Spun Sugar

* Recipe
  + 75mL water
  + 50mL light corn syrup
  + 250mL granulated sugar
* Step by step directions:
  + 1: Set Up:
    - Prepare workstation by taping 3-4 wooden dowels to the edge of a table. Cover the workstation and floor with foil or newspaper so that nothing is exposed except the dowels. Dowels must be wooden to prevent sticking. Line a dry sheet with parchment paper and set aside. Have a candy thermometer, spatula, fork and bowl of cold water ready.
  + 2: Cