

# **Habits of Mind**



## **Applying Past Knowledge To New Situations**

### **Students' Handouts**



## Applying Past knowledge to New Situation

### *Remember, Transfer and Apply I use what I already know*

Intelligent humans learn from experience. When faced with a new and confusing problem, they will recall and apply experiences from their past. They can often be heard to say, "This reminds me of..." or "This is just like the time when I..." They explain what they are doing now with reference to their experiences. They call upon their store of knowledge and experience as sources of data to support, theories to explain, or processes to solve each new challenge. They are able to abstract meaning from one experience, carry it forth, and apply it in a new situation.



**Teachers are often dismayed when they invite students to recall how they solved a similar problem previously and students don't remember. It's as if they have never heard of it before, even though they had just worked with the same type of problem just recently.**

### **"Episodic grasp of reality"**

Too often, students begin each new task as if they were doing it for the first time. It seems each experience has no relationship to what has come before or what comes after, and that each event in life is separate and discrete, with no connections to what may have come before or with no relation to what follows. Their learning is so isolated that they seem unable to draw forth from one event and apply it in another situation.

Relevant learning involves making connections. It means drawing on prior experience and past knowledge to understand and see the relevance of new concepts. This enhances students' success in the following ways:

- It helps students build on a body of knowledge rather than just accumulate information.
- It helps students learn how to apply concepts from one course or level to another and from school to work.
- It transforms rote learning to relevant learning.
- It stimulates critical thinking skills.
- It makes education meaningful by relating concepts to real life.

**Model Profession.**

**The archaeologist** exploring an ancient ruin needs to use their background knowledge to piece together history. Even though they may know what an ancient fossil or building is supposed to look like, each discovery is a new adventure for them as they uncover the traces of the past.

**Quotations for the habit:**

*Accessing prior knowledge;  
transferring knowledge beyond the  
situation  
in which it was learned.  
Use what you learn*

**"Look back to learn how to look forward."**

**Joe Girard**

**"Life must be understood backwards.  
But it must be lived forward."**

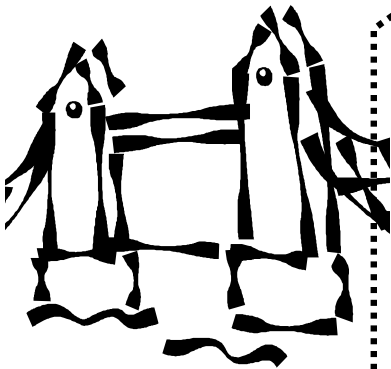
**Soren Kierkegaard**

**"Life is divided into three terms—that which was,  
which is, and which will be.  
Let us learn from the past to profit by the present, and  
from the present  
to live better  
in the future."**

**Wordsworth**

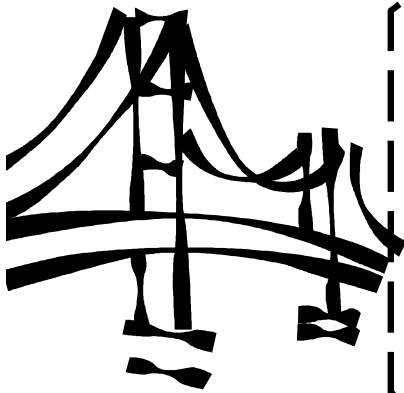
# Habits of Mind: Applying Past Knowledge to New Situations

## Discussion on Mega Structure



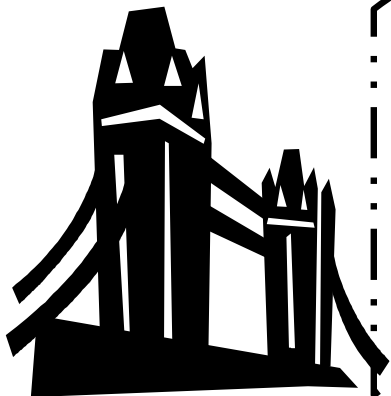
1. What contributed to the success of the construction of this bridge?

A large, empty rectangular area with a dotted border, intended for a student's response to question 1.



