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| **Subject:** | Mathematics |
| **Title:** |  Building an Arena |
| **Grade Level:** | 6 |
| **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:** | * Develop and apply a formula for determining the:
* area and perimeter of rectangles
* Solve problems involving whole numbers and decimal numbers.
* Describe, compare and construct 2-D shapes,

 including:* Triangles
* Squares
* Rectangles
* Circles
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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 2-D shapes that will be involved (rectangle, square, circles 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), the shapes used to build an arena and that are seen on the ice (rectangles and circles).
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 for their measurements that need to be included, 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, 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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