**Primary Initial Teacher Education: Curriculum Plan**

**STRAND: Postgraduate Programmes Design and Technology**

***NB – this curriculum plan identifies when trainees will ‘meet’ content for the first time – the intention is that at each phase, university and school-based colleagues will support trainees in recalling, refining, applying and discussing content from the previous phases.***

**Curriculum Intent:**

*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** | **Learn that…** | **Learn how to…** |
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| **Phase 1****(University-led)** | **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. LT1.6, LT 1.3**
 |  **Plan a design and technology project over a short series of lessons. LH2.1** |
| * The four aims of the National Curriculum for design and technology.
 | * Provide opportunities for children to research and evaluate existing products LH2.3
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| * The six key areas of study in the primary DT curriculum
 | * Provide opportunities for children to learn how things work by deconstructing products. LH2.3
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| * That children need to investigate and evaluate existing products before designing their own. LT2.2
 | Provide appropriate and meaningful scenarios for children to design a simple product in accordance with a design brief. |
| * That products are designed using several strategies such as exploded diagrams, annotated drawings. LT2.9
 | Identify basic skills required for specific making tasks and teach these skills including rules for health and safety. LH3.1 |
| * A mock-up is a model which looks like the real thing but does not show its functionality. LT4.3
 | Provide appropriate tools and resources for children to select from to make their product. |
| * That products are made using a variety of materials and tools including construction materials and textiles.
 | * Support children in evaluating the effectiveness of their finished products against a given criteria LH6.5
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| * That products need to be evaluated for their effectiveness using simple criteria with the initial brief in mind
 | * Manage risk and behaviour in practical design and technology lessons.
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| * Basic health and safety rules. For example, children need to be taught how use simple tools such as scissors and kitchen knives safely.
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| * 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)
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| * .Questioning is an essential tool to determine prior knowledge. LT4.6
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| * That feedback should support pupils to monitor and regulate their own learning and mistakes are part of the learning process. LT6.6
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| **Trainees will understand:**  | **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 a high quality design and technology lesson/short series of lessons. LH1.2**
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| * The iterative nature of design and technology
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| * That we live in an increasingly and rapidly advancing technological world.
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| * That products are designed and made with a specific need/problem in mind and have a specific audience.
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| * The transferable skills, learning behaviours and attitudes developed through high quality D&T provision.
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| * That design and technology can be incorporated into a thematic approach
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| 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. |
| * Specific understanding of how simple mechanisms work, eg, hinge mechanisms, levers, linkages. LT3.2
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| **Literature and resources** | * The Really Useful Primary Design and Technology Book. (Flinn E & Patel S)
* National Curriculum For Design and Technology (DfE)
* Progression Framework in Design and Technology ([www.data.org.uk](http://www.data.org.uk))
* Food teaching in Primary Schools (Public Health England)
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| **Assessment pertaining to Phase 1** | * Baseline assessment will take place in session 1 and quick quizzes/retrieval activities in each session at the end.
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| **Phase 2****(School-led – Professional Practice 1)***\*Trainees will observe, discuss, apply and secure the knowledge, understanding and skills developed at Phase 1 and will add the following…* | **Trainees will know:**  | **Trainees will be able to:** |
| * The iterative process required to teach a high quality design and technology lesson/short series of lessons within a school’s curriculum. LT1.3 LT1.6
 | * Plan and teach a stand-alone or sequence of design and technology lessons if appropriate within a school’s/ classes planned curriculum or articulate where design and technology fits in the school’s curriculum LH1.1
 |
| * How to adapt learning for children with identified SEND LT5.1 LT5.2, LT5.3
 | * Model basic health and safety rules regarding safe use of equipment/hygiene if appropriate.
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| * How to promote a resilience for pupils irrespective of background and ability. LH1.3
 | * Promote positive learning behaviours and attitudes in design and technology lessons if appropriate.LH1.7
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| **Trainees will understand:**  | **Composite knowledge/understanding/skills***By the end of this phase trainees will* ***know:*** **How design and technology could/might be covered in a school’s whole curriculum plan***By the end of this phase trainees will* ***understand:*** **That design and technology can be taught within a cross-curricular theme.***By the end of this phase trainees will be* ***able to:*****Teach a stand-alone or sequence of design and technology lessons if appropriate within a school’s/ classes planned curriculum or articulate where design and technology fits in the school’s curriculum** |
| * Collaborative learning and dialogue are effective approaches to problem solving in design and technology.
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| * That design and technology has subject specific vocabulary which children should be taught. LT3.5
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| * 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
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| **Assessment pertaining to phase 2****Lesson observation or trainees evaluation of lesson to be discussed at weekly development meeting (school based mentor)** |