2. What past knowledge did the engineer apply in the construction of this bridge?

A large, empty rectangular area with a dashed border, intended for a student's response to question 2.



3. What other habits are exhibited in this video clip?

A large, empty rectangular area with a dash-dot border, intended for a student's response to question 3.



**Group Activity 1 :**

**Design a logo for the habit 'Applying Past Knowledge to New Situations'**

A large, empty rectangular frame with a thick black border. The top-left and bottom-left corners are decorated with elegant scrollwork, while the top-right and bottom-right corners are rounded. This frame is intended for students to draw a logo for the habit 'Applying Past Knowledge to New Situations'.

**Group Activity 2: Choose any one of the following tasks to work on.****Option 1:**

- Carry out a survey/research to find out any one of the following:
  - 1 (a) The BMI (Body Mass Index) of your classmates.
  - 1 (b) (i) How frequently do your classmates eat fast food within a period of one month?  
(ii) What restaurants do they patronise? What type of fast food do they eat?
  - 1 (c) What is The Food Pyramid and what constitutes a balanced diet?
  
- Prepare an oral presentation to present the following:
  - a graphical representation of your findings,
  - your recommendation for a more healthy life-style,
  - how you have applied this habit in your process of completing the task.
  
- Some internet sites for your reference:
  - 1. BMI Calculator  
<http://www.nhlbisupport.com/bmi/bmicalc.htm>
  
  - 2. Food Pyramid  
<http://www.nal.usda.gov/fnic/>

**Option 2:**

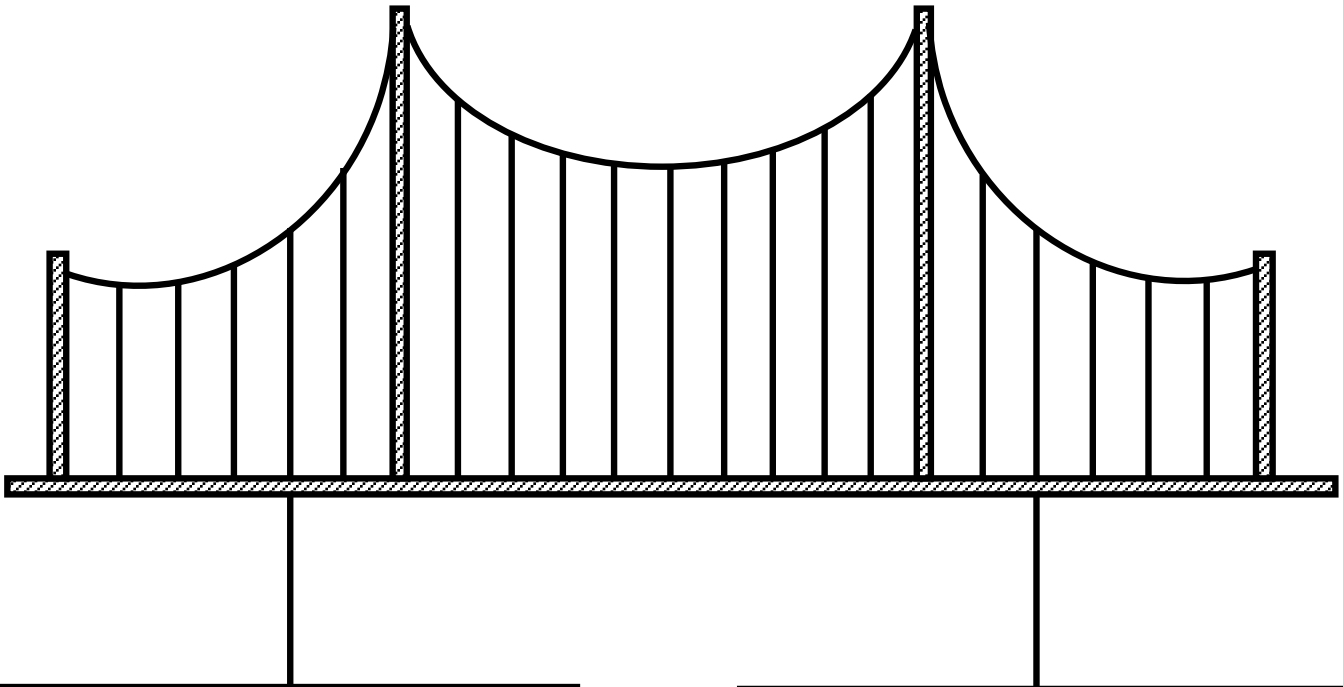
- Choose one of the following stories to work on:
  - Three Little Pigs
  - Little Red Riding Hood
  - Cinderella
  - Snow White & the Seven Dwarfs
  - Sleeping Beauty
  
