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EMTH 200 Micro-Teaching Template:
Adapted from Madeline Hunter and Barrie Bennett's <u>Beyond Monet</u>

Mathematical Topic: Addition	**Grade(s):** 2 **Note: This lesson can be adapted to fit higher grade levels**
Saskatchewan curriculum objective(s): N2.2: Demonstrate understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by: • creating and solving problems involving addition and subtraction • estimating • using personal strategies for adding and subtracting with and without the support of manipulatives • analyzing the effect of adding or subtracting zero • analyzing the effect of the ordering of the quantities (addends, minuends, and subtrahends) in addition and subtraction statements.	

Source of Task (Author, title, page #)
Erica, Matt, Mettao, M., Maryanne, & DebRoy, S. (2018, March 19). Can Your Kids Solve the Magic Triangle Math Puzzle? Retrieved from https://www.whatdowedoallday.com/magic-triangle

Why this task? [How does it connect to the curriculum objective(s)? How does it involve problem solving?]
• Having the students add multiple numbers together will help them develop an understanding of solving problems with multiple addends. • The task will encourage students to practice estimating and using personal strategies for adding. • This task will encourage students to pay attention to the ordering of quantities and develop an understanding of how they affect each other. Moreover, they will strategize number placement.

Objective(s) [Important knowledge & skills the lesson will develop in an effort to help students develop deep conceptual understanding]	

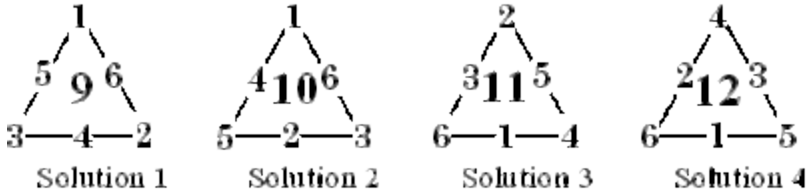
• Students will know...
  ○ Basic addition
  ○ The term "strategize"
  ○ The term "add" (or any variation of it – plus, put together, etc.)
	• Students will be able to...
	  ○ Practice critical thinking skills and mental math
	  ○ Strategize number placement
	  ○ Make estimations and practice adding skills
	  ○ Check their final answers by calculating each side of the triangle

Assessment: [How will you know what they've learned? How will you evaluate their problem solving?]
• Students will be able to justify/support their solution by demonstrating the sums of each side of the triangle. • Students will communicate their strategies and thinking with their peers.

Required Resources & Materials
• Copies of triangles and numbers o https://www.whatdowedoallday.com/wp-content/uploads/2016/04/magictriangles-1.pdf

Stage	Teacher Activity	Student Activity
Set-up (instructions)	Teacher will model the activity in front of the class to ensure comprehension. Answer any questions that students may have. After, the teacher will provide each student with a triangle and set of numbers.	Students will ask questions about the task that they may have.
Implementation of task	The teacher will circulate the room to ensure that students fully understand the task and to offer students support, guidance, or prompts. Observe for any misconceptions or errors and ask students to verify. If there are students who finish early, encourage them to try solve for another sum or offer them a triangle with more blank spaces and numbers.	Students work independently on task.
Class discussion	Teacher will ask students to find a person in the room with the same sum to compare triangles. The teacher will facilitate discussion by asking students what they notice. Some prompts may include: - Your sums are the same, but are the numbers in each circle the same? - Why do you think the numbers are different?	Students will discuss, compare, and contrast their strategies and solutions in pairs. After, they will share their findings with the whole group.

Possible difficulties and nudges	Students might struggle with adding multiple numbers together. • Provide students with scrap paper or manipulatives for support. • Provide them a sum to begin with. For students who require additional support, have some numbers already filled in as a nudge.

Possible solutions	All sides must have the same sum to be considered a solution. Examples:  Magic triangle (mathematics). (2018, December 16). Retrieved from https://en.wikipedia.org/wiki/Magic_triangle_(mathematics)