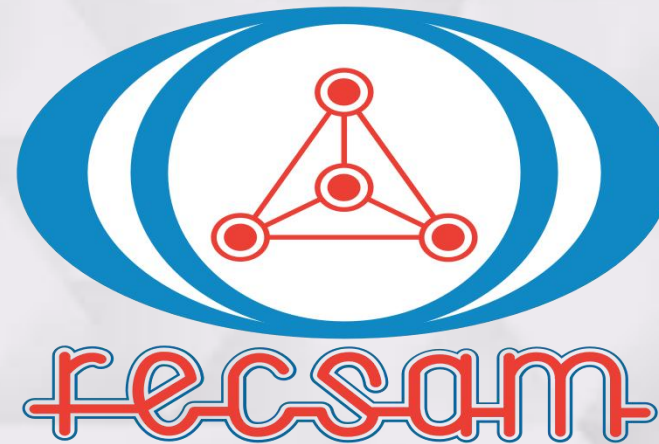


# Dr Wan Noor Adzmin Binti Mohd Sabri Mathematics Education Specialist

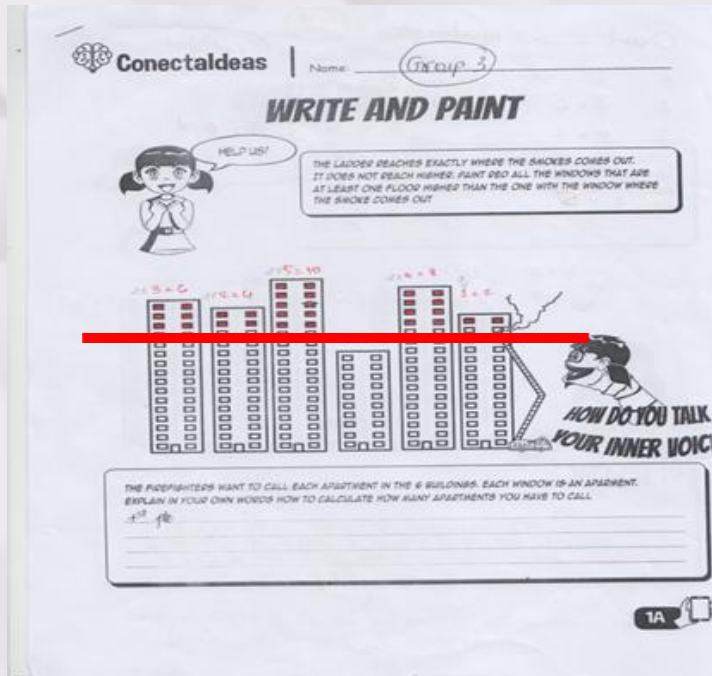


# APEC-TSUKUBA INTERNATIONAL CONFERENCE XVII

## Chapter 3

### Classroom STEM Activities

#### Example: FIRE EMERGENCY



Task 1 : A simple task on painting the window using the instruction given in the book

Task 2 : Relate to the fire problems in this task.

Students are asked to think mathematically to solve the problems.

Task 3 : STEM activity

Fire extinguisher – relate with the four disciplines : Science, Technology, Engineering, Mathematics

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## Computational Thinking skills and Mathematical Thinking

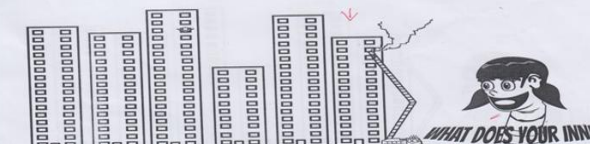
- Pattern recognition could be seen from the Task 1 and Task 2
- Algorithmn will be observed in the STEM activities

where students are asked to follow exactly the instructions given to create fire extinguisher

Conectalideas From: Group 3 To:

**WRITE AND PAINT**

help us. The ladder reaches exactly where the smokes come out. It does not reach higher. paint red all the windows that are at least one floor higher than the one with the window where the smoke came out.



WHAT DOES YOUR INNER VOICE SUGGEST TO YOU

The fire-fighters want to call each apartment in the 6 buildings. He takes 5 minutes to call each apartment. Explain in your own words how to calculate the time firefighters need to call all apartments having red windows.

The number of the red windows: 30 windows.  
Key answer:  $5 \times 30 = 150$  (minutes)

Count = 30 Apartments.

1	2	3rd	1 = 2
2	2x2		2 = 4
3	2x3		3 = 6
4	2x4		4 = 8
5	2x5		5 = 10

1st 2nd } 30 Apt.

$5 \times 30 = 150$

$(2 \times 5) + (2 \times 2 \times 5) + (2 \times 3 \times 5) + (2 \times 4 \times 5) + (2 \times 5 \times 5)$



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## Reflections

What can students learn from these activities?

- Contents : Numbers and Operations
- Mathematical thinking and processes – Operation, Algorithm.
- Inductive Reasoning
- Exploration and Enquiry
- Simpler and easier
- See and think mathematically
- Pose questions and develop explanation
- Creative, innovative and harmoniously to develop citizenship

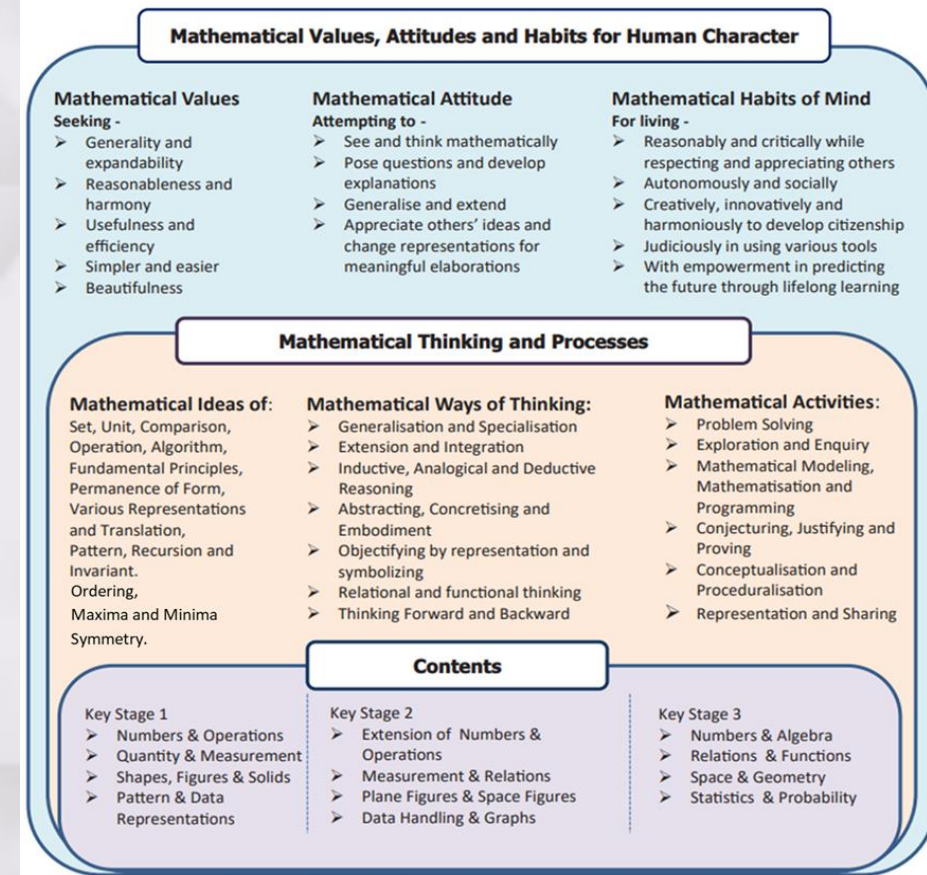


Figure 1. Revised CCRLS Framework in Mathematics