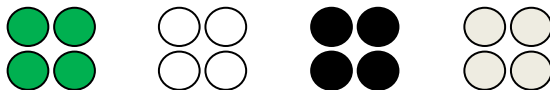
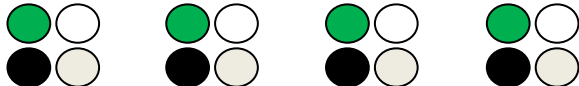


Professional Learning Packs				
<p><u>Rationale</u></p> <p>It is important that all staff, including SMT, engage with professional reading and dialogue to allow them to critically consider practice and make informed decisions on the best way forward based upon current research. This is an expectation of the Standard for Career-Long Professional Learning from the GTCS.</p> <p><u>Overview</u></p> <p>What are the Professional Learning Packs?</p> <ul style="list-style-type: none">➤ The Professional Learning Packs are a collection of readings on set topics designed to encourage professional dialogue and reflection on the teaching and learning of mathematics.➤ Each pack consists of a selection of readings, related questions and suggested follow up tasks.➤ The five Professional Learning Packs are outlined below.➤ A school should decide collaboratively which of the Professional Learning Packs they would like to focus on. <p>What would this engagement look like?</p> <ul style="list-style-type: none">➤ ‘Using the Professional Learning Packs’ provides an outline as to how this looks in practice.➤ Individually, all staff will undertake a single reading together with associated questions.➤ This will lead to professional dialogue where staff will discuss the themes of their various readings.➤ Staff will then engage with a task which will allow them to consider their current practice.➤ Following this there will be an opportunity for teachers to share this learning before agreeing a way forward for the whole school.				
Developing Conceptual Understanding of Number	Maths Anxiety and Resilience	Maths Talk	Flexible Grouping Practices	Enquiry Learning and Problem Solving
The papers discuss the relevance of conceptual understanding at all stages of mathematical learning. The need to develop a deep understanding of number, through exposure to a range of manipulatives and real life situations is discussed, with consideration given to the importance of this in enabling learners to think flexibly about number and apply their learning in a range of situations. The importance of understanding, and exploring different ways of how calculations can be represented, before they are memorised as routines or number facts, is also discussed.	People who feel stress, apprehension and fear of situations involving maths, are said to experience maths anxiety. The papers in this pack discuss the causes and symptoms of maths anxiety and analyse how it can affect learning. Readers can reflect as to how our own actions, attitudes and experiences of maths may impact learners’ feelings towards maths. A number of suggestions are made throughout the papers as to how maths anxiety can be prevented. Thought will also be raised as to how we can adapt our classroom practice to reduce the risks of maths anxiety arising and also develop a sense of mathematical resilience in learners.	The pack contains five papers relating to mathematical discourse. The papers should stimulate reflection on the current level of discourse in maths lessons. Examples of conversations during maths lessons are given and practical ideas of how pupil’s responses can be used for the development and assessment of maths.	This pack consists of a mixture of papers and videos discussing the impact of ability grouping and setting on pupil achievement. They take into account the work undertaken by Carol Dweck on mindsets and the work carried out by John Hattie on effect size of interventions. The pack offers alternative suggestions to classroom organisation and management of groupings and considers the impact of expectations of pupils	.This pack contains seven papers relating to the topics of enquiry learning and problem solving. The papers should stimulate reflection on the place of problem solving and enquiry learning within everyday teaching of mathematics and the contribution these make to developing resilience in learners. There are case studies of lessons which allows for practitioners to reflect upon the structure and organisation of their own maths lessons.

Using the Professional Learning Packs			
Preparation for Workshop 1	Workshop 1	Workshop 2	Follow Up
<ul style="list-style-type: none">• Share the readings out amongst staff.• Each staff member, including SMT, should receive a different paper to read independently before Session 1.• The readings are presented in the pack overviews in order of accessibility.• Each paper comes with questions to aid individual reflection and it is expected that key messages will be summarised as part of this.• Agree a date for the whole staff to come together to discuss their findings. <p><i>Note: In smaller schools it may be necessary to use fewer texts to allow for a variety of staff perspectives. It is recommended that more than one person engages with each text.</i></p>	<ul style="list-style-type: none">• Staff form groups based upon the text they have read e.g. all staff reading paper 1 form a group, all people reading paper 2 form another group etc. Each group then discuss their responses to the reflective questions and agrees on the shared key messages from their text. <div></div> <ul style="list-style-type: none">• Staff then ‘jigsaw’ to form new groups, so that each new group comprises people who have read different papers. The new groups then share the key messages from their texts and identify commonalities between all the papers. <div></div> <ul style="list-style-type: none">• Staff will then come together as a whole to reflect upon the implications for their own context and what it means to them in terms of their own practice.• They will then select a task from the ‘Task List’ included with each pack and prepare to share their findings at Session 2.• It is suggested that Session 2 is no less than three weeks later.	<ul style="list-style-type: none">• All staff meet to share their findings from the task they have undertaken.• Staff should discuss:<ul style="list-style-type: none">➤ What they did➤ Why the task was chosen➤ What was discovered➤ What changes in practice may result from this• Following the sharing of practice, the school will then collectively consider next steps based on their engagement with the readings and tasks.• Consideration should be given to aspects of practice that staff should ‘Keep Doing, Stop Doing and Start Doing’.• A timescale should be set for each part of the action plan.	<ul style="list-style-type: none">• Staff meet again and review progress towards the action plan set in Step 7, setting new targets as required.