Brainstorm solutions to the problem. List all ideas – don’t hold back! Discuss and select the best possible solution.

Define the problem and how it is affecting life globally, nationally, and locally. Research and consider how others have approached solving the problem. Describe why this problem needs a solution. Determine constraints (e.g., time, space, resources, etc.).

Diagram the solution. Identify the materials needed to build the prototype. Write out the steps to take. Describe the expected outcomes.

Follow the design plan and build the solution.

Test the design and collect quantitative and qualitative data. Discuss results and compare with the expected outcomes. Seek areas of improvement and make changes where needed.

Communicate what was learned. Share the design, data, and conclusions. Present results.