FAIRGREEN INTERNATIONAL SCHOOL

Primary Years Programme

MATHS NO PROBLEM!

Parent Workshop

Fairgreen Maths Policy
Maths No - Problem!

10th December 2024

Kim Gerber
Grade 5 Headteacher and Maths Lead for PYP

FAIRGREEN INTERNATIONAL SCHOOL

Primary Years Programme

MATHS NO PROBLEM!

AGENDA
10th December 2024

8:10 - 8:15	Welcome
8:15 - 8:30	Fairgreen Maths Policy
8:30 - 9:00	Why Maths — No Problem! as the backbone to our policy
9:00 - 9:10	Book Perusal, Questions and Open Discussion

Fairgreen International School LLC
The Sustainable City,
Dubai, UAE
www.fairgreen.ae

P.O. Box 392024

T: 971 4 875 4999
E: info@fairgreen.ae

FAIRGREEN INTERNATIONAL SCHOOL

Philosophy

At Fairgreen, we believe the **child must be at the centre** of the learning process.

It is important that they **understand the processes** they are using and are able to **apply them in unfamiliar situations**.

They should become **fluent in the fundamentals of mathematics** so that they develop **conceptual understanding** and the ability to **recall and apply** knowledge rapidly and accurately.

They need to be able to **reason mathematically** and **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication.

Fairgreen International School LLC
The Sustainable City,
Dubai, UAE
www.fairgreen.ae
P.O. Box 392024
T: 971 4 875 4999
E: info@fairgreen.ae

FAIRGREEN INTERNATIONAL SCHOOL

Differentiation through Depth rather than Acceleration

While the entire class progresses through the same content at a consistent pace, there are ample opportunities for differentiation.

Rather than accelerating advanced learners through new material, those who quickly grasp concepts are engaged with rich, sophisticated problems that **deepen their understanding within the topic.**

Meanwhile, students who need additional practice are provided **targeted support to solidify their fluency and comprehension** before advancing.

This approach ensures that all learners are challenged appropriately and supported effectively.

Fairgreen International School LLC
The Sustainable City,
Dubai, UAE
www.fairgreen.ae
P.O. Box 392024
T: 971 4 875 4999
E: info@fairgreen.ae

FAIRGREEN INTERNATIONAL SCHOOL

We believe that students learn best...

- When they have opportunities to construct meaning using an inquiry approach to learning.
- When challenged to think by explaining, listening and problem solving.
- When encouraged to use a common language to discuss mathematics.
- By developing mental strategies first using concrete materials, then using pictorial representation and lastly using abstract number properties.
- Through a balanced development of both number knowledge and operational strategies so they can be efficient, flexible and accurate when solving mathematical problems.
- By developing mathematical confidence and a love of mathematics.
- By applying mathematical concepts to real life situations.

Fairgreen International School LLC
The Sustainable City,
Dubai, UAE
www.fairgreen.ae
P.O. Box 392024
T: 971 4 875 4999
E: info@fairgreen.ae

FAIRGREEN INTERNATIONAL SCHOOL

Teachers agree to...

- Pre-assess all students at the start of a unit and use this data to inform/differentiate instruction. Regularly formatively assess learning and complete summative assessments for every unit to measure progress.
- Provide students with regular opportunities for self and peer assessment. Provide students with regular feedback in line with the school marking policy. Use teacher and peer feedback in a timely effective manner.
- Offer students opportunities to problem solve, ask questions and apply their learning through units of inquiry where there is a natural link.
- Use common mathematical language.
- Develop conceptual understanding and the ability to recall, transfer and apply knowledge rapidly and accurately. Develop mental maths strategies to support the automaticity of maths calculations.
- Allow students time to record their thinking in a maths journal.
- Make use of the **'Maths - No Problem!'** teaching resource as a primary teaching resource.
- Use other resources to supplement and support students when needed.

Fairgreen International School LLC
The Sustainable City,
Dubai, UAE
www.fairgreen.ae
P.O. Box 392024
T: 971 4 875 4999
E: info@fairgreen.ae

FAIRGREEN INTERNATIONAL SCHOOL

Maths - No Problem!

MATHS NO PROBLEM!

- The lesson is split into six sections.

- Each part of the lesson could take roughly 10 minutes, making up a full hour, but this could change depending on the individual teacher.

FAIRGREEN INTERNATIONAL SCHOOL

Building a Strong Conceptual Understanding

MATHS NO PROBLEM!

FIS Policy: A maths lesson at Fairgreen International School focuses on developing students' understanding of mathematical concepts at a deep level, rather than just memorizing procedures. As a teacher, it's important to make sure that students understand the "why" behind mathematical concepts, and can apply their knowledge in a range of contexts.

