engineers in charge of stadium design to textile engineers producing the players’ kits, the importance of engineers is huge. |

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| **Curriculum links** | |
| **England: National Curriculum**  Design & Technology   * KS2 1a, 1b. | **Northern Ireland Curriculum**  Personal development and mutual understanding   * Mutual Understanding in the Local and Wider Community: being aware of their own cultural heritage, its traditions and celebrations; recognising and valuing the culture and traditions of one other group who shares their community. |
| **Scotland: Curriculum for Excellence**  Craft, design, engineering and graphics   * TCH 2-09a. * TCH 2-11a. | **Wales: National Curriculum**  D&T   * KS2 Skills: Designing 1, 2, 5, 6. |

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| **Assessment opportunities** | | |
| * Formal and informal teacher assessment of finished designs. * Self/peer assessment of finished designs. | | |
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