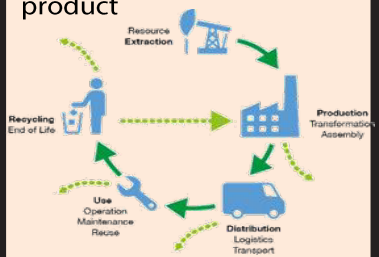
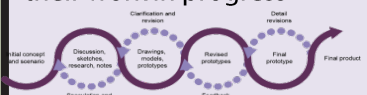




## YEAR 11 CYCLE 3 DESIGN TECHNOLOGY

|  |   |   |   |  |  |
|--|---|---|---|--|--|
| <b>Year 11 D&amp;T Cycle 3</b>   | <b>Automation-</b> process to improve efficiency, reliability & speed of tasks previously carried out by humans   | <b>Innovation-</b> creation of a new product, aiming to improve efficiency, effectiveness or competitive advantage  | <b>Digitisation-</b> automation of existing manual/paper-based processes from an analogue to digital format   | <b>Longevity-</b> How long a product is used for without failing. How long a product remains in the market place   | <b>Ethics-</b> Well-founded standards of right & wrong that prescribe what designers ought to do in terms of rights, obligations, benefits to society & fairness |
| <b>Key Vocabulary</b>  |   |   |   |  |  |
| <b>Week One</b>  | <b>Week Two</b>   | <b>Week Three</b>   | <b>Week Four</b>  | <b>Week Five</b>   |  |
| <p><b>1. Automation:</b> Robotic manufacturing processes that offer significantly greater consistency, accuracy, reliability and productivity than human workers</p> <p><b>2. Cooperatives</b> organisations or businesses that are owned and run by its members</p> <p><b>3. Fairtrade</b> ensures better prices, decent working conditions and fair terms of trade for farmers and workers in less economically developed countries</p>                                  | <p><b>1. Non finite resources</b> are unlikely to be exhausted, or those that are replaced faster than we can use them</p> <p><b>2. Continuous improvement</b> is an approach that seeks to continually improve and develop products, services and procedures for the better</p> <p><b>3. Inclusive design</b> Designs which are developed to be easily used by the elderly or disabled people</p>  | <p><b>1. Technology push -</b> Research and development in new <b>technology</b>, drives the development of new products.</p> <p><b>2. Market pull -</b> Consumer driven pressure causes manufacturers to continuously develop new products or add functionality to existing products</p> <p><b>3. Cobots-</b> Collaborative robots allow greater human-robot interaction. They work with humans rather than for them to significantly improve productivity</p> | <p><b>Life cycle assessment (LCA)</b><br/>Evaluates the environmental impact of a product</p>  <p><b>Planned obsolescence</b><br/>Products that are only built to last a short amount of time</p>  | <p><b>1. Computer Aided Design (CAD)</b><br/>CAD software is used to create precision 2D or 3D drawings, models or technical illustrations</p> <p><b>2. Computer Aided Manufacture</b><br/>CAM uses Computer Numerical Control (CNC) and CAD files to generate 3D tool paths for the machinery to follow<br/>CAM machinery includes laser cutters, embroidery machines, CNC milling machines, routers and lathes</p>                                     |  |
| <b>Week Six</b>  | <b>Week Seven</b>   | <b>Week Eight</b>   | <b>Week Nine</b>  | <b>Week Ten</b>  |  |
| <p><b>Flexible manufacturing systems (FMS)</b> involves an assembly of automated machines commonly used on short-run batch production lines where the products frequently change</p> <p><b>Lean Manufacturing</b> aims to manufacture products just before they are required to eliminate areas of waste.</p> <p><b>Just In Time Production (JIT).</b> Items are created as they are demanded. No surplus stock of raw material, component or finished parts are kept.</p> | <p><b>User centred design</b><br/>The focus of user-centred design is the client or user group.</p> <p><b>Systems approach to design</b> represents a sequence of actions, often based on an input-process-output model</p> <p><b>Iterative design</b> cycle enables the designer to refine their work in progress</p>  <p><b>Collaborative Design</b> is working with others to greatly increase creativity</p> | <p><b>Design movement</b> is a style in art or design that upholds a specific philosophy or ideal and is followed and promoted by a group of artists for a defined period of time.</p> <p><b>Iconic Design</b> is a design that is 'ground breaking' and one that sets new standards in its field. It is a design that becomes a bench mark for other similar products.</p>   | <p>Designing and design decisions:</p> <ol style="list-style-type: none"> <li><b>Ergonomics</b> is the process of designing or arranging products to fit the people who use them.</li> <li><b>Anthropometrics</b> is the measurement of body sizes at rest and when using products and furniture</li> <li><b>Prototype:</b> is a first or preliminary version of a product which can be modified further</li> </ol> | <p>Designing and design decisions:</p> <ol style="list-style-type: none"> <li><b>Quality control (QC)</b><br/>Process to check quality against a set standard or specification: the quality of the product at different stages of production.</li> <li><b>Quality assurance (QA)</b><br/>Does <b>not</b> check the quality of the final product but the quality of all systems on the production line, staff training and quality monitoring.</li> </ol> |  |