- Rewrite the story, using the same characters but with a different plot
  
- Present the story in Pictorial Form  
eg. Cartoon Sequence or Role Play the characters you have newly created

**Option 3:**

- Plan a program to orientate the secondary one students for their first day in school. The following questions may help in your planning.  
On your first day in school
  - How did you feel?
  - What were you afraid of or worried about?
  - What would you like to know about the school?
  - What kind of help were you looking for then?
- Present your Sec 1 Orientation Program.
- Explain the connections between your past experience and the program proposed.

**Option 4:**

- Choose one of the following to work on:
  - (a) compose a script for a pop show
  - (b) translate the lyrics of a song from one language to another.
  - (c) convert a pop song to a rap.
- Give a presentation to class.

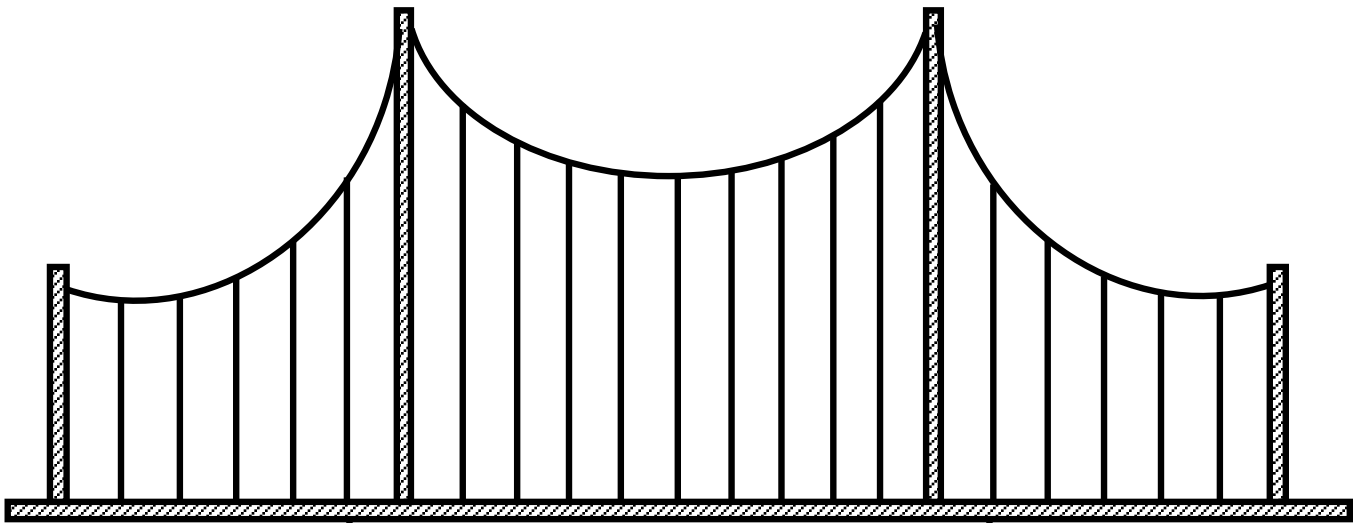
**BRIDGE MAP 1(a)****What you already know...**

- 1 measurements of height and mass
- 2 able to perform arithmetic operations  
(+, -, ×, ÷)
- 3 able to group data in table form
- 4 draw pie chart/bar chart
- 5 meaning of terms like 'average' and 'mode'

