# **Primary Initial Teacher Education: Curriculum Plan**

# **Subject: Design and Technology Postgraduate Programmes**

# **Links to Practical knowledge, Substantive/theory, Disciplinary**

**Curriculum Vision:**

Through our initial Teacher Education Curriculum, it is our intention that all Edge Hill Primary teacher trainees will:

* be able to plan and teach high quality design and technology lessons.
* gain knowledge and understanding to develop a range of skills, learning behaviours and attitudes to support progress across the curriculum.
* know that high quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.
* develop confidence and promote an enthusiasm for design and technology and believe all children can be successful in the subject regardless of social background or other circumstances and that this is our moral purpose as educators.

| **Phase 1** | | | | | | |
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| **University Based Learning** | | | | | | |
| **Learn That** | | | **Learn How** | | | |
| **Component Knowledge** | * There are principles of high quality design and technology teaching: The iterative process of researching, designing, making and evaluating products.   **LT 1.1**, **LT1.4, LT3.1** | | * Plan a design and technology project over a short series of lessons.   This will be consolidated whilst on professional practice.  **LH2.1, LH2.2, LH2.4, LH2.5, LH2.6, LH2.9 LH3.1, LH3.3, L3.4** | | Intent |
| • There are four aims of the National Curriculum for Design and Technology  **LT3.1** | | * Provide opportunities for children to research and evaluate existing products. This will be consolidated whilst on professional practice.   **LH2.4, LH3.14, LH3.10, LH3.4** | |  |
| * There are six key areas of study in the primary DT curriculum   **LT3.1, LT3.2, LT3.5** | | * Provide opportunities for children to learn how things work by deconstructing products. This will be consolidated whilst on professional practice.   **LH4.3, LH4.7, LH4.10, LH4.12, LH4.14, LH4.15** | |  |
| * children need to investigate and evaluate existing products before designing their own.   **LT3.2, LT3.6, LT3.7, LT4.6** | | * Provide appropriate and meaningful scenarios for children to design a simple product in accordance with a design brief. This will be consolidated whilst on professional practice.   **LH.14, LH4.15** | |  |
| * That products are designed using several strategies such as exploded diagrams, annotated drawings.   **LT4.2, LT4.4, LT4.8** | | * Identify basic skills required for specific making tasks and teach these skills including rules for health and safety.   This will be consolidated whilst on professional practice.  **LH4.2, LH4.5** | |  |
| * A mock-up is a model which looks like the real thing but does not show its functionality.   **LT3.2. LT3.3, LT3.4, LT3.5, LT3.6** | | * Provide appropriate tools and resources for children to select from to make their product.   This will be consolidated whilst on professional practice.  **LH3.3, LH3.5, LH3.10** | |  |
| * That products are made using a variety of materials and tools including construction materials and textiles.   **LT3.2. LT3.3, LT3.4, LT3.5, LT3.6** | | * Support children in evaluating the effectiveness of their finished products against a given criteria.   This should be consolidated whilst on professional practice.  **LH6.1, LH6.6, LH6.3, LH6.12** | |  |
| * That products need to be evaluated for their effectiveness using simple criteria with the initial brief in mind.   **LT6.4, LT6.5, LT6.6** | | * Manage risk and behaviour in practical design and technology lessons.   This will be consolidated whilst on professional practice.  **LH7.1, LH7.3, LH7.4, LH7.5, LH7.6, LH7.8, LH7.12, LH7.16** | |  |
|  | * That there is subject specific vocabulary in Design and Technology which children need to use effectively and fluently.   **LH3.20** | | * Plan for additional adults effectively.   This should be consolidated on professional practice.  **LH5.7, LH8.5, LH8.11, LH8.12, LH8.15** | |  |
|  | * Basic health and safety rules. For example, children need to be taught how use simple tools such as scissors and kitchen knives safely.   **LT 5.1, LT5.3, LT5.5, LT5. LT7.2, LT7.4** | | * How to identify the component knowledge required to achieve ambitious end goals from the NC in the Cooking and Nutrition strand.   **LH3.1, LH3.8** | |  |
|  | * The role of government approved organisations in supporting the teaching and learning of design and technology (Design and Technology Association, National Expert group for Design and Technology)   **LT8.3, LT8.7, LH8.3** | | * Plan a meal using sustainable and seasonal produce. **(sustainability)** | |  |
|  | * That we live in an increasingly and rapidly advancing technological world.   **LT1.1, LT1.4, LT1.6** | |  | |  |
|  | * That products are designed and made with a specific need/problem in mind and have a specific audience.   **LT2.1, LT3.1** | |  | |  |
|  | * The transferable skills, learning behaviours and attitudes developed through high quality D&T provision.   **LT7.1, LT7.2, LT7.3** | |  | |  |
|  | * That design and technology can be incorporated into a thematic approach.   **LT3.7** | |  | |  |
|  | * That skills from other curriculum areas are used in design and technology.   **LT3.7** | |  | |  |
|  | * The progression of skills and knowledge within a given strand of design and technology from EYFS to Y6.   **LT2.2, LT2.3, LT2.4, LT2.5, Lt2.6, LT2.7, LT2.8** | |  | |  |
|  | * Specific understanding of how simple mechanisms work, eg, hinge mechanisms, levers, linkages.   **LT3.2, LT3.3** | |  | |  |
|  | * The NC end points for the Cooking and Nutrition strand   **LH3.5, LH3.6, LH3.7, LH3.8** | |  | |  |
|  | * About food miles and seasonality. **(sustainability)** | |  | |  |
| **Assessment** | **Assessment** | | | |  |
| No formal assessment as this is a non-assessed module.   * All sessions begin with an informal retrieval activity. * All sessions provide opportunities for students to model teaching of specific skills and knowledge. * Students are to produce a lesson plan in their final session. | | | | Impact |
| **Composite Knowledge** | **Composite knowledge/understanding/skills** | | | |
| *By the end of this phase trainees will* ***know:*** | *By the end of this phase trainees will* ***understand:*** | | *By the end of this phase trainees will* ***be able to:*** |
| * That every teacher can develop children’s creative, technical and practical expertise to perform everyday tasks confidently and specific tasks to meet specific needs. * Key approaches and skills to teach simple mechanisms.   **LH3.14, LH3.8, LH3.20**   * Key approaches and skills to teach nutrition, where food comes from, seasonality and sustainable diets.   **LH3.14, LH3.8, LH3.20**   * Essential rules for health and safety**.**   **LH7.8, LH7.11** | * The iterative nature of the design and technology. * The importance of effective behaviour management and how to manage risks to health and safety.   **LH7.1, LH7.2, LH7.3, LH7.4, LH7.5, LH7.7, LH7.12** | | * Model effective practice in the teaching of simple mechanisms and food and nutrition.   **LH3.1, LH3.2, LH3.3, LH3.7**   * Confidently plan a Design and Technology lesson following the Iterative process.   **LH2.4, LH2.5, LH2.9** |
| **Research** | **KEY RESEARCH****That Trainees will know that informs teaching and learning in Design and Technology** | | | | |
| * **National Curriculum for Design and Technology 2014** * **Teaching Design and Technology – Food in Primary Schools from Food – a Fact of Life (DATA) Key research article.** * [**www.data.org.uk**](http://www.data.org.uk) * **The really useful primary design and technology book Elizabeth Flinn and Sarah Patel (2016)** * [**www.foodafactoflife.org.uk**](http://www.foodafactoflife.org.uk) * **Mastering Primary Design and technology book by Gill Hope** | | | | |

