



## Primary Maths Curriculum Policy

This policy reflects the values and philosophy of iCAN British International School in relation to the teaching and learning of mathematics. It is based upon the English National Curriculum Programme of Study for Key stages 1 and 2 (2014). It gives a framework to which learning facilitators and learning support assistants work and provide guidance on planning, teaching and assessment, ensuring continuity and progression in the teaching of mathematics.

### The Importance of Mathematics

Mathematics equips learners with a uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem-solving skills, and the ability to think in abstract ways. Mathematics is important in everyday life, many forms of employment, science and technology, medicine, the economy, the environment and development, and in public decision making. Different cultures have contributed to the development and application of mathematics. Today, the subject transcends cultural boundaries and its importance is universally recognised. Mathematics is a creative discipline. It can stimulate moments of pleasure and wonder when a pupil solves a problem for the first time, discovers a more elegant solution to that problem, or suddenly sees hidden connections. It promotes the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

### Subject Aims

At iCAN, our aim is to provide a maths curriculum which will develop learners to be numerate, creative, independent, inquisitive, enquiring and confident. We aim to provide a stimulating environment with a range of supportive resources so that all learners can develop their mathematical skills to their full potential. We aim to provide learners with rich and enjoyable experiences related both to their individual needs and to the wider world.

We aim for each learner to:

- Have a growth mindset towards mathematics.
- Have self-confidence in their abilities as mathematicians.
- Think logically and work systematically.
- To be independent mathematicians.
- Experience a sense of achievement regardless of age or ability.
- To be able to think and solve problems mathematically by using the appropriate skills, concepts and knowledge in the areas of understanding.
- To be able to apply their understanding in a variety of contexts.
- To be able to communicate using appropriate mathematical language.
- To be able to utilise a variety of mental strategies and demonstrate flexibility with numbers.

## Planning of Maths Lessons at iCAN

### Early Years Foundation Stage

Use the 'Mathematical Development' area of the Early Learning Goals, which covers all of EYFS up to Reception.

### Milepost 1-3

In Primary, maths is based on the English National Curriculum.

#### *Long Term Planning (Year):*

The English National Curriculum stipulates learning goals for each year (Y1 and 2) and each MP (Y3-4 and Y5-6). The long term plans are an overview of coverage of learning goals over the 6 learning blocks of the school. When planning for the year, specific links to the themes of the IPC units should be made where appropriate.

#### *Medium Term Planning (prior to the teaching of each maths topic):*

Medium term planning outlines the learning goals that will be covered for a specific maths topic and is informed by the National Curriculum and long term planning. For MP1-3, Partner teachers should look at the next maths learning topic they are going to teach next (eg. Data handling) and select the appropriate learning goals that will be taught for that subject. Links to IPC and relevant teaching contexts should be considered.

#### *Short Term Planning (week):*

Learning facilitators must have weekly planning meetings with their year group partner to discuss and plan for meeting the learning goals.

LFs should have thought about, discussed and and planned for:

- A balance of knowledge, skills and understanding learning goals to be covered at the appropriate points through the week
- KSU graphics to be used in planning to embed understanding and promote discussion of the learning through this
- Specific differentiated activities (and pathways) to promote independent success and progress for all learners broken down from the learning goal and updated into the BDM document
- A range of possible questions to ask learners to probe understanding
- Opportunities to practise skills and demonstrate understanding through application in different contexts
- Opportunities to formatively assess and provide feedback (including planning next step questions)
- Opportunities for cooperative learning

Plans for the week should be completed on weekly or daily planning formats as appropriate for the partner learning facilitators. The above planning expectations should be explicit in the planning document **or** any accompanying slides/flipchart, not necessarily both.

## Teaching of Maths Lessons at iCAN

### Early Years Foundation Stage

In the Early Years and Foundation Stage learners have access to practical numeracy activities to develop their skills and are introduced to different mathematical concepts through songs, rhymes, games and role play.

In Reception, learners have 10-15 minutes whole class learning three times a week, delivered by the learning facilitator. All learners then experience a group focus activity twice a week with the learning facilitator, based on the Development Matters learning objectives.

In Nursery, learners have 10-15 minutes small group learning twice a week, delivered by the learning facilitator. All learners then experience a group focus activity once a week with the learning facilitator, based on the Development Matters learning objectives.

When not learning with the class learning facilitator, learners have access to independent numeracy learning and activities supported by the LSA based on the same weekly objectives.

### **Primary**

Each primary class has between 5 timetabled hours of maths per week. Within maths lessons, there is a balance between whole-class, group and individual work. Learning facilitators must ensure that a variety of teaching approaches are used, incorporating a range of appropriate cooperative learning structures to enhance the learning.

