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## Appendix 4.5: Crystals and Crystal Growing

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### A. Rock Candy Sugar Crystals

This is a popular activity because students can grow large edible sugar crystals. This activity can also be done at home.

#### Safety Precautions

If crystals are to be eaten, use only clean household equipment. If crystals are to be observed only, laboratory glassware could be used.

#### Materials

- ½ cup (125 mL) water
- small saucepan
- short length of white string
- pencil
- 1 cup (250 mL) granulated sugar
- small nut or paper clip (to act as a weight)
- wooden spoon
- measuring cup
- tall glass
- hot plate

#### Procedure

1. Clean all equipment thoroughly before use.
2. Tie a small nut or paper clip to one end of a clean piece of white string and tie the other end of the string to a pencil. The string should be just long enough to touch the bottom of the glass when the pencil is resting across the top of the glass.
3. Pour the sugar and water into the saucepan and stir to dissolve as much of the sugar as you can at room temperature. Heat the mixture on the hot plate, stirring constantly. Continue heating until all the sugar is dissolved.
4. Pour the hot syrupy solution into the glass. Hang the string, weighted down with a nut or paper clip, into the solution.
5. Set the glass and contents aside, covered loosely with a piece of paper, in a place where it won't be disturbed. Check the solution daily. Break up any crust that forms on the surface so that water can continue to evaporate as crystals grow along the string.