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| **Indicative scheme of work – GSK** | | |
| **Week** | **Learning outcome/s** | **Content summary and resources available to support learning** |
| **1** | Project Launch  An investigation into auto injection medical devices | Opportunity to bring employers in the classroom through launch event.   * Understand GSK and their products * Demonstration of self-injection device currently produced by GSK   **Activity**   * Identify STEM Job roles within GSK. * Students to identify their roles within the project. * Internet Research into auto injection medical devices (Secondary Research)   + What can it be used to treat?   + Who will it appeal to?   + What is available out there? Any auto inject?   + How does it work?   + What has GSK got at the moment? How does it work?   + Are they user friendly? Are customer scared of needles * All must be written as a report. |
| 2 | Technical Focus: Design  Outer Design  GSK want to know:   * What would the patient want the device to look like? * How long would a patient want to hold an auto-injector pen against themselves for to receive their medicine? * How could you design the device so that a weaker patient could handle and use it? * Some people are scared of syringe, the look could make a difference * *Creative thinking techniques* * *Discussion around customers and their needs* * *Work individually to create ideas* | **Individual Activity**   1. Sketches 2. Hand drawings 3. Write- up based on individual ideas.   **Group Activity**   1. Come together to share ideas. 2. Pick best ones(mix and match) 3. Keep all sketches in folder. 4. Write up that answer all GSK questions.   Extension: CAD design |
| 3. | Technical focus (Engineering)  Inner Design (Mechanical)   * Dispensing * Syringe * Button to press or pull | **Individual Activity**   1. Sketches 2. Hand drawings 3. Write- up based on individual ideas.   **Group Activity**   1. Come together to share ideas. 2. Pick best ones(mix and match) 3. Keep all sketches in folder. 4. Write up that answer all GSK questions.   Extension: CAD design (Solid Works) |
| 4 | Technical focus: Geography and Manufacturing  Environmental Impact and Material.  GSK want to know:   * How could you reduce the impact to the environment from waste (i.e. could it be re-usable)? * Cost of all material needed to make a product. * Possibly order the material | **Individual Activity**   * Research materials that are reusable or recyclable * *Cost benefit analysis.* * *Create a list of materials to order* * *Write up on findings* |
| 5 | Technical Focus: IT  Digital Instruction  GSK want to know:   * What instructions would the patient need?   Instructions are very important when administering drugs, since everyone now have a Smartphone or Tablet devices.  Remember GSK is a global company. | **Activity**   * Design a digital instruction to administer the auto- inject Medical device. E.g. App, QR code that takes you to a video of administering it. Voice activation to read out text etc. * Can be used all over the world without language barrier. |
| 6 | Technical Focus: Business and Engineering  Marketing, Advertising and Standard  GSK want to know:   * How could you make sure that every medical device is made to the same standard? | **Activity**  Strategies to maintain same standard  Carry out Primary research on your design from teachers and fellow students  Create 2 different form of promotion for the auto inject   * Remember to state your unique selling point |
| 7 | Mid Review/Reflection/ | **Possible mentor site visit**  **Activity**  Review your content/Documentation  Catch up on missed work  Group Report writing ( everything you have done so far) |
| 8 | Technical Focus: Engineering/IT  Prototype | * A presentation * A poster * A project report * Digital instructions for the patient or for our HCPs (Healthcare professionals). This could be an app or a digital leaflet.   **Extra stretch**   * Video demo / 3D image / prototype of the medical device   **Top tips for presentation**   * Stick to the time limit you are given * Get your ideas across clearly and concisely. Speak clearly and don’t rush * Be creative, what will make you stand out, is your presentation interesting? Would using technology improve your presentation? Is your presentation slick? * If you use notes, try not to read from a page, use them as prompts to help you. Try and remember what you want to say * Practice and plan what, and who is going to say what and when * Put yourself in the position of an employer watching your presentation. Have you done your research? Is what you are presenting accurate and true? |
| 9 | Technical Focus: Engineering/IT  Prototype | * A presentation * A poster * A project report * Digital instructions for the patient or for our HCPs (Healthcare professionals). This could be an app or a digital leaflet.   **Extra stretch**   * Video demo / 3D image / prototype of the medical device   **Top tips for presentation**   * Stick to the time limit you are given * Get your ideas across clearly and concisely. Speak clearly and don’t rush * Be creative, what will make you stand out, is your presentation interesting? Would using technology improve your presentation? Is your presentation slick? * If you use notes, try not to read from a page, use them as prompts to help you. Try and remember what you want to say * Practice and plan what, and who is going to say what and when * Put yourself in the position of an employer watching your presentation. Have you done your research? Is what you are presenting accurate and true? |
| 10 | Final project development/ Finishing touch on documentation and prototype | Students work collaboratively to summarise information in resources and develop presentation skills. |
| 11 | Project ‘Rehearsal’ Presentation | * Practice presentation, ensuring all team members have a speaking role. |
| 12 | |  | | --- | | Project Exhibition | |  |