

## Grade 5/6 Home Learning

Term 3 Week 4 2017, (Due Monday August 14<sup>th</sup>)

### MATHEMATICS



#### CHALLENGE ONE:

\*Complete the two Manga High Challenges: 'Find prime numbers' and 'long multiplication'.

\*They have been assigned to you within your class and must be completed by Monday the 14th August.

\*If you do not have internet access at home please speak to your classroom teacher.

#### STRATEGIES

\*Thinking about, and articulating, the strategies we **could** use to solve mathematical problems, is just as important as answering them.

#### WHY?

\*Because if we give ourselves a range of possible strategies, we are more likely to understand the mathematics more deeply, and to be successful, because we have more than one way to solve it.

\*Below is a chart by Peter Maher which outlines the 9 Problem Solving Strategies.

## The 9 Problem Solving Strategies

- 1 Look for the important words in the question**  
Write them down.  
Underline them.  
Make sure I know what to do.
- 2 Look for a pattern**  
Can I see something happening over and over again?  
Will this help me solve the problem?
- 3 Have a go**  
Try an answer.  
Does the answer make sense?
- 4 Use a table or a chart**  
Will something like this help?  

- 5 Use a drawing**  
Can I draw something about the problem?  
Will this help me to find the answer?
- 6 Work backwards**  
Can I start at the end of the question to help work it out?  
Will my answer work?
- 7 Try an easier problem**  
Can I change the numbers in the question to make it simpler?  
Will this make finding the answer easier?
- 8 Make a model**  
Can I use paper or blocks to help me find the answer?  
Can I use people to help me find the answer?
- 9 Think logically**  
Can I tell something about the answer straight away?  
Can I get rid of answers that are not correct?

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## CHALLENGE TWO

\*Solve the following worded problems, but show the working out using at least 4 of the 9 strategies outlined above. **Make sure you show/explain it in a detailed manner in your answer.** Also solve the algorithm.

- A. Nick pours 400ml of water on his indoor plants every day, except Monday. Three days a week he pours 1.5l of water on his outdoor plants. About how many litres of water would he use in a week?
- B. One half of the 131 students in 5<sup>th</sup> and 6th grade sold raffle tickets to raise money for a composting system for the school. If each student sold 5 tickets and the tickets were \$2 each, how much money was raised?
- C. Carla was bird watching at school. The first day she spotted 12 blue wrens. The next day she spotted 16 crimson rosellas. On the third day she saw 9 magpies. If the pattern continued, how many birds did she see on the sixth day?
- D. Erik works 20 hours a week at the library and is paid \$7.35 per hour. If he takes 2 weeks of unpaid vacation and works the remaining weeks, how much money will he make in a year?
- E. For a school fundraiser, Jackson needs to sell 40 boxes of cookies. So far, he has sold 15 boxes of lemon cookies to his aunt, 10 boxes of chocolate cookies to his mother, and 5 boxes of oatmeal cookies to a neighbour. How many more boxes of cookies does Jackson need to sell? If each box costs \$3.50, how much will Jackson earn if he sells all of them?

## \*REFLECTION

How did the Peter Maher strategies help you?

## \*EXTENSION

Rewrite the worded problems using the same facts but add some more detail to make them more difficult.

## Spelling

<i>multiplication</i>	<i>straight</i>	<i>successful</i>	<i>composting</i>	<i>mathematical</i>	<i>neighbour</i>
<i>logically</i>	<i>strategies</i>	<i>happening</i>	<i>continued</i>	<i>Crimson rosellas</i>	<i>reflection</i>