**Primary Initial Teacher Education: Curriculum Plan**

**Subject / Strand: Design and Technology: Undergraduate Programmes**

Curriculum Intent: The Design and Technology curriculum will enable trainees to plan and deliver high quality learning opportunities. They will be equipped with the knowledge and understanding to develop a range of skills, learning behaviours and attitudes to support progress across the curriculum [as well as the technical knowledge and understanding associated with the subject].

Themes such as social justice, human rights and environmental issues are addressed in seminars at L6.

Cultural capital will be promoted through the teaching of all strands of design and technology, for example architecture in ‘structures’, international cuisine in ‘cooking and nutrition’.

| **Phase** | **Learn that…** | **Learn how to…** |
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| **Phase 1** | **Trainees will know:** | **Trainees will be able to:** |
| * **The principles of high quality design and technology teaching: The iterative process of researching, designing, making and evaluating products. LT1.3, LT1.6** * That children need to investigate and evaluate existing products before designing their own. LT2.2 * That products are designed using several strategies such as exploded diagrams, annotated drawings. LT2.9 * A mock-up is a model which looks like the real thing but does not show its functionality. LT4.3 * That products are made using a variety of materials and tools including construction materials and textiles. * That products need to be evaluated for their effectiveness using simple criteria with the initial brief in mind. * Questioning is an essential tool to determine prior knowledge. LT4.6 * Feedback should support pupils to monitor and regulate their own learning and that mistakes are part of the learning process.LT6.6 * Basic health and safety rules. For example, children need to be taught how use simple tools such as scissors and sewing needles safely. | **Plan a design and technology project over a short series of lessons. LH2.1**  Provide opportunities for children to research and evaluate existing products. LH2.3  Provide opportunities for children to learn how things work by deconstructing products. LH2.3  Provide appropriate and meaningful scenarios for children to design a simple product in accordance with a design brief.  Identify basic skills required for specific making tasks and teach these skills including rules for health and safety. LH3.1  Provide appropriate tools and resources for children to select from to make their product.  Support children in evaluating the effectiveness of their finished products against a given criteria. LH 6.5 |
| * The Purpose of Study and Aims of the National Curriculum for Design and Technology. | * Manage risk and behaviour in practical design and technology lessons. |
| * The role of government approved organisations in supporting the teaching and learning of design and technology (Design and Technology Association, National Curriculum Expert Group for Design and Technology) |  |
| **Trainees will understand:** |  |
| * The iterative nature of design and technology. |
| * That we live in an increasingly and rapidly advancing technological world. |
| * That products are designed and made with a specific need/problem in mind and have a specific audience. |
| * The transferable skills, learning behaviours and attitudes developed through high quality D&T provision.   That design and technology can be incorporated into a thematic approach.  That skills from other curriculum areas are used in design and technology.  The progression in design from EYFS to Y6, for example early designing may be through making before moving on to more formal recording of plans.  The progression of skills and knowledge within a given strand of design and technology from EYFS to Y6.   * The advantages of children working collaboratively.LT4.9 |
| * Specific understanding of how simple mechanisms work, eg, hinge mechanisms, levers, linkages and wheels and axles.LT3.2 |
| **Composite knowledge / understanding / skills**  *By the end of this phase trainees will* ***know:***   * That every teacher can develop children’s creative, technical and practical expertise to perform everyday tasks confidently and specific tasks to meet specific needs. LH1.1   *By the end of this phase trainees will* ***understand:***   * The iterative nature of the design and technology. * The importance of effective behaviour management and how to manage risks to health and safety.   *By the end of this phase trainees will* ***be able to:***   * Plan and teach a high quality design and technology lesson. LH1.2 | |
| **Research, literature and resources supporting the curriculum design of Phase 1.** | **The Really Useful Primary Design and Technology Book, Elizabeth Flinn and Sarah Patel, 2016**  **Teaching D&T: Food in Primary Schools, D.A.T.A 2021**  **D.A.T.A resources available from [www.data.org.uk](http://www.data.org.uk)**  **National Curriculum, 2014** | |
|  | **Assessment pertaining to Phase 1.**  Baseline assessment will take place in session 1 and quick quizzes in each session at the end.  Session 6 will be a more structured self-marked summative assessment. |  |
| **Phase 2** | **Trainees will know:** | **Trainees will be able to:** |
| * The end of stage requirements of design and technology at Key Stage 1 and Key Stage 2 and that cooking and nutrition has its own separate strand. LT3.1 * LT3.5 | * Use the iterative cycle to design make and evaluate KS1 and KS2 appropriate products. |
| * A prototype is a working model of a product. LT4.4 | * Use a mood board to begin the design process for a given brief. |
|  | * Use more complex construction skills and use tools and equipment safely. LH3.3 |
| * How to adapt lessons to ensure that children with SEND can experience success LH5.1 | * Plan a unit of work in design and technology. |
| * **Trainees will understand:** | * Teach a unit of work in design and technology over a number of lessons. LH3.4 |
| That design and technology can be the lead subject in a cross-curricular approach.be incorporated in a thematic approach. Phase 1? |  |
| * The progression of skills and knowledge from EYFS to Y6 in all strands of design and technology. |
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| **Composite knowledge / understanding / skills**  *By the end of this phase trainees will* ***know:***   * The different strands of design and technology at Key Stages 1 and 2   *By the end of this phase trainees will* ***understand:***   * The different teaching and learning approaches that can be used in design and technology.   *By the end of this phase trainees will* ***be able to:***   * Plan and teach a complete project of work in design and technology |
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| **Research, literature and resources supporting the curriculum design of phase 2.** | **.D.A.T.A. resources available at [www.data.org.uk](http://www.data.org.uk)**  **Progression Framework, DATA**  **The Really Useful Primary Design and Technology Book, Elizabeth Flinn and Sarah Patel, 2016** |  |
|  | **Assessment pertaining to Phase 2.**  **Session quizzes at end of each session – retrieval activities.**  **Written assignment on aspect of Foundation Subjects.** |  |
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| **Phase 3** | **Trainees will know:**  That within each strand of the design and technology curriculum, there is specific technical knowledge. | **Trainees will be able to:** |
| * The components and materials required for each strand. | * Plan, teach and assess a unit of work in design and technology over a number of lessons and will be able to record children’s progress in a manageable way. LH3.3 LT6.5 |
|  | * Sustainably design and manufacture a product to a specific brief. |
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| * **Trainees will understand:** |  |
| That designers come from a diverse range of backgrounds and the impact their products have on society. |  |
| * How social justice can be positively and negatively impacted by manufacturing. |
| * How to adapt learning in design and technology. LT5.1 * LT5.3 * LT5.5 |
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| **Composite knowledge / understanding / skills**  *By the end of this phase trainees will* ***know:***   * Subject specific content for individual strands of design and technology at KS1 and KS2   *By the end of this phase trainees will* ***understand:***   * How to adapt learning for children with specific needs.   *By the end of this phase trainees will* ***be able to:***   * Plan, teach and assess a unit of work in design and technology over a number of lessons. |
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| **Research, literature and resources supporting the curriculum design of Phase 3.** | **D.A.T.A resources from [www.data.org.uk](http://www.data.org.uk)**  Human before the Garment: Bangladesh Tragedy Revisited. Ethical Manufacturing or Lack Thereof in Garment Manufacturing Industry, Rodrigues G. and Khan Z, 2015  Progression Framework, DATA | |
|  | **Assessment pertaining to Phase 3.**  **Session quiz**  **Reflective journal/EPP** | |