The LJMU Mentor Guide to the curriculum in Phase 3
Secondary Design and Technology

The ITE Curriculum in Phase 3 further extends student teachers' critical engagement with research and practice, within the relevant subject(s) and age phase(s). Most of Phase 3 is school based, as the student teacher completes their final placement, extending their knowledge and skills to achieve a recommendation for Qualified Teacher Status (QTS).

The Phase 3 curriculum (centre based) includes a focus on:

- Subject pedagogies and strategies across the Secondary age range.
- Curriculum design.
- Transition between key stages.
- Statutory assessment.
- Deepening Subject knowledge and curriculum knowledge.
- Adaptive practice.
- Preparing for the ECT year.

School based training:

During Phase 3, the ITE curriculum will be extended and contextualised within school placements.

Training will enable student teachers to successfully demonstrate a range of teaching approaches, appropriate to subject, age, and individual needs, and contribute to the development of curriculum thinking, drawing on evidence from research.

Whilst we expect the ITE curriculum to be increasingly personalised during Phase 3, in order to meet individual areas for development and school priorities, it is likely that student teachers' understanding and experience of working with other adults (including parents), and of assessment and adaptive teaching will need deepening during this final period, supported by expert colleagues.

During Phase 3 student teachers have more independent responsibility for planning and teaching lessons which are well matched to the needs of groups and individuals, and for planning units of work as part of an ambitious curriculum, with a positive impact on pupil progress.

Expected outcomes

Mid-point and end of Phase reviews are completed by ITT Mentors in schools. In Phase 3, these reviews assess progress against the Teachers' Standards. By the end of Phase 3 we expect student teachers to:

- Compile evidence in placement experience folder to demonstrate achievement of ALL of the Teachers' Standards (including Part 2)
- Respond constructively to challenge, feedback and critique, and demonstrate a commitment to continuously improve their understanding and practice, reflected in their Career Entry and Development Profile.

In Design and Technology sessions:

Please see the ITE Curriculum for design and technology for the full programme throughout the year.

Student teachers should now have a better understanding of pupils' designing and making and the role of ideation. Student teachers should feel confident to support pupils with enquiry and imagination responding to the school curriculum and principles of progression. A firm foundation of practical, theoretical, and disciplinary knowledge supports the teaching of schema for effective learning, teaching, and now moving to embed assessment, and accessing a full range of ages in key stage 3 and 4. The subject sessions at university will ensure they re-encounter and discuss specialisms building in complexity building on their own prior knowledge and an authentic understanding of transition across the key stages. This curriculum ensures student teachers have the potential to be highly effective teachers who consider prior knowledge, progression (including statutory assessment) and that they can design an effective knowledge rich curriculum for all pupils in their classrooms and consider complex and critical and contemporary themes in design and technology.

The Phase 3a ITE Design and Technology Curriculum: In Phase 3, the centre-based curriculum focuses on subject knowledge, pedagogy, adaptive practice, assessment, and progress in the subject. We ask you to support students in exploring these further in schools.