**What you need to do...**

- 1 find the definition of BMI
- 2 work out the BMI of the class
- 3 design a statistical presentation
- 4 interpret the results obtained

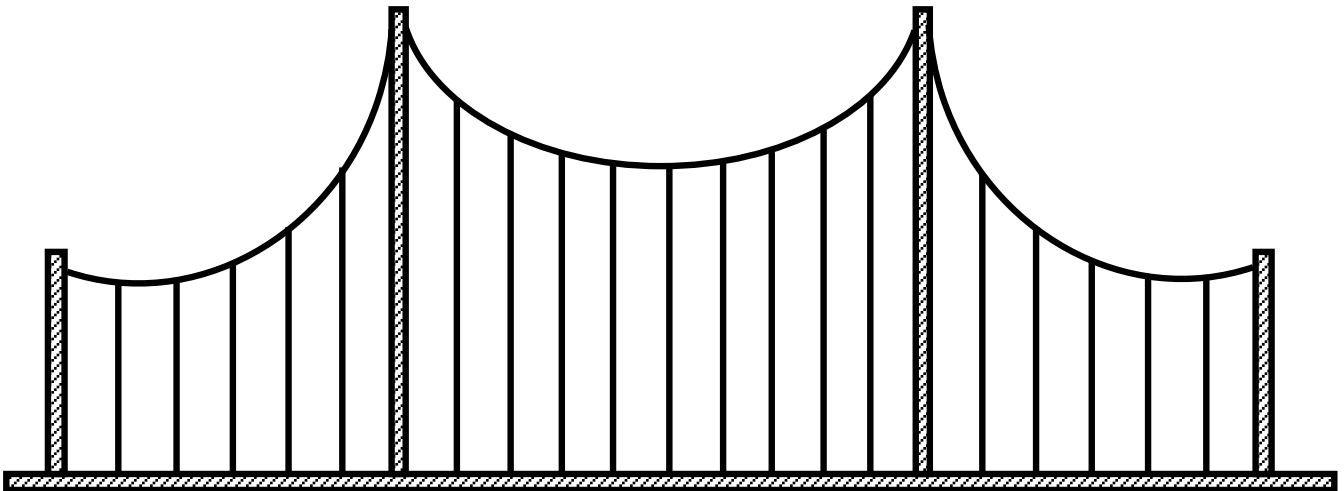


**BRIDGE MAP 1(b)****What you already know...**

- 1 types of restaurants
- 2 types of fast food
- 3 able to do a survey
- 4 know how to draw a table
- 5 knowledge of bar chart, pie-chart, average and mode

**What you need to do...**

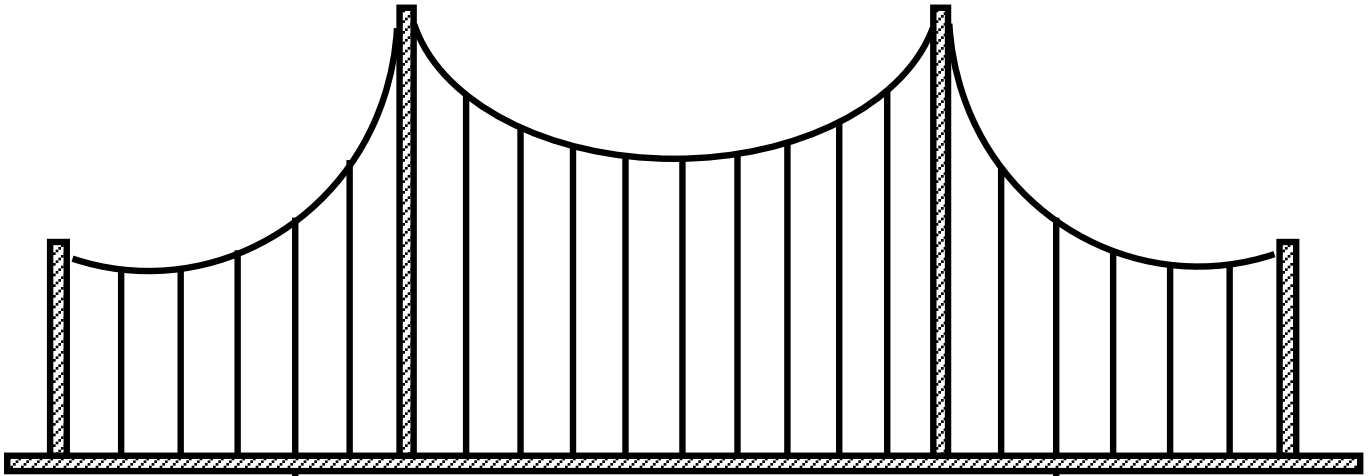
- 1 collect data from classmates
- 2 organise data in a table
- 3 relate the frequency of fast food consumed to pupils' weights
- 4 present data in an interesting manner

