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| **Subject group and discipline:** | Design (design, digital design, product design) | **Unit duration:** | about 20 hours |
| **Unit title:** | Design improving medical experiences | | |

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| **Global context and specific exploration:** | Identities and relationships: health and wellbeing |
| **Key concept:** | Communication |
| **Related concept:** | Ergonomics |
| **Statement of inquiry:** | Empathy and understanding are essential if designers want to improve user experience. |
| **Inquiry questions such as these should be developed by teachers and students:** | |
| **Factual:** | What is the experience of visiting a hospital like?  Who do designers need to communicate with to understand the needs of a patient?  How is the design experience different for solutions for young clients than adult clients? |
| **Conceptual:** | How can design be improved through empathy for the user?  How can designers interpret the real needs of users? |
| **Debatable**: | Can designers improve health? |

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| **Summative assessment** | | |
| The student produces an ePortfolio that follows the design cycle to develop a solution (or range of solutions), which improve the physical and/or psychological experience of their audience/client.  Students **must**target one of the following audiences/clients:   * Children who areregular visitors to hospital * Teenagers with long-term illnesses * Young people with sudden illness or injury   **Suggested**solutions **may** be, but are not limited to, the following ideas:   * app to track health, medication or symptoms * character, animation or game to explain sickness and medical treatment to a child * character clothes for doctors, nurses or patients * mural, scenic divider or design for ceiling tiles that can entertain patients in a hospital * sensoryblanket or toy for a visually impaired child * story book, interactive guide or app to explain life-changing conditions to young children * toys for waiting rooms or consultation rooms * visually appealing specified diet snack boxes | | |
| **Objectives:** | All strands of all objectives (A, B, C and D) | |
| **Learning objectives / Assessment criteria** | | **Evidence of summative assessment tasks for eAssessment:** |
| **Criterion A**   1. explain and justify the need for a solution to a problem for a specified client/target audience 2. identify and prioritize primary and secondary research needed to develop a solution to the problem 3. analyse a range of existing products that inspire a solution to the problem 4. develop a detailed design brief, which summarizes the analysis of relevant research. | | Within **Criterion A** the student **selects** a target audience/client **from the options above** and demonstrates through submitted evidence:   * the need for a solution * identification and prioritisation of appropriate primary and secondary research * existing products related to their intended solution * a design brief for the intended solution which reflects the analysis of their research with reference to the global context and statement of inquiry. |
| **Criterion B**   1. develop design specifications, which clearly states the success criteria for the design of a solution 2. develop a range of feasible design ideas, which can be correctly interpreted by others 3. present the chosen design and justify its selection 4. develop accurate and detailed planning drawings/diagrams and outline the requirements for the creation of the chosen solution. | | Within **Criterion B** the student submits:   * a detailed design specification for the intended solution with success criteria * a range of ideas or designs that consider the specifications. Examples of planning these solutions may include annotated sketches, storyboards, accurate drawings, diagrams, aesthetic considerations * the selected final design along with justifications * accurate and detailed drawings, diagrams and requirements. |
| **Criterion C**   1. construct a logical plan, which describes the efficient use of time and resources, sufficient for peers to be able to follow to create the solution 2. demonstrate excellent technical skills when making the solution 3. follow the plan to create the solution, which functions as intended 4. fully justify changes made to the chosen design and plan when making the solution | | Within **Criterion C** the student submits:   * step by step instructions, including time and resources, that could be followed by peers to accurately create the solution * evidence of excellent technical skills appropriate to MYP year 5 students * evidence of following the plan to create, refine and present a final product * justification of any changes made.   *Evidence of technical skills and the development of the solution will be one or more of the following:*   * *audio* * *annotated photographs (including screenshots)* * *video (including screencasts)* * *written.*   ***Please note URLs must not be submitted.*** |
| **Criterion D**   1. design detailed and relevant testing methods, which generate data, to measure the success of the solution 2. critically evaluate the success of the solution against the design specification 3. explain how the solution could be improved 4. explain the impact of the solution on the client/target audience. | | Within **Criterion D** the student submits evidence of:   * authentic tests (user trial/observation,field/performance, expert appraisal) to generate data to measure success of the solution * critical evaluation using data from the authentic tests against the success criteria within the design specification * a detailed account of the possible improvements to the solution including reasons or causes * a detailed account the impact of the solution for the selected client/target audience including reasons or causes. |