KSU Learning Goals, using the iCAN visuals, should be introduced to learners and referred back to at appropriate points in the week's learning, particularly at the start and end of each lesson. There does not have to be a K, S and U Learning Goal for each individual lesson, but all three should be covered through the course of the maths lessons that week.

There should also be a reference to differentiation i.e. *Beginning*, *Developing* and *Mastering* activities or pathways. The level to which this is made explicit to the learners is based on the judgement of the LF, the needs of the class and the task being done.

## **Assessment and Tracking**

Assessment is an integral part of teaching and learning and is a continuous process. It is the responsibility of the class learning facilitator to observe and assess all learners in their class and record their progress. Accurate assessment allows us to identify learning priorities. Assessments are used to inform teaching in a continuous cycle of planning, teaching and assessment.

### **Early Years Foundation Stage**

Assessments are based on the EYFS learning goals and are a continuous process of questioning and observation, with verbal feedback given. Observations and evidence of learners meeting those learning goals are recorded using Tapestry and tracked on a document covering the learners' development through this stage. EYFS learning outcomes tracked throughout the year along with the Maths Expected outcomes which have been taken and modified from EYFS learning goals.

### **MP1-3**

#### **Formative Assessment**

Formative assessment is an integral part of every lesson and includes; checking for understanding, questioning, AFL activities, observations, marking of learners' work and a weekly mental maths quiz (MP2 and 3). All learners' maths work will be marked using the following guidelines:

One task per week should be planned to allow for in depth marking and next steps feedback. Verbal or written feedback should make reference to them being beginning, developing or mastering for that skill. The next steps could be to correct mistakes or misconceptions, consolidate skills or give further opportunities to demonstrate and challenge understanding. Learners need to be given time to respond to this feedback.

#### **Summative Assessment**

##### *MP1*

Summative assessment for Year 1 is to be carried out twice a year (end of LB4 and 5), and for Year 2 from LB2 onwards. These assessments can be taken from the White Rose End of Block assessment resources and carried out as the MP1 Learning facilitators deem appropriate for that age group.

##### *MP2 and 3*

3 formal assessments through the year based on what has been learned leading up to that point that assess knowledge, skills and understanding. Assessments can be taken from Testbase, the White Rose End of Block assessment resources, Twinkl or created by the LFs depending on what is appropriate for the maths topic that is being assessed.

In addition, all learners will complete an INCAS computer based assessment once a year, of which maths forms one part.

The results of this will be used to identify trends and areas of strength or for development within the primary maths curriculum.

### **Tracking**

Learning facilitators should complete the maths assessment tracker as and when they finish a specific maths topic. They can assess their learners as Beginning, Developing, Mastering or Exceeding Expectations. This decision is informed by class learning, marking of next step questions and any summative assessment completed. Trackers are used for coverage and attainment, moderated by partner learning facilitators.

The results of practice of mental maths skills are tracked following the Expected Outcomes. Mental maths aims for each year group are stipulated in the Expected Outcomes section of the curriculum document and should be tracked in the maths tracker. This allows the learning facilitator to check coverage, but is also used as an AFL tool to inform subsequent planning.

### **Number Talks**

Learning facilitators should use Number Talks to develop their learners' fluency with mental maths. The Number Talks activities should be used as a warm up to the main maths lesson. Number Talks are a "10-15 minute classroom conversation around purposefully crafted computation problems that are solved mentally" (Parish, 2014). LFs should follow the year group progression plan and choose Number Talk activities that are suitable for their learners which focus on a specific strategy. During a Number Talk session, learners look at how values can be broken down, rearranged and/or reassembled to solve a problem. In Number Talks for Reception and MP1 this might be assessing an image (dots, 10-frames) to subitize or count. The aim of using Number Talks is to improve learners' confidence when solving calculations mentally and to develop their ability to be flexible with numbers.

### **Additional Learning Needs**

The daily mathematics lesson is differentiated for all learners. Learners identified as needing an ILP maths target will be given additional support in the classroom by the learning support team (ALN) and in a regular small group setting or 1:1 session. These targets will be set according to the learner's progress in discussion with the class learning facilitator and a member of the learning support team (ALN). These targets are monitored and reviewed by a member of the learning support team every 6 weeks.

We are also aware of the specific needs of learners with English as an Additional Language (EAL.) Learners identified as needing additional EAL support will be given support by the learning support team (EAL). They may assist in-class with activities or assessments when possible.

Learning facilitators are responsible for challenging more able learners through differentiated activities.