**BRIDGE MAP 1(c)****What you already know...**

- 1 different classes of food
- 2 sources of each class of food
- 3 function of each class of food
- 4 what is a balanced diet

**What you need to do...**

- 1 find out more about a Food Pyramid
- 2 draw a Food Pyramid
- 3 recommend each class of food for a balanced diet

**BRIDGE MAP 1(a)**

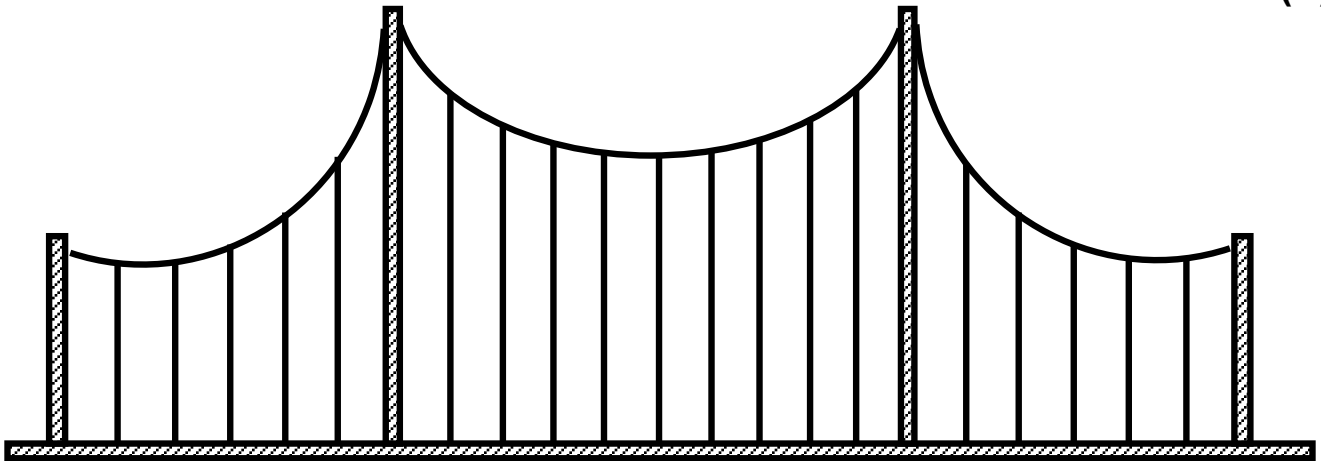
What you already know...

- 1 measurements of height and mass
- 2 able to perform arithmetic operations (+, -, ×, ÷)
- 3
- 4
- 5

What you need to do...