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| **Resources**  The following resources based on the global context are suggestions or starting points which may be used during the teaching of the unit. The list is optional and for information. It is neither prescribed nor exhaustive. Schools should always satisfy themselves that the content of any suggested resource is suitable for their own context.  **Ted Talk**  Paul Bennett – Design is in the Details: <https://www.ted.com/talks/paul_bennett_finds_design_in_the_details/up-next>  **Apps**  <https://itunes.apple.com/gb/app/tap-n-see-now/id491247565?mt=8>  <https://itunes.apple.com/gb/app/toca-doctor/id424209938?mt=8>  **Food**  <http://www.autism.org.uk/about/health/eating.aspx>  <https://dustbowl.wordpress.com/2009/06/29/pop-up-cookie-packaging/>  <https://www.boredpanda.com/creative-bento-food-art-samantha-lee/>  **Adaptive clothes**  [How adaptive clothing empowers people with disabilities](https://www.ted.com/talks/mindy_scheier_how_adaptive_clothing_empowers_people_with_disabilities)  <http://www.sewmuchcomfort.org/pdfs/Adaptive%20Clothing%20We%20Provide.pdf>  <http://www.silverts.com/catalog/fall-winter-2017-us/#p=16>    **Blankets**  <http://www.pathstoliteracy.org/blog/tactile-baby-blankets>    **Pediatricpractitioner and patient clothes**  <http://www.uniformadvantage.com/pages/dpt/pediatric-prints.asp>  <https://www.littlethings.com/designers-transform-hospital-gowns/>  **Hospital furniture, ceilings and murals**  <https://www.healingceilings.com>  <https://i.pinimg.com/originals/99/78/79/9978793a19a8f85563cfa7f639059a32.jpg>  <http://www.distrohome.com/wp-content/uploads/2011/07/Beautiful-Stunning-and-Awesome-Ceiling-Murals-with-Gorgeous-Blue-Sky-Motif.jpg>  <https://playscapes.com>  <https://www.kidsrooms.co.uk/children/waiting-rooms.html>  <http://www.motionmagix.com/>  <http://medicalfuturist.com/peek-into-the-future-of-hospitals/>  **Play therapy, toys and accessories**  <http://www.walesonline.co.uk/news/health/nurse-launches-book-help-parents-9201781>  https://www.toy-design.com/design-toys-play-therapy-hospital-preparation/  <http://blog.sensoryedge.com/waiting-room-toys-and-furniture-solutions-2/>  <https://www.theverge.com/ces/2018/1/11/16874724/aflac-special-duck-robot-toy-children-cancer-therapy-ces-2018>  http://www.yankodesign.com/2010/06/30/braille-ball-for-all-to-learn/  https://www.usatoday.com/story/news/local/2015/07/16/lily-pad-project-nick-konkler/30232677/  **Guides**  <http://www.novonordisk.co.uk/content/dam/UK/AFFILIATE/www-novonordisk-co-uk/Home/Health%20Care%20Professionals/Documents/NN_Diabetes_made_simple_A5_v18_WEB.pdf>  <https://www.diabetes.org.uk/Guide-to-diabetes/Kids>  <https://itunes.apple.com/ca/app/kids-guide-to-cancer/id1024920168?mt=8>  **Some examples ofpossible age appropriate development software. Please note this list is not extensive and for advice only:**  Free to download programming language: <https://www.python.org/>  App creator: <http://appinventor.mit.edu/explore/>  App creator: <https://www.touchdevelop.com/>  Adobe Flash Builder: <http://www.adobe.com/devnet/flash-builder/articles/hello-world.html>  <http://www.adobe.com/devnet/flex/testdrive.html>  Adobe Photoshop: <https://edex.adobe.com/Dashboard/>  Adobe Illustrator: <https://helpx.adobe.com/illustrator/view-all-tutorials.html>  Adobe In Design: <https://helpx.adobe.com/indesign/how-to/add-work-with-graphics.html?playlist=/ccx/v1/collection/product/indesign/segment/designer/explevel/beginner/applaunch/ccl-get-started-1/collection.ccx.js?ref=helpx.adobe.com>  Adobe Animate: <http://www.adobe.com/la/products/animate.html> |