YEAR 11 CYCLE 3 SPORT STUDIES







Sport Studies Cycle 3 – R184: Contemporary Issues in Sport (EXAM)

| Week 1  | Week 2   | Week 3   | Week 4   | Week 5  |
|---|--|--|--|---|
| <p><b>User Groups:</b> The different groups of people who participate in sport and physical activity.</p> <p><b>Which user groups do I need to know?</b></p> <ol style="list-style-type: none"> <li>1. Gender.</li> <li>2. People from different ethnic groups.</li> <li>3. Retired people/people over 60.</li> <li>4. Families with children.</li> <li>5. Carers.</li> <li>6. People with family commitments.</li> <li>7. Young children.</li> <li>8. Teenagers.</li> <li>9. People with disabilities.</li> <li>10. Parents (singles or couples).</li> <li>11. People who work.</li> <li>12. Unemployed/economically disadvantaged people.</li> </ol> <p><b>Barriers:</b> Something that makes participation difficult and reduces access.</p> <p><b>Revision Tip: Remember barriers are a 'lack off... something!'</b></p> <p>Lack off...</p> <ol style="list-style-type: none"> <li>1. Disposable income.</li> <li>2. Transport.</li> <li>3. Positive sporting role models.</li> <li>4. Family support or role models.</li> <li>5. Appropriate activity provision.</li> <li>6. Awareness of activities.</li> <li>7. Media coverage (gender and ethnicity).</li> <li>8. Employment and unemployment.</li> <li>9. Family commitments.</li> </ol> | <p><b>Solutions to Barriers:</b></p> <ol style="list-style-type: none"> <li>1. Increase availability and appropriateness of transport.</li> <li>2. Improve access to facilities e.g. disability ramps.</li> <li>3. Appropriate pricing e.g. discounts or subsidised prices.</li> <li>4. Increase provision of activities.</li> <li>5. Have appropriate timing of sessions.</li> <li>6. Use targeted promotion e.g. social media.</li> <li>7. Use role models to promote.</li> <li>8. Use initiatives e.g. female only gyms.</li> </ol> <p><b>Factors Affecting Popularity of Sports:</b></p> <p><b>Revision Tip: Remember 'REPS &amp; MAPS'.</b></p> <p>Role models<br/>Environment/climate<br/>Participation<br/>Spectatorship</p> <p>Media coverage<br/>Acceptability<br/>Provision<br/>Success</p> <p><b>Emerging Sports:</b> New sports growing in popularity. For example, footgolf, walking football, pickleball and American Football.</p> <p><b>Traditional Sports:</b> Established sports that have a history of popularity. For example, football, cricket, netball and rugby.</p> | <p><b>Sporting Values:</b><br/>National pride.<br/>Inclusion.<br/>Citizenship.<br/>Excellence.</p> <p>Fair play.<br/>Team spirit.<br/>Tolerance and respect.</p> <p><b>Revision Tip: Remember 'NICE FTT'.</b></p> <p><b>The Olympic Rings:</b> Five interlocking rings to represent unity and peace between all continents.