Name of Strategy:	Frames
Organising Element: Higher order thinking	Graphic organiser

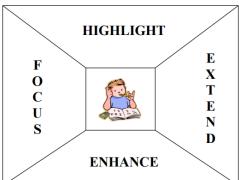
#### **Purpose of Strategy:**

Frames is a graphic organiser that can be used in a variety of ways. Frames can be selected to highlight, extend, enhance and focus attention on the core curriculum.

The use of frames can help students:

- Focus on the Big Idea
- Clarify and deepen understanding
- Guide thinking towards analysis and evaluation, synthesis and creativity
- Work collaboratively in groups
- Explore the discipline of mathematics

# Frames can be used to:



## **Description of Strategy**

- 1. Place the concept to be examined in the centre of the frame (Diagram 1a: Template; Diagram 1b. Template for gifted learners)
- 2. Dimensions of the concept are placed in the four bordering quadrants. These are designed to explore the concept and extend learning. (Diagram 2: Problem solving)
- 3. Icons of depth and/or complexity can be placed into each of the quadrants so that students can respond to the topic through the lenses of the icons. (Diagram 3: Creative Arts; Diagram 4: Bases; Diagram 5: Part numbers)
- 4. Frames can also be used to assist students to engage in the dispositions and language of the discipline. (Diagram 4: Think like a mathematician)



Year levels: Primary

Diagram 1a: Template

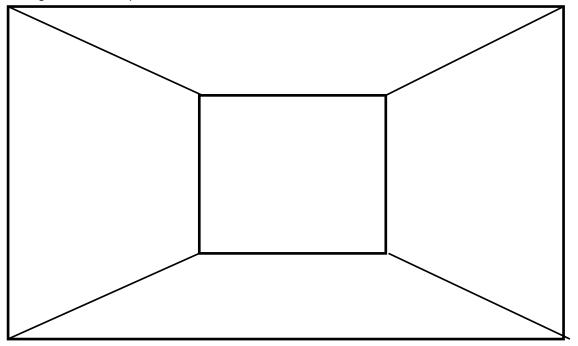


Diagram 1b: Template for gifted learners

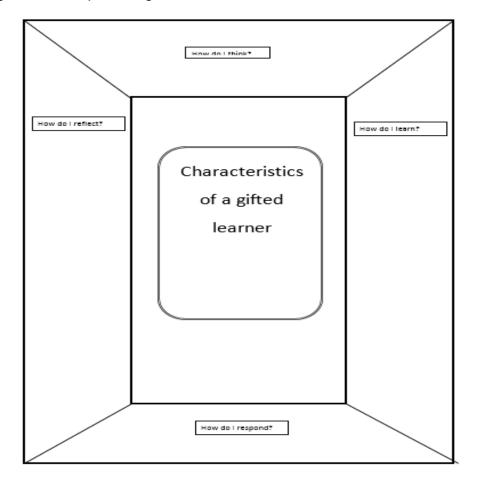


Diagram 2: Problem solving

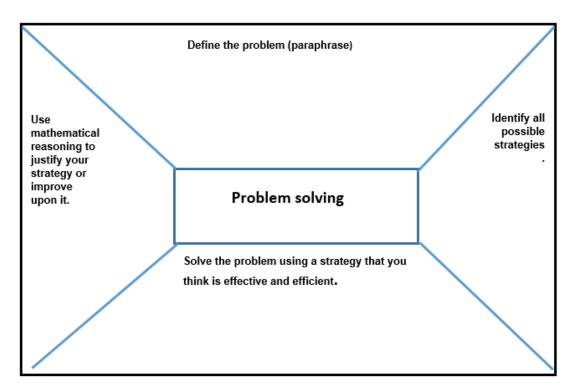
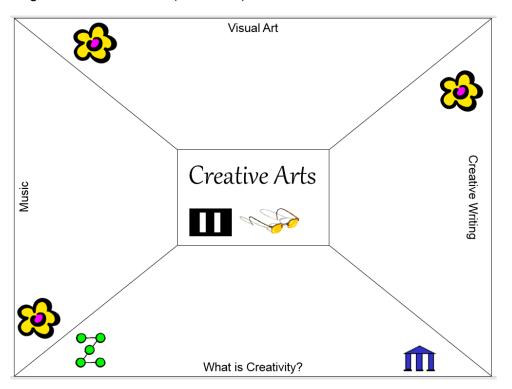


Diagram 3: Creative Arts (with icons)



### Diagram 4: Bases (with icons)

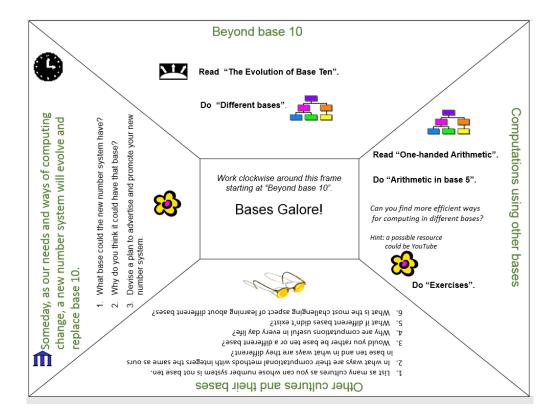


Diagram 5: Part numbers (with icons)

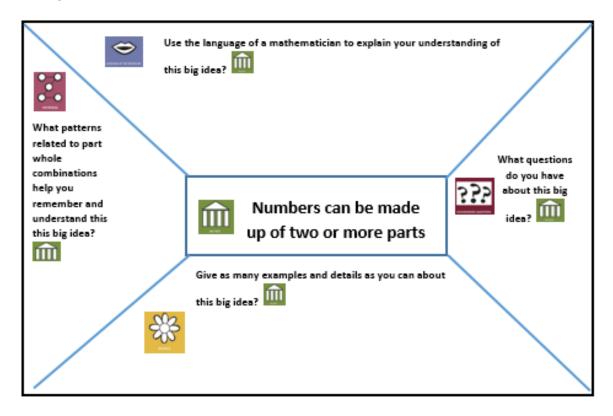


Diagram 6: Think like a mathematician Think like a Mathematician or one who ... Apply or use the Use these language of the products of a mathematician: describe what you are studying. Think Problem Language describing solving attributes: strategies like a Attributes of: measurement Accuracy number mathematician geometry Vocabulary for data communication probability Estimation Language of gradation Application Language of analysis, and Understanding evaluation Reasoning Language of creativity Questions Fluency Use these skills of a mathematician: estimate, operate, calculate, reason, apply, problem solve, investigate, reason, strategize, conclude, test, find trends, pattern, question, prove, generalise, predict, connect, relate, compare, order, sequence, match, represent, communicate

#### References:

Frames were developed by Dr Sandra Kaplan and Bette Gould. A complete description of the uses and designing of Frames may be found in their book: Frames differentiating the core curriculum

Kaplan, S. & Gould, B., 1998, Frames differentiating the core curriculum, CA, Educator to Educator Inc.

Further information may be found at J.Taylor Education, <a href="http://www.jtayloreducation.com/">http://www.jtayloreducation.com/</a>

Brydseed, I., (2016) <a href="http://www.byrdseed.tv/frames-language-arts/">http://www.byrdseed.tv/frames-language-arts/</a> Retrieved 23/11/2017

Adapted from: I am a Mathematician-Torry Too

C. Grzesik, Seymour College, Used with permission.