| **Phase 2** | | | | | | | | | |
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| **School Based Learning – Introduction/Developmental** | | | | **University Based Learning** | | | | | |
| **Learn That** | | **Learn How** | | **Learn That** | | | **Learn How** | | |
| **Component Knowledge** | • The iterative process required to teach a high quality design and technology lesson/short series of lessons within a school’s curriculum.  **LT3.2, LT3.3, LT3.5, LT3.1** | * To break down NC end points into component knowledge.   **LT3.3, LH2.8, LH4.1** | | **There is no further teaching of FS in phase 2** | |  | | Intent |
| * There is subject specific knowledge associated with design and technology which children need to be taught to use confidently.   **LH3.20, LH3.21** | * How to adapt learning for children with identified SEND   **LH5.1, LH5.2, LH5.3, LH5.7**  **LH5.8** | |  | |  | |
| * Collaborative learning and dialogue are effective approaches to problem solving in design and technology.   **LT4.7, LT4.9, LT4.12, LT4.13** | * Design a lesson linked to a theme.   **LH3.7, LH3.8** | |  | |  | |
| * The importance of questioning.   **LT4.6, LH4.15, LH4.16, LH6.4, LH6.6** | * Model basic health and safety rules regarding safe use of equipment/hygiene if appropriate.   **LH4.8LH4.2, LH4.7** | |  | |  | |
| * The importance of direct teaching.   **LH4.3** | * positive learning behaviours and attitudes in design and technology lessons if appropriate.   **LH7.1, LH7.3, LH7.4, LH7.5, LH7.6, LH7.8, LH7.12, LH7.16** | |  | |  | |
| * That first attempts in design and making may not be successful but pupils should be encouraged to evaluate these and refine as appropriate.   **LH1.3** | * Plan for additional adults.   **LH5.7, LH8.5, LH8.11, LH8.12, LH8.15** | |  | |  | |
| * Know about food miles and seasonality when planning meals.   (sustainability) | * Provide out of school experiences in design and technology such as cookery after school club. * **LH8.3, LH8.13** | |  | |  | |
| **Assessment** | **Assessment** | | | **Assessment** | | | | Impact |
| * Lesson observations by school-based mentor. * Students meet the subject knowledge requirements to proceed as set out in the Interim Placement Progress Report. | | |  | | | |
| **Composite Knowledge** | **Composite knowledge/understanding/skills** | | | | | | |
| *By the end of this phase trainees will* ***know:*** | | *By the end of this phase trainees will* ***understand:*** | | *By the end of this phase trainees will* ***be able to:*** | | |
| * The key components of a successful Design and Technology lesson. * The practical knowledge and associated skills to make a product.   **LT2.1. LT2.2, LT2.3, LT2.4, LT2.5**   * The relevant substantive knowledge to explain reasons for their choices**.**   **LH3.8. LH3.9** | | * How to adapt Design and Technology lessons to meet the needs of all pupils.   **LH5.1, LH5.2, LH5.3, LH5.7**  **LH5.8**   * That design and technology can be taught within a cross-curricular theme.   **LH3.7, LH3.8** | | * Confidently plan and teach a high quality Design and technology lesson.   **LH1.3**   * Reflect on their teaching and consider how they might improve their teaching in future.   **LH4.14, LH4.15** | | |
| **Research** | **KEY RESEARCH****That Trainees will know that informs teaching and learning in Art and Design** | | | | | | | |
| **• National Curriculum for Design and Technology 2014**  **• Teaching Design and Technology – Food in Primary Schools from Food – a Fact of Life (DATA) Key research article.**  **• www.data.org.uk**  **• The really useful primary design and technology book Elizabeth Flinn and Sarah Patel (2016)**   * **Mastering primary design and technology book by Gill Hope**   **• www.foodafactoflife.org.uk** | | | | | | | |