</p>  <p><b>Olympic &amp; Paralympic Values:</b></p> <p><b>Revision Tip: Remember 'FRE &amp; DICE'.</b></p> <p><b>Olympic:</b><br/>Friendship.<br/>Respect.<br/>Excellence.</p> <p><b>Paralympics:</b><br/>Determination.<br/>Inclusion.<br/>Courage.<br/>Equality.</p> | <p><b>Initiative:</b> An idea to overcome a barrier.</p> <p><b>Campaign:</b> Use of media and advertising to address a barrier of problem.</p> <p><b>Examples of Initiatives &amp; Values Promoted:</b></p> <ul style="list-style-type: none"> <li>▪ This Girl Can – Equality &amp; inclusion.</li> <li>▪ Kick it Out – Inclusion &amp; tolerance and respect.</li> <li>▪ Rainbow Laces – Equality &amp; tolerance and respect.</li> </ul> <p><b>Etiquette &amp; Sporting Behaviour:</b><br/><b>Etiquette:</b> Unwritten rules followed in sport.</p> <p><b>Example:</b> Being quite during another country's national anthem.</p> <p><b>Sportsmanship:</b> Playing to the rules and spirit of the game.</p> <p><b>Example:</b> Shaking hands after a game of hockey or rugby.</p> <p><b>Gamesmanship:</b> Bending the rules to gain an unfair advantage.</p> <p><b>Example:</b> Time wasting or slowing the play down in football.</p> <p><b>Video:</b> Why is sporting behaviour important for players and spectators?</p>  | <p><b>Performance Enhancing Drugs (PEDs):</b> Drugs which increase performance in sport and physical activity.</p> <p><b>Why take PEDs?</b></p> <ol style="list-style-type: none"> <li>1. Faster recovery.</li> <li>2. Increase performance.</li> <li>3. Pressure to win.</li> <li>4. Perception everyone else is taking them.</li> </ol> <p><b>Why not take PEDs?</b></p> <ol style="list-style-type: none"> <li>1. Damage to your reputation if caught.</li> <li>2. It is cheating – against the rules.</li> <li>3. Provides an unfair advantage.</li> <li>4. Long term health damage.</li> </ol> <p><b>World Anti-Doping Agency (WADA):</b> Organisation responsible for drug testing and monitoring in sport.</p> <p><b>Whereabouts Rule:</b> Athletes must inform WADA of their location, changes to training schedule for one hour every day so they can be randomly drug tested.</p> <p><b>Drugs Testing Samples:</b> Hair, nail, urine or blood.</p> <p><b>Sanctions:</b> Bans, fines, suspensions, removal of medals.</p> <p><b>Educational Initiatives:</b></p> <ol style="list-style-type: none"> <li>1. 100% Me</li> <li>2. Clean Sport Week</li> <li>3. Future Performers</li> </ol> |

**Throughout Cycle:** R185: Topic Area 1 - Continue to add to your logbooks for your practical sports (date, position, league/comp, details of what you did).

YEAR 11 CYCLE 3 SPORT STUDIES

Sport Studies Cycle 3 – R184: Contemporary Issues in Sport (EXAM)

