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| **Subject:** | Mathematics |
| **Title:** |  Building an Arena |
| **Grade Level:** | 5 |
| **Purpose:** | * Students will use their knowledge of measurement – capacity, perimeter, surface area etc. to construct/build a Hockey Canada arena.
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| **Curricular****Connections:** | * Design and construct different rectangles, given either perimeter or area, or both (whole numbers), and make generalizations.
* Demonstrate an understanding of measuring length by:

-modeling and describing the relationship between mm, cm and m units.* Demonstrate an understanding of volume.
* Demonstrate an understanding of capacity.
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| **Materials:** | * Pencil, ruler, eraser
* Paper, construction paper or visual journal
* IPads, chrome books, desktops etc.
* Building materials (Cardboard, containers, construction paper, scissors, glue etc.) \*For extension activity.
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| **Activity:** | 1. As a class, brainstorm how measurement is necessary to build a Hockey arena. Ask students what type of measurements will be needed (Perimeter, surface area, area, volume and capacity). Also, the shapes that will be involved (rectangle, square, oval etc.)
2. As a class (or in partners) you with the students or the students themselves will research hockey arenas. In particular the size of the rink, how many people can fit in the rink (capacity) etc.
3. In partners, using their research of hockey arenas and their knowledge of measurement, will design a hockey arena.
4. Students will sketch their arena and provide all the necessary measurements and calculations on their paper.
5. Teachers can provide a list (surface area, capacity, volume, perimeter etc) for their measurements, calculations and sketches or have them use a visual journal or blank paper/construction paper.
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| **Extension:** | * Students can provide different forms of measurement for the ice surface (in feet and inches, cm’s, mm’s and m’s). As well as when calculating the volume of the ice (ml’s, l’s etc.)
* Students can build a hockey rink to scale. They will use their previous knowledge, calculations and sketches.
* Can provide more information required, such as parking, location, ticket prices etc.
* Students can find the measurement of red line, blue lines, goal lines, circles etc.
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| **Assessment:** | 1. Anecdotal: How well are students explaining how they solved for their answers.
2. Product: Students will hand in their work. Showing their sketches, measurements and calculations.
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