IN FOCUS

The In Focus is the problem that the whole lesson is centered around, it can be found in the textbooks at the beginning of every lesson. Teachers start by reading through the problem with their students. At this point in the classroom, the students explore the problem for themselves in groups, but independent of the teacher. The teacher encourages students to lead the investigation by asking open questions such as:

- What is the problem asking you to do?
- What do you already know to help you solve this problem?
- Could you use any resources to help you?
- Could you draw a picture to help you?
- What methods could you use to solve this problem?
- How many different methods could you use?

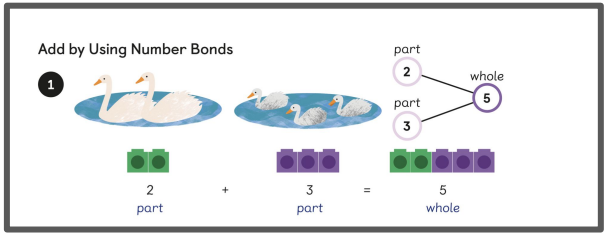
How many swans are there altogether?
How can we find out?

Using Manipulatives and Visual Aids

FIS Policy: A maths lesson at Fairgreen International School encourages the use of manipulatives and visual aids to help students visualize mathematical concepts and make connections between different ideas. As a teacher, you should be comfortable using a range of manipulatives and visual aids to support student learning.

STRUCTURED LESSON

- In most lessons there are multiple methods for solving the original problem presented in the In Focus.
- These methods have been structured to follow on from what the students have previously learnt.
- It is important for students to compare different methods, evaluating each one and validating their own discoveries, as well as learning how to present their ideas effectively.
- It is important to talk through this section of the textbook and get familiar with the **mathematical language** used.



FAIRGREEN INTERNATIONAL SCHOOL

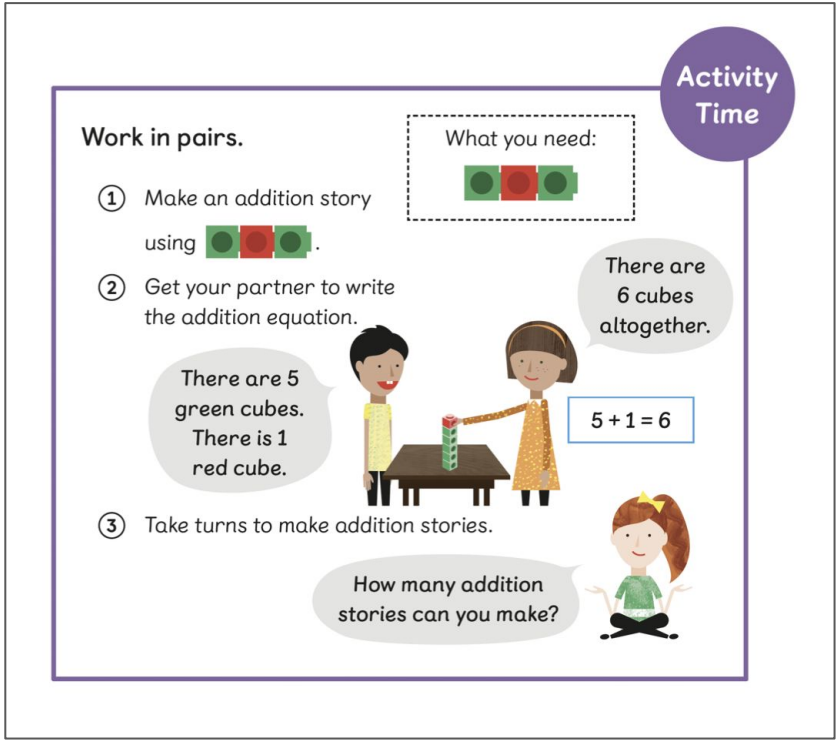
Encouraging Student Discussion and Collaboration

MATHS NO PROBLEM!

FIS Policy: A maths lesson at Fairgreen International School emphasizes the importance of student discussion and collaboration in the learning process. As a teacher, you should create opportunities for students to share their thinking, explain their reasoning, and work together to solve problems.

ACTIVITY TIME

- Activity Time is usually some form of game or investigation that can be found in the textbook.
- Pairs work through the instructions together.
- The activities have been included to help students explore the mathematical concepts further.



FAIRGREEN INTERNATIONAL SCHOOL

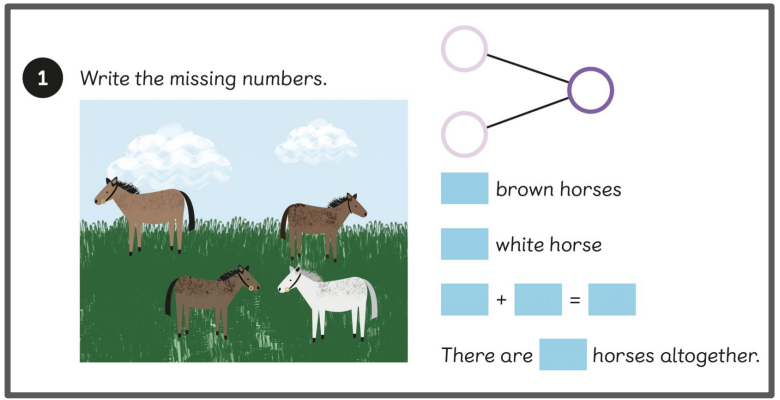
Identified Barriers to Learning (Personalization and Differentiation)

MATHS NO PROBLEM!