| Week 6  | Week 7  | Week 8   | Week 9  | Week 10  |
|---|---|--|---|--|
| <p><b>Types of Major Sporting Events:</b><br/> <b>Regular:</b> Happens at set intervals e.g. once a year but in different locations.<br/> <b>Example:</b> UEFA Champions League Final.<br/> <b>One-off:</b> Once in a generation events.<br/> <b>Example:</b> The Olympics or FIFA World Cup.<br/> <b>Regular &amp; Recurring:</b> Happens in the same place every year.<br/> <b>Example:</b> Wimbledon (Tennis) or the British Grand Prix held at Silverstone.</p>  <p><b>Nature of Major Sporting Events:</b><br/>           They are international:<br/>           1. Involves participants and spectators from different countries.<br/>           2. Attracts media attention from across the world.</p>  | <p><b>Advantages &amp; Disadvantages of Hosting an Event:</b><br/> <b>Before: Advantages</b><br/>           1. Bidding for the event draws attention to your country.<br/>           2. Infrastructure and transport can be improved.<br/>           3. More investment from sponsors.<br/>           4. Creates jobs.<br/> <b>Before: Disadvantages</b><br/>           1. Bidding is expensive and you might not win.<br/>           2. Infrastructure is expensive to build.<br/>           3. Country's residents may protest about the event locally and nationally.<br/>           4. New jobs are temporary.<br/> <b>During: Advantages</b><br/>           1. Increased direct and indirect tourism.<br/>           2. Increased national status, if run well (shop window effect).<br/>           3. Increased coverage of sport.<br/> <b>Before: Disadvantages</b><br/>           1. Increased risk of terrorism and crime.<br/>           2. Benefits may be local and not impact whole country.<br/>           3. Increased traffic.<br/> <b>After: Advantages</b><br/>           1. New sporting facilities.<br/>           2. Increased participation.<br/>           3. Increased international status.<br/> <b>Before: Disadvantages</b><br/>           1. Facilities can be abandoned.<br/>           2. National status can decrease.<br/>           3. May lose money.</p> | <p><b>National Governing Body (NGB):</b><br/>           The organisation responsible for organising a sport in a country.</p> <p><b>Examples of NGBs:</b><br/>           1. The FA – Football.<br/>           2. The RFU – Rugby.<br/>           3. Badminton England.<br/>           4. Basketball England.<br/>           5. Volleyball England.<br/>           6. British Canoeing.</p> <p><b>What is the role of an NGB?</b><br/>           1. Promote participation.<br/>           2. Develop and train coaches and referees.<br/>           3. Organise tournaments and competitions.<br/>           4. Create rules and apply disciplinary procedures.<br/>           5. Ensure safety within their sport.<br/>           6. Provide support, insurance and guidance to members.<br/>           7. Lobby for funding.</p> <p><b>Video:</b> The role of national governing bodies in sport.</p>  | <p><b>Role of Technology in Sport:</b><br/>           1. To enhance performance.<br/>           2. To increase the safety of participants.<br/>           3. To increase fair play and the accuracy of officiating.<br/>           4. To enhance spectatorship.</p>  <p><b>Examples:</b><br/>           1. GPS tracking to monitor how are players work.<br/>           2. Use of PolarTec and Gore-Tex in skiing clothing to keep you warm and dry.<br/>           3. Use of a Video Assistant Referee (VAR) in football.<br/>           4. Use of a Television Match Official (TMO) in rugby.<br/>           5. Use of goal-line technology in football.<br/>           6. Use of Hawk-Eye in tennis.<br/>           7. Different viewing options of Sky Sports to watch as a fan.</p>   | <p><b>Positive Effects of Technology:</b><br/>           1. Enhanced performance.<br/>           2. Lower risk of injury.<br/>           3. Quicker recover from injury.<br/>           4. More accurate decision making from officials.<br/>           5. Provides technical analysis of performance.</p> <p><b>Negative Effects of Technology:</b><br/>           1. Unequal access to the same quality of technology.<br/>           2. Increased cost of technological advances.<br/>           3. Availability and affordability of technology is not equal.<br/>           4. Can reduce the flow of the game.<br/>           5. Officials' decisions can be influenced by technology.</p> <p><b>Positive Effects of Technology for Spectators:</b><br/>           1. Increased understanding of what is happening.<br/>           2. Can stay up to date with 24/7 coverage.<br/>           3. Makes sport more fair.<br/>           4. Can watch from more angles.</p> <p><b>Negative Effects of Technology for Spectators:</b><br/>           1. Can slow the speed of the game down.<br/>           2. Technology can make the game less exciting.<br/>           3. Belief that high levels of performance are caused by technology not talent.<br/>           4. Changes the nature of sport, refereeing decisions should not be made from a screen.</p> |

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