Overview

We live in an interconnected world; our actions and activities impact living conditions for others both locally and globally. In 2000 the United Nations drafted initial Millennium Goals (**http://www.un.org/millenniumgoals/**) to improve quality of life. Recently, these goals were revised, focusing on issues of environmental sustainability, happiness, and well being.

Frugal innovation refers to removing nonessential features from a solution in order to make it as widely applicable as possible. Of primary concern is achieving the highest quality at the lowest cost. Experts suggest frugal innovation may provide the best approach to reducing the complexity and cost of finding solutions to global challenges impacting our global community. It is suggested that frugal innovation may be one of the best ways to achieve the new Millennium Goals (**https://www.unicef.org/innovation/frugal**).

Design Rationale

As Canadians, we enjoy an enviable quality of life—clean water, expectation of safety, strong government, etc. We expect that these qualities will be sustained, maintained, and even improved. However, concerns related to environmental sustainability increasingly impact our life. It is important that we find solutions to our problems that respect environmental sustainability at local and global levels and continue to provide the quality of life that is important to us. A challenge in the future will be how we can sustain our values and lifestyle, maintain a sense of happiness and well being, and address the concerns that face us, in ways that are respectful of larger contexts.

Problem Scenario

Your team has been selected to look at sustainability issues in your region. Your team must choose an issue that resonates with you and develop a prototype to address the concerns raised by that issue. The issue that you choose should have an impact on the day-to-day quality of life for an identified group in your region. The solution should also increase their happiness, be frugal in design, and have little impact on the environment.

Success Determinants

Success will be determined by the degree to which your design solution:

❒ Addresses the issues suggested in the design challenge

❒ Uses some of all the consumable items found in the participant group kit provided

❒ Introduces the functional elements from the appropriate technologies bar and enhances your prototype

❒ Demonstrates accurate measures and cuts with careful fabrication

❒ Aligns with your design sketch
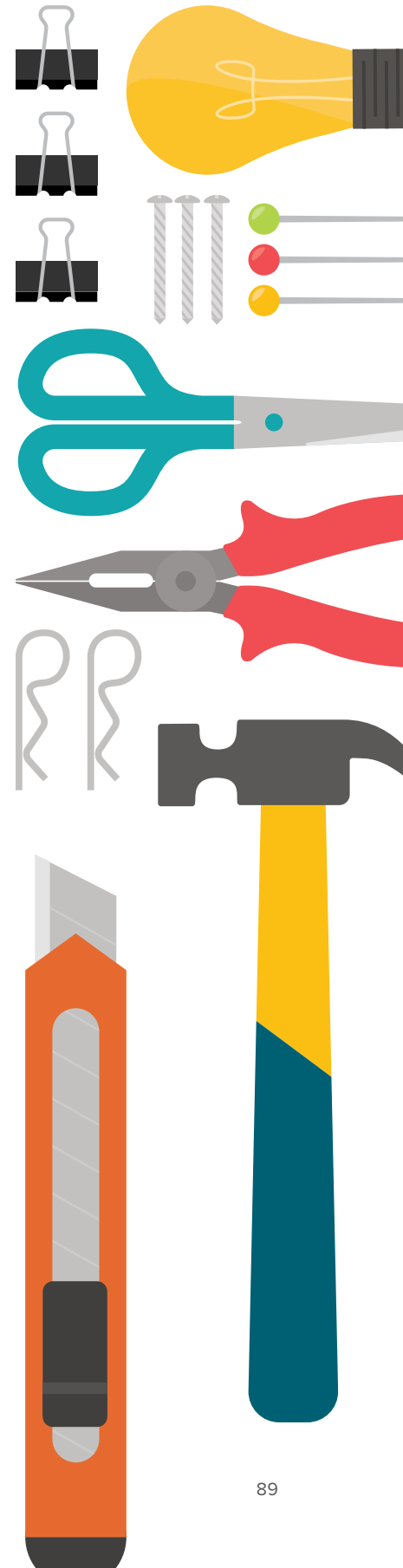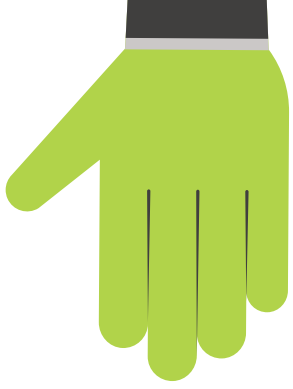
Parameters

❐ Plan how to use something of every consumable item in the participant group kit provided.

❐ Use materials found in the shared pantry to aid your group in the development your solution.

❐ Use the tools that have been provided at the shared tool station.

❐ Incorporate at least three (3) functional elements enabled by components from the appropriate technologies bar, and your team must be prepared to explain how these components support your prototype.