- 1 find the definition of BMI
- 2
- 3
- 4

2 Express

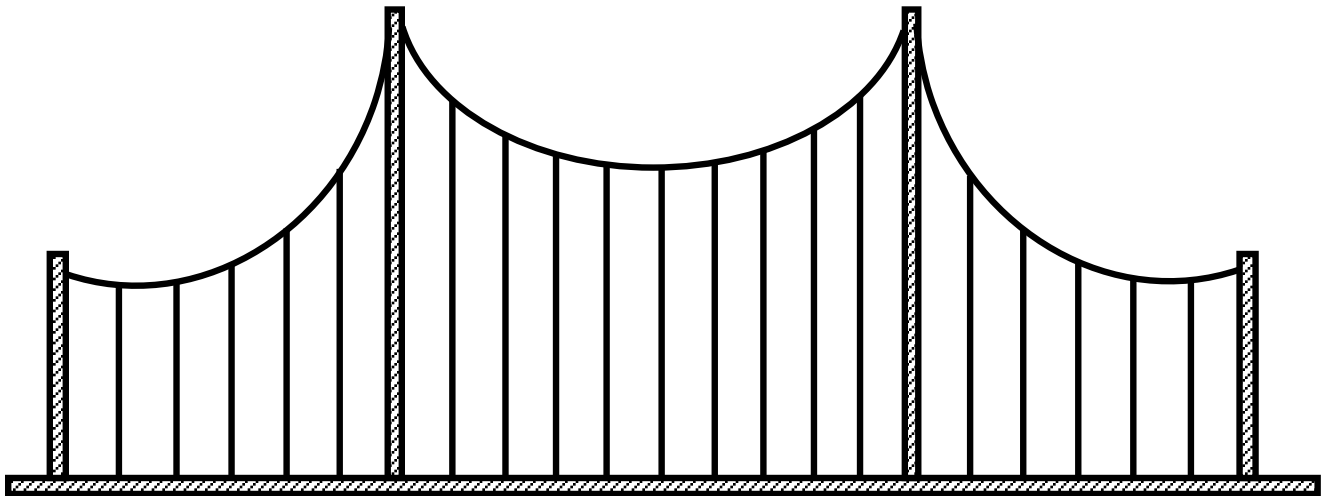
**BRIDGE MAP 1(b)**

What you already know...

- 1 types of restaurants
- 2 types of fast food
- 3

What you need to do...

- 1 collect data from classmates
- 2

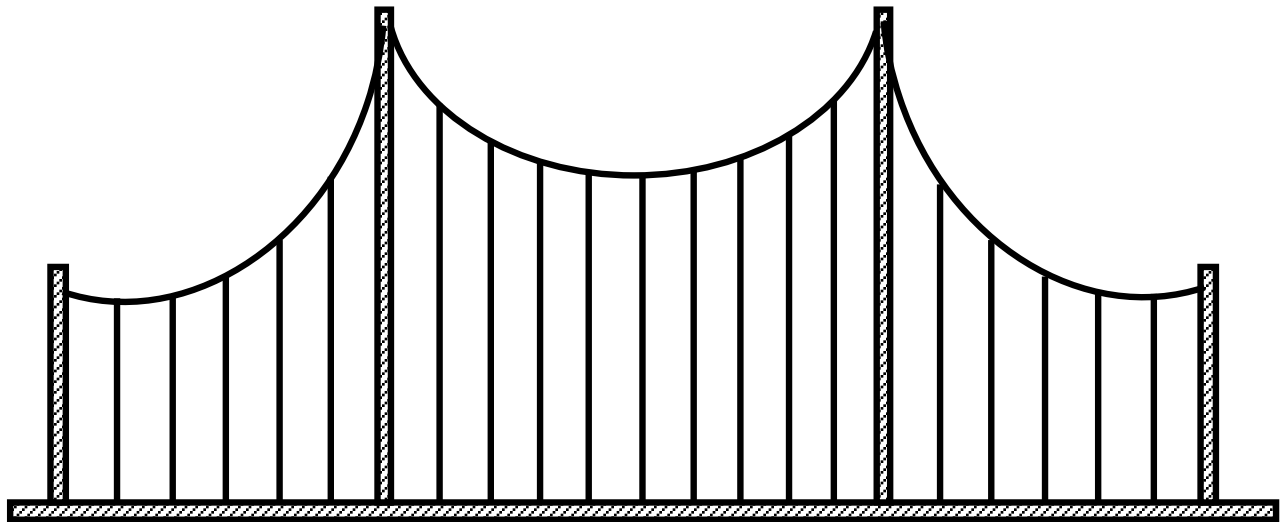
**BRIDGE MAP 1(c)****What you already know...**