| **Phase 3****(University-led)***\*Trainees will review the knowledge, understanding and skills developed at Phases 1 and 2, and will add the following…* | **Trainees will know:**  | **Trainees will be able to:** |
| * How to adapt lessons to ensure that children with SEND can experience success LT5.1, LT5.2, LT5.3
 | * Plan, teach and assess a unit of work in design and technology over a number of lessons. LH4.1 LH2.4
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| * Where to locate 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 LT3.2
 | * Identify misconceptions and be able to provide appropriate strategies to overcome these. LH 2.5
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| **Trainees will understand:**  | **Composite knowledge/understanding/skills***By the end of this phase trainees will* ***know:*****A range of strategies to support the understanding of the iterative process involved in design and technology.***By the end of this phase trainees will* ***understand:*** **That learning how to cook is a crucial life skill.***By the end of this phase trainees will be* ***able to:*** **Plan, teach and assess high quality design and technology lessons and adapt learning to meet the needs of all pupils.** |
| * That design and technology can be the lead subject in a cross-curricular approach.
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| * The importance of promoting a healthy, balanced diet to children . LT1.1
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| * That learning how to cook is a crucial life skill which children need to feed themselves and others now and in later life.
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| * The importance of promoting seasonality and sustainability to children.
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| * The importance and significance of food in diverse cultures.
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| **Resources and literature.** | * Food and nutrition education opportunities within Australian primary schools (Love P et al)
* [www.data.org.uk](http://www.data.org.uk)
* Teaching D&T: Food in primary schools (DATA)
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| **Assessment pertaining to Phase 3** | * Lesson plan/unit demonstrating adaptive teaching and assessment opportunities.
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| **Phase 4** **(School-led – Professional Practice 2)***\*Trainees will observe, discuss, apply and secure the knowledge, understanding and skills developed at Phases 1, 2 and 3, and will add the following…* | **Trainees will know:**  | **Trainees will be able to:** |
| * How to plan, teach and assess a stand-alone or sequence of lessons developing skills and technical knowledge appropriate to the project. LT4.1, LT4.5, LT6.1, LT6.5
 | * **Plan, teach and assess high quality design and technology lessons/ series of lessons within a cross-curricular theme or stand-alone and record progress LH4.1 LH2.4,**
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| * How to deploy other adults to support children’s needs. LT8.5
 | * Assess children’s progress and record in a manageable way. LH6.4, LH6.5 LH6.9, LH6.10, LH6.12, LH6.22
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| * How to promote resilience and perseverance when solving technical problems considering the role of working memory, long-term memory and CLT. LT2.3, LT2.4, LT2.5
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| **Trainees will understand:** | **Composite knowledge/understanding/skills***By the end of this phase trainees will* ***know:*****How to plan, teach and assess lessons in design and technology taking into account prior learning and the needs of all children.***By the end of this phase trainees will* ***understand:*** **That pupils need to revisit key skills in design and technology and make links with other areas of the curriculum for example, electronics in science.***By the end of this phase trainees will be* ***able to:*** **Teach a sequence of design and technology lessons if appropriate within the school’s / classes planned curriculum or articulate where design and technology fits in the school’s curriculum and compare with other schools’ curricula.**  |
| * Spaced learning can benefit cognitive load, working memory and long-term memory. LT 2.7, LT2.8
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| * How key skills are revisited and progressed through the long term planning of a school.
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| **Assessment pertaining to Phase 4****Lesson plan/unit of work indicating Design and Technology within a thematic approach and observation or evaluation of lesson (school based mentor)** |
| **Phase 5****(University-led)***\*Trainees will review the knowledge, understanding and skills developed at Phases 1, 2, 3 and 4, and will add the following…* | **Trainees will know:**  | **Trainees will be able to:** |
| * About key events and individuals in design and technology that/who have shaped the world and how to teach these to pupils in an age-appropriate manner. LT3.2
 | * Provide opportunities for pupils to research key events and individuals in design and technology. LH3.2
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| * How to use relevant contexts (for example the local area and community) to provide opportunities for pupils to engage in product analysis and market research. LT3.1
 | * Promote cultural diversity through their knowledge of individuals from diverse backgrounds and their contribution to key designs and technology.
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|  | * Encourage pupils and provide cross-curricular links when researching key events and individuals (for example Isambard Kingdom Brunel and the Industrial Revolution/Victorian period of history) LH8.4
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| **Trainees will understand:** | **Composite knowledge/understanding/skills***By the end of this phase trainees will* ***know:*****How to plan and teach pupils using a range of strategies about key events and individuals in design and technology*.****By the end of this phase trainees will* ***understand:*** **That different communities and contexts will present differing needs and solutions.***By the end of this phase trainees will be* ***able to:***  **Provide opportunities for pupils to research key events and individuals in design and technology.** |
| * That communities and environments have different needs and problems to solve and pupils in those communities and environments need to design and make products which satisfy those needs.
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| **Assessment pertaining to phase 5****Directed task - tutor** |