| **Phase 3** | | | | | | |
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| **School Based Learning – Consolidation** | | | | | | |
| **Learn That** | | | **Learn How** | | | |
| **Component Knowledge** | * Trainees need retrieval practice to commit knowledge to the long-term memory.   **LT2.7, LT2.8, LT2.9, LT2.11** | | * To revisit chunking when lesson planning a series of lessons. Worked examples.   **LH2.3, LH2.5, LH2.9** | | Intent |
| * Progress is knowing, remembering more and doing more.   **LT6.6, LH6.3** | | * Transfer/link learning from one subject to another.   **LT3.7** | |
| * The role and work of the Design and technology Association for supporting professional development/CPD.   **LT8.2, LH8.3, LH8.7** | | * To make judgements based over time (summative assessments) based on whether pupils are progressing through the intended curriculum and using the DATA 6 point assessment approach.   **LT6.6, LH6.3, LH6.12** | |
| **Assessment** | **Assessment** | | | | Impact |
| • Lesson observations by school-based mentor.  • Students meet the subject knowledge requirements to proceed as set out in the End of Placement Progress Report. | | | |
| **Composite Knowledge** | **Composite knowledge/understanding/skills** | | | |
| *By the end of this phase trainees will* ***know:*** | *By the end of this phase trainees will* ***understand:*** | | *By the end of this phase trainees will* ***be able to:*** |
| * How to plan, teach and assess a series of lessons in Design and Technology.   **LT3.3, LT3.5, LT4.1, LT6.1, LT6.3, LT6.4** | * The practical skills and knowledge and the disciplinary knowledge required for each strand of the design and technology curriculum.   **LH3.8. LH3.9** | | * Confidently plan, teach and assess a sequence of lessons in design and technology (adapting published schemes of work if necessary) demonstrating elements of good practice indicated in EHU ‘lesson observation prompts**.**   **LT3.5, LH3.3, LH4.1, LT6.1, LT6.3, LT6.4** |
| **Research** | **KEY RESEARCH****That Trainees will know that informs teaching and learning in Art and Design** | | | | |
| **•** National Curriculum for Design and Technology 2014  • Teaching Design and Technology – Food in Primary Schools from Food – a Fact of Life (DATA) Key research article.  • www.data.org.uk  • The really useful primary design and technology book Elizabeth Flinn and Sarah Patel (2016)  • www.foodafactoflife.org.uk | | | | |