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| PASS SHIELD | Problem Solving Template 1 The main ideas for the following template were obtained from [www.openmiddle.com](http://www.openmiddle.com) |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Other Members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
For you will need to complete the first two attempts individually. Write your mathematics but also what you learned and what you will try that is different next time. What you try next should link to what you learnt out of the attempt.

|  |  |  |
| --- | --- | --- |
| **First Attempt /2** | **What did you learn from it? /2** | **What will you try next? /2** |
|  |  |  |
| **Second Attempt /2** | **What did you learn from it? /2** | **What will you try next? /2** |
|  |  |  |

For the next three attempts you will need to combine your individual thinking on this task with one or more others in the class. Look at what you each learnt and come up with another three possibilities, this time think about what you learnt as a group and what you agreed to try next.

|  |  |  |  |
| --- | --- | --- | --- |
| **Third Attempt /2** | | **What did you learn from it? /2** | **What will you try next? /2** |
|  | |  |  |
| **Fourth Attempt /2** | | **What did you learn from it? /2** | **What will you try next? /2** |
|  | |  |  |
| **Fifth Attempt /2** | | **What did you learn from it? /2** | **What will you try next? /2** |
|  | |  |  |
| PASS SHIELD | Problem Solving Template 2 The main ideas for the following template were obtained from [www.robertkaplinsky.com](http://www.robertkaplinsky.com) | | |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Other Members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Question(s)** – These questions form the basis for the task. Everyone is expected to do the main task. The enabling prompt is a small extra task that will help you to understand the main task better. The extending prompt is a small extra task to get you thinking more deeply about the main task.

|  |  |  |
| --- | --- | --- |
| **Enabling Prompt (if given)** | **The Main Task** | **Extending Prompt (if given)** |
|  |  |  |

**Estimates** – Estimation is a good way to start many problems. In forming your estimates make sure they are strong by providing a narrow band of possible answers.

|  |  |  |
| --- | --- | --- |
| **An answer which is too low** | **An answer which is too high** | **My estimate** |
|  |  |  |

**Information** – Look at the question(s) that you have been provided with. Think about the information and put it into one of the provided sections below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Information that is useful** | | **Information that is not useful** | **Extra information that I need** | |
|  | |  |  | |
| **My Thinking, Calculations and Working** | | | | |
|  | | | | |
| **Conclusions Reached** | | | | |
|  | | | | |
| PASS SHIELD | Problem Solving Template 3 The main ideas for the following template were obtained from <http://simerr.une.edu.au/quicksmart/pages/index.php> | | |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Other Members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sense – Does your answer make sense? Can you justify your answer? Is there a more efficient way of solving it?

Search – What are you being asked to find out? Underline key words and information.

Select – Select the information and method you will use to solve the problem. Is it the only way?

See – Do you need to draw the problem? Is there a diagram that you can add to?

Solve – Can you estimate the likely answer? Can you model your solution?

The Question

Sort – What information is helpful or not helpful? What other information do you need?

|  |  |
| --- | --- |
| PASS SHIELD | Problem Solving Template 4 The main ideas for the template were obtained from <https://www.tes.com/teaching-resource/maths-problem-solving-template-6137370> |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Other Members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- | --- | --- |
| **The Problem/Situation** | | | |
|  | | | |
| **Gather/Organise** | | **Identify** | |
| Make a list of what you know. | | What do you need to find out? | |
| **Generate and Decide** | | | |
| What can you do to work it out? Tick what you will try. | | | |
| **Implement and Communicate** | | | |
| Show and describe how you worked it out here. | | | |
| **Evaluate and Learn** | | | |
| How well did your idea work and what did you learn? | | | |
| PASS SHIELD | Problem Solving Template 5 The main ideas for the template were obtained from <https://www.youtube.com/watch?v=a-Fth6sOaRA> | |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Other Members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **The Problem/Senario** | |
|  | |
| **I notice…….** | **I wonder…….** |
|  |  |
| **My Thinking about the Problem** | |
|  | |
| **Conclusion** | |
|  | |