Date (LJMU)	Taught LJMU session	School-based focus	Mentor curriculum in weekly meeting and Professional Development Activities.
Friday 23 Feb	**Preparing for the phase and tutorials**	Establish the timetable and balance to include key stage 4 teaching, intervention, and support to ensure shift in understanding of student led learning.	***Discuss with your mentor:*** Student led versus teacher led foci in planning for key stage 4, independence, and motivation in the subject **Key question? What is a trainee teachers' role in planning for coursework?**
Friday 1 Mar	Target setting for Subject knowledge development in phase 3	Planning and ideas for schemes of learning. Focus on content knowledge and gaps in knowledge and how to address those gaps and support needed.	***Discuss with your mentor:*** Gaps in subject knowledge and opportunities in teaching and observation to develop this knowledge based on the audit completed the previous week **Key question? What links does the school have with external agencies / learning outside the classroom** Subject content for GCSE in Design and Technology
Friday 8 Mar	Sequencing learning –SOL deconstruction and reconstruction of a scheme of learning Case study exercises.	Planning and ideas for schemes of learning. Themes and projects and opportunities to work with children in key stage 4.	***Discuss with your mentor:*** Planning for sequences of learning (one example) **Key question? What is a key theory that influences your design and technology teaching?**
Friday 15 Mar	**Dealing and responding to data and assessment –** **Effective feedback in the subject and coursework.**	**Tracking progress in the subject** Case study exercises/school practice. Data and target setting in key stage 3 and progress data in key stage 4 and 5.	***Discuss with your mentor:*** Approaches to developing your own records of assessment and progress in phase 3 – including samples of report writing and target grades **Key question? Discuss evidence informed practice and sharing of ideas – has you mentor engaged in theory, research, CPD that has had an impact in the classroom?**
Friday 22 Mar	**Equality and Diversity -. Designing a key stage 3 curriculum** *EAL 5 minute reflections of progress*	How has the school diversified the curriculum, opportunities **Interdisciplinary learning** -	***Discuss with your mentor:*** How the curriculum represents diversity. **Key question? what possibilities exist for learning which is grounded in real life contexts, the concerns of young people and their communities in this area.**
Friday 29 Mar	**Subject knowledge, curriculum, and teaching GCSE** Key stage 4 focus	Discuss the assessment objectives for GCSE, how this is taught through the curriculum. Teaching approaches for GCSE, how is this different?	***Discuss with your mentor:*** How the assessment objectives are approached in years 10 and 11. How is the curriculum for GCSE sequenced. **Key question? How is the curriculum sequenced in year 10 to support independent personalised approaches?**
Friday 19th April	**Offsite partnership school visit- assessment and moderation.** GCSE/A level marking and moderation from expert practitioner.	An expert input to depict the process of taking an exam group, assessment, presenting work for an examiner and the marking process.	***Discuss with your mentor:*** Formal **Assessments** – used diagnostically, what does it tell you about pupils' technical control, automaticity and proficiency? **Synoptic assessment (The role) Ranking, Sequence** the curriculum to build, develop and challenge pupils
Friday 26th April	**Teaching A level and BTEC –** pedagogy.	Teaching A level, the structure, process, and content. Key stage 5 – differences and similarities–	***Discuss with your mentor:*** What are the key differences between key stage 4 and post 16? (These may include: the physical, social, and cognitive development of teenagers,

	Intervention- A level foci.	preparing students for higher education and progression.	curriculum content, teaching and learning activities, Covid 19 impact on their experiences etc What helps or hinders this process? What do pupils find difficult in the process in terms of subject knowledge and the transition. **Key question? How is the curriculum sequenced in year 10 to support independent personalised approaches?**
Friday 3rd May	**Designing an effective Curriculum** – curriculum design and focus as an ECT. Contemporary issues in design and technology contemporary issues **Preparing for triangulation -**	Curriculum Design – a vision for your subject Collaborative planning.	***Discuss with your mentor:*** the role of engagement and reluctant learners and how topics can engage and motivate pupils.

The Phase 3 mentor guide will be accessible Section B www.itt-placement.com website.

Guidance for Observation and Target Setting in Secondary Design and Technology

National Curriculum Purpose of study Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

6 Key Questions to ask when observing Design and Technology lessons:

Lesson observation focus questions*: these questions can be used as foci or prompt for lesson observations and mentor/student teacher discourse.

	Question	*Additional Information*
1	**Is the learning intention/outcome clear?** …what the pupils will be learning in the lesson	The learning outcome is connected to prior learning, or previously encountered knowledge and skills linked to the learning that is taking place in the lesson. Classroom, activities are clear about what children will learn
1	**Practical knowledge and work:**? Are pupils able to develop the creative, technical and practical expertise in the lesson? **Design and Make** What technical knowledge is being developed?	For example: what practical knowledge is explored and how is this developed **(Knowledge and skills)** What technical knowledge is being developed?

2.	Are pupils able to **critique, evaluate and test their ideas?**	For example: Theoretical - When cooking pupils will make connections to practical work through theoretical knowledge e.g. nutrition – the eatwell plate. (**(Knowledge and skills)**
3	**Lesson design and delivery**, including sequencing and appropriate choice of teaching methods. Is there knowledge, skills and understanding evident because of pedagogical choices?	What teaching approaches support pupil progress. Modelling, explanations, worked examples, guides and scaffolds. Instructional practice. Pedagogy is aligned with the types of knowledge taught – practical, theoretical, or disciplinary. Have misconceptions been addressed.
4	**Is the lesson successfully adapted** to the pupils' stage of creative development?	Careful planning considers pupil expertise, and subject specific adaptations are made through pupils who need new content further broken down. Formative assessment supports adaptations.
5.	**Questioning/Feedback/formative assessment** Does feedback address how to build on strengths and review and refine work?	**(Understanding)** Can pupils recall previous information and build upon this with new learning? Can pupils reflect on their own skills?
6.	**Literacy, vocabulary, and high-quality classroom talk. A**re skills, techniques and practices underpinned by specialist subject specific vocabulary, is this modelled and used well.	Have the children been given an opportunity to engage in design thinking and talking regarding work. How is **theoretical or disciplinary understanding** being developed or secured? Does the lesson allow **pupils to articulate their technological understanding** more confidently. Can pupils explain their design process

Potential **Design & Technology Specific** Targets on Lesson Analysis Forms.*

Lesson design and delivery, including sequencing and choice of teaching methods (CCF curriculum & pedagogy) Next Steps:
Identify and make explicit the **key practical, theoretical or disciplinary knowledge** and specialist art and design vocabulary you want the children to know and remember from this lesson/sequence.
Use visual images and **high quality worked examples, models** to support understanding of difficult key concepts e.g. joining wood.
When planning a lesson **introduce new material in steps**, explicitly linking new ideas to what has been previously studied and learned. Providing sufficient opportunity for pupils to consolidate and practise applying new knowledge and skills in the lesson.

Pupil progress in this lesson and use of assessment (including questioning) (CCF assessment) Next Steps:
Plan **formative assessment tasks** linked to lesson objectives and think ahead about what would indicate understanding in a practical response or analysis of a product
When using questions **prompt pupils to elaborate** when responding to questioning to check that a correct answer stems from secure understanding of … a process or retrieval of knowledge.
High-quality feedback can be written or verbal; encourage further effort, and provide specific guidance on how to improve in coursework.

Comments about student teacher's developing Subject Knowledge and Pedagogy (CCF curriculum & pedagogy) Next Steps
Develop your understanding further of the essential components/concepts/ knowledge/ skills and practices of the topic (e.g. plastics) this will enable you to be more confident to motivate pupils and **teach effectively from a secure understanding.**
When planning anticipate what children might find difficult developing your awareness of **common misconceptions** how to help pupils master important concepts (e.g. raising agents in baking, soldering)
Situate the learning in the sequence or schema - remembering pupils are likely to struggle to transfer what has been learnt in one discipline to a new or unfamiliar context support pupils' to make clearer connections to prior learning or where they may have encountered something before (e.g. ideation) Where prior knowledge is weak, pupils are more likely to develop misconceptions, particularly if new ideas are introduced too quickly.
When planning, consider the **role of modelling**, instruction and explanations to acknowledge novices need more structure early in the sequence e.g. drawing in 3D
How could you support the next lesson with **guides, scaffolds and worked examples** to help pupils apply new ideas?
Think about the **types of questions** you would ask in class discussions to extend and challenge pupils (e.g. by modelling new vocabulary or asking pupils to justify answers when analysing the work of other).
The role of memory: Breaking complex material into smaller steps will support pupils (e.g., using partially completed drawing to focus pupils on the specific steps rather than a refined finished example) Working memory capacity is limited and can be overloaded.

*We would welcome any feedback on using these questions through the subject network, please email any comments or recommendations to c.j.cole@ljmu.ac.uk