Core subjects knowledge enhancement audit

This knowledge audit has been designed to enable you to develop your understanding of national curriculum expectations in core subjects and for you to begin to consider where and how to develop your own subject knowledge. We have designed the OBU Knowledge Base subject knowledge enhancement pages to support you with developing your knowledge.

Please download and save a copy of this booklet. You will **need to complete all elements of this audit before induction week**. If you have questions about any elements of the audit please note them down. OBU lecturers will be keen to support you.

English subject knowledge audit

Audit overview
The knowledge audit below asks you to consider your response to personal experiences of the English national curriculum. Use the questions to scaffold your thinking. The purpose of this is to enable you to recognise your strengths and areas for development in English. The course will provide opportunities to reflect on and develop your knowledge - so be honest!
Purpose of study - taken from the national curriculum
English has a pre-eminent place in education and in society. A high-quality education in English will teach pupils to speak and write fluently so that they can communicate their ideas and emotions to others, and through their reading and listening, others can communicate with them. Through reading in particular, pupils have a chance to develop culturally, emotionally, intellectually, socially and spiritually. Literature, especially, plays a key role in such development. Reading also enables pupils both to acquire knowledge and to build on what they already know. All the skills of language are essential to participating fully as a member of society; pupils who do not learn to speak, read and write fluently and confidently are effectively disenfranchised.
Exploring Language Modes **English is made up of four language modes; we often focus on just one or two but they all play an equally important role. When we first meet for English, we will discuss our thoughts and experiences in the areas below.**

Language Mode	*Your own personal experiences from Primary/Secondary school (Just note one or two for each mode)*	*What did you take from these experiences and how might these influence your thinking about the teaching of English - both good and bad.*
Speaking		
Listening		

Reading		
Writing		

Reflection:

English is a vast subject which takes many years to master and understand. As you join us at Oxford Brookes, it's important to acknowledge that each of you brings a unique set of experiences and perspectives to the table. Some of you may have already developed a deep appreciation for English, while others may be approaching it with curiosity or apprehension.

Take a moment to reflect on your experiences with English during your time in primary school. Think about the moments that stand out to you—the ones you enjoyed and those you found challenging. Consider which aspects of English they align with, such as Speaking, Listening, Reading, or Writing.
In the space provided below, share with us a memorable event (this could be a positive or negative experience and does not have to be a lesson but could be things such as: a play,whole class reading, drama etc from your primary school English education. Describe what made it enjoyable or challenging, and identify the Language Mode(s) it corresponds to.

My Experience of Primary English:

Knowledge enrichment:	*With English in mind, are there areas you are interested in knowing more about? What are you looking forward to?*

Mathematics subject knowledge audit

Audit overview
The knowledge audit below includes statements from the national curriculum for mathematics. Use the questions to scaffold your thinking and consider your targets for knowledge enhancement. Read the primary mathematics section of the National Curriculum. Consider the elements of the curriculum you are confident with - and the ones you will need to develop your understanding of. Remember, you do not need to enhance your knowledge of all these elements at once - this is an ongoing process throughout your career. For now, we have identified some elements that we would like you to begin securing your knowledge of. Please take the time to work through the elements outlined below and note your responses.
Purpose of study - taken from the primary National Curriculum
Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of

mathematics, and a sense of enjoyment and curiosity about the subject.	
Complete the subject specific terminology table below with short, precise definitions (and at least one example for each)	
Terminology	
place value	
arithmetic	
automaticity	
fluency	
reasoning	
problem-solving	
misconceptions	
CPA	
sentence stems	

Mastery is frequently referenced around maths, but there's a lot of confusion over what it means - it depends who you listen to and the term isn't referenced for mathematics in the National Curriculum. To understand what it means, find 3 different definitions from the web, to include the source of your information, before coming up with a simple definition of your own (fuse the ideas you gather and try to make sense of what the meaning behind them is).

Definition	Source (e.g. Pearson Maths)

Your straightforward definition (considering the impact on children):

Mastery involves/ supports …

KS1 Pupils should:	
Develop confidence and mental fluency using concrete and pictorial representations to do and see the maths	*Mental fluency is mistakenly assumed to be in your head thinking, but children need repeated and ongoing opportunities to do, see and make connections in maths before this can happen.* *Watch: Build Math Minds (start at 2 mins - 6 mins 38 seconds)* *Explain (in your own words) what you have discovered:*

Learn the importance of precise vocabulary in mathematics and use it to support children's understanding	*Why is language such an important part of maths? Go to the maths preface in the National Curriculum to find out and detail it here, in your own words.*
KS2 Pupils should:	
Perform calculations accurately using increasingly efficient methods, as laid out in the National Curriculum	*Using this article from the NCETM, document why the answer in maths is only one small part of the story.*
Develop connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.	*Watch this video: You Cubed* *Why are connections important in maths? Think beyond what the video revealed and considered.*

All pupils should:	
move through the programmes of study at broadly the same pace	*What challenges might moving through programmes of study at broadly the same pace pose for* *learners?* *teachers?*
consolidate their understanding, including through additional practice, before moving on.	*What does consolidating your understanding mean in terms of maths?*

Knowledge enhancement target	*Where do you need to focus your knowledge development? How will you use the resources on the OBU knowledge base to support you?*

Science subject knowledge audit

Audit overview
The knowledge audit below includes statements from the science national curriculum. Use the questions to scaffold your thinking and consider your targets for knowledge enhancement. Read the science national curriculum. Consider the elements of the curriculum you are confident with - and the ones you will need to develop your understanding of. Remember, you do not need to enhance your knowledge of all these elements at once - this is an ongoing process throughout your career. For now, we have identified some elements of the national curriculum we would like you to begin securing your knowledge of. Please take the time to work through the elements outlined below and note your responses.
Purpose of study - taken from the national curriculum
A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.
Complete the subject specific terminology table below with short precise definitions

Terminology	*Definition*
Biology	

Chemistry	
Physics	
Habitat	
Life cycle	
Material	
Solid, liquid, gas	
reversible/ irreversible change	
Friction	
Light source	
Force	
KS1 Pupils should:	
Experience and observe phenomena, looking more closely at the natural and humanly constructed world around them	*There are 5 broad subject areas taught in KS1 (years 1 and 2) - look at the National Curriculum and note the headings here:* *There are three branches of knowledge in science. Use the subject areas you have noted above and decide whether each has a focus on Biology, Chemistry or Physics.*
All pupils should be taught:	

To work scientifically	*Working scientifically is a set of key skills we develop in primary school science. Look at the Enquiry Skills poster from the Primary Science Teaching Trust website and note the key enquiry skills.*
KS2 Pupils should:	
Be taught to use practical scientific methods, processes and skills through the teaching of the programme of study content	*Working scientifically is described in the non-statutory boxes within each subject area in the national curriculum. Choose 2 subject areas that are taught in Key Stage 2 (Years 3,4,5,6) and note some ways in which working scientifically could be included.* *For example, in Forces and Magnets children might sort materials into magnetic and non-magnetic materials and look for patterns to explain this.*

Knowledge enhancement target	*Where do you need to focus your knowledge development? How will you use the resources on the OBU knowledge base to support you?*