FIS Policy: Every student has unique learning needs and abilities, and a maths lesson at Fairgreen International School emphasizes the importance of differentiating instruction to meet the needs of all students. As a teacher, you should be prepared to adapt your teaching strategies and materials to support students who may be struggling, as well as those who need to be challenged.

GUIDED PRACTICE

- In the textbook, there are a handful of problems that link to the original lesson problem.
- In class, these problems are assigned for students to complete in pairs or groups.
- The teacher lets the students lead the calculations. This involves pausing for a bit and allowing them to think over what they have learnt.
- If they are working confidently through the questions, the teacher asks the students to explain to them what they are doing and why they are doing it.



FAIRGREEN INTERNATIONAL SCHOOL

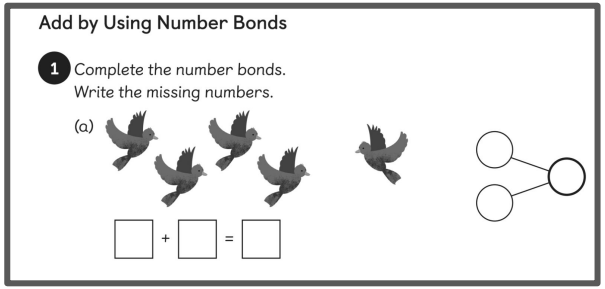
Providing Opportunities for Independent Practice

MATHS NO PROBLEM!

FIS Policy: A maths lesson at Fairgreen International School emphasizes collaborative learning, it's also important to provide opportunities for independent practice. As a teacher, you should design activities and tasks that allow students to practice and consolidate their learning independently.

INDEPENDENT PRACTICE

- Each lesson in the textbook has a corresponding worksheet in the workbook.
- This is again for the students to practice what they have learnt, but this time should be independent work.
- Student work through these problems by themselves.
- Students are resourceful and have been taught to be problem solvers, struggling allows them to push their understanding of the concepts and learn to manipulate the mathematics.

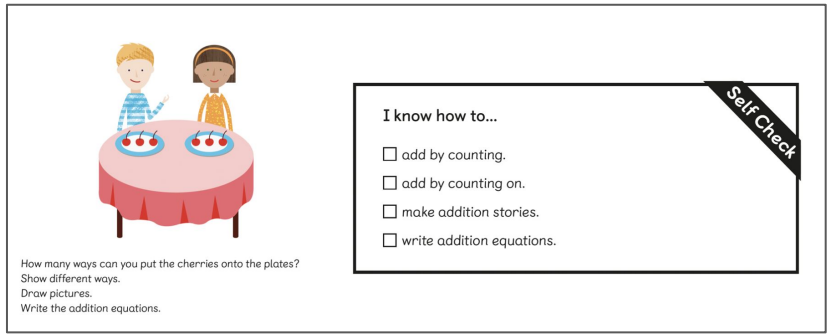


Journaling

FIS Policy: Allow students time to record their thinking in a maths journal.

JOURNALING

- In the MNP lesson, students are encouraged to journal regularly about their discoveries.
- If each student's journal is completely personal it is an excellent tool to assess their understanding.
- There is an example journal question at the end of each chapter in the textbooks, but journaling is something that could be completed at the end of each lesson.



1. Write a set of instructions for your friend explaining how you solved today's problem.
2. Write down two or three different methods to solve today's problem. Why did you choose these methods? In your opinion, which method is the best and why?
3. Pick a calculation from the Guided Practice section of the lesson and write a story for what the numbers mean.
4. If you completed a calculation in the lesson, highlight some of the steps for the calculation and write down what is happening in each of the highlighted steps.

Textbooks and Workbooks

- Maths - No Problem! is a textbook and workbook maths mastery programme following the 2014 English national curriculum.

- Textbooks are for reference but the workbooks are written in.

- The books have been organized by content.

  The first half of the year, A Books, relating to number and operations.

  The second half of the year, B Books, applied maths including topics like geometry and measures.

- Spiral approach — Each year group is organized in this way meaning that students revisit topics throughout their primary education and always build on the knowledge that they have already learnt.

- Each chapter in the textbooks are split into lessons, and these lessons represent one lesson in the classroom. The lessons also have a corresponding worksheet in the workbooks.

FAIRGREEN INTERNATIONAL SCHOOL

MATHS NO PROBLEM!

Additional Home Practice

MyMaths

MNP Books, Questions and Open Discussion

Thank - you for attending this morning's Parent Workshop.

Please reach out to me if you have any questions or comments.

kgerber@fairgreen.ae

Kim Gerber