- 1 different classes of food
- 2 sources of each class of food
- 3
- 4

**What you need to do...**

- 1 find out more about a Food Pyramid
- 2

## BRIDGE MAP for Option 2



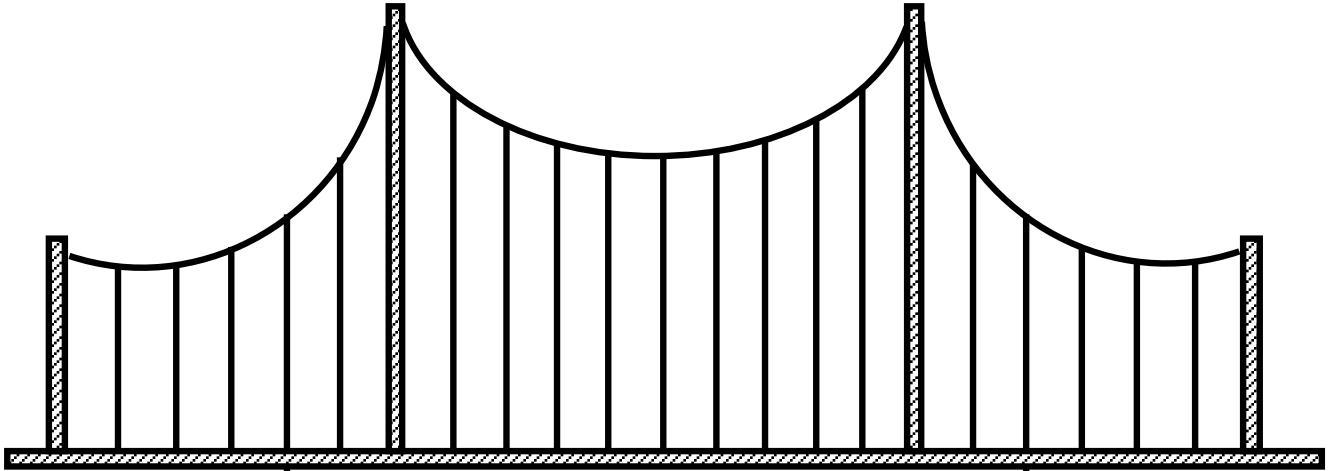
### What you already know...

- 1 the characters in story and their characteristics
- 2 what happened to the characters in the story
- 3 the ending of the story

### What you need to do...

- 1 list the characters in the story and their characteristics
- 2 decide which characters to change/ behave in the new story
- 3 decide on the new ending

## BRIDGE MAP for Option 3



What you already know...

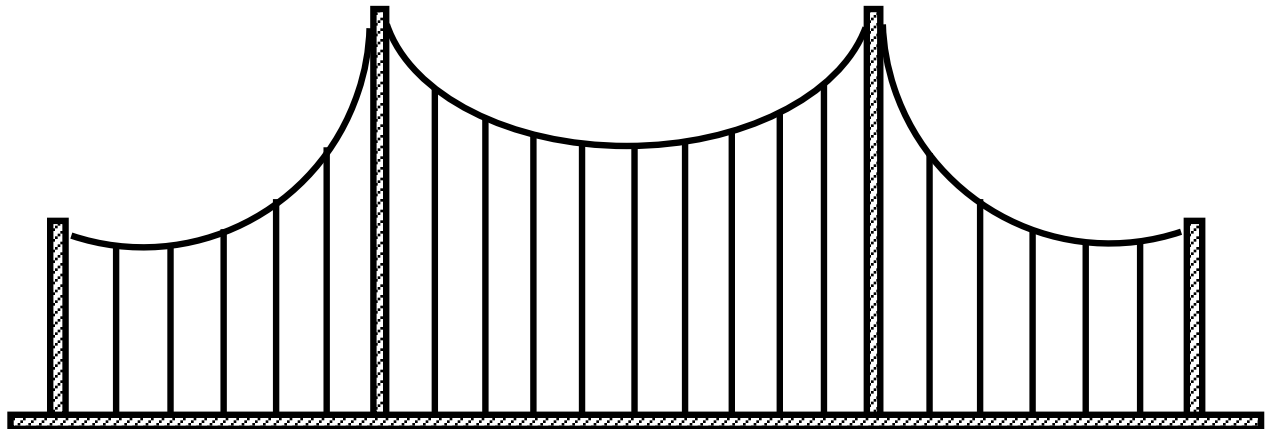
1 feeling of Sec 1 pupils on their first day of school:

2 Information that Sec 1 would like to have:

What you need to do...

Plan the Sec 1 Orientation Program

## BRIDGE MAP for Option 4



What you already know...

1. the lyrics of the song.

What you need to do...

- 1.



**Habits of Mind: Applying Past Knowledge to New Situations**

**My Reflections and Thoughts**

**Understanding this habit of mind helps me**

**I observed that my friend practises this habit when he/she**

**I can use this habit more frequently in**



**APPLYING PAST KNOWLEDGE TO NEW SITUATIONS****How Are You Doing?****SEC 2NA/NT**

- 1 You are invited to your friend's house and you do not know how to go. What would you do?  
 A. Take a cab there.  
 B. Check the street directory and plan which bus to take.  
 C. Forget it - don't go. ( )
- 2 You are given a new MP3 player for your birthday. You really have no idea how to use it. What would you do?  
 A. What is a MP3 player?  
 B. Ask my friend who also has a MP3 player.  
 C. Read the instruction manual and try to understand it. ( )
- 3 You come across a Mathematics problem solving question in the exam that you do not know how to do. So you  
 A. try to recall the formula you need and use it to solve the question.  
 B. write some irrelevant stuff just to make your teacher happy.  
 C. give up on the question and sleep. ( )
- 4 You are working part time in a fast-food restaurant. One day, a customer wants to be served first, even though he is last in the long queue. You would  
 A. run to your supervisor for help.  
 B. try to use the tips your supervisor has taught you.  
 C. quit from this restaurant straight away and apply for another job. ( )
- 5 You are asked to organize a camp for your CCA and you have no idea how to start. So you  
 A. try to remember how your last camp was run and make improvements.  
 B. will find other members to help run the show.  
 C. just do it, don't care if it's well-run or not. ( )
- 6 Your parents are away for a long holiday and you are alone at home with your pet fish. You have run out of clothes to wear, so you need to do your own laundry. But, alas, you do not know how to use the washing machine. What would you do?  
 A. Reuse the dirty clothes.  
 B. Beg your neighbour to wash for you.  
 C. Think very hard the steps your mother takes to operate the machine. ( )
- 7 When you watch TV serials, what do you normally do?  
 A. Try to predict the ending based on previous serials you have seen.  
 B. Discuss with friends and bet on the ending.  
 C. Who cares about the ending? It's only make-believe. ( )
- 8 How often do you recall your previous experience and apply it to a new situation?  
 A. Most of the time.  
 B. Often.  
 C. Once in a while. (You never realize you can do that) ( )

<b>Scoring:</b>	<b>Qn 1, 4:</b>	<b>Option A – score 1</b>
		<b>B – score 2</b>
		<b>C – score 0</b>
	<b>Qn 2, 6:</b>	<b>Option A – score 0</b>
		<b>B – score 1</b>
		<b>C – score 2</b>
	<b>Qn 3, 5 7, 8:</b>	<b>Option A – score 2</b>
		<b>B – score 1</b>
		<b>C – score 0</b>

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**If your score is:**

- 12 – 16 :** Congratulations! You are really good at using this habit (though you may not be aware of it). This is an asset for you in life. You are able to learn fast as you apply a vast store of experience and knowledge to new situations.
- 7 – 11 ;** You can be a little more independent in tapping your own store of knowledge, rather than relying on those around you.
- 0 – 6 :** You are, by nature, a quitter. Will there be any success in life if you give up so easily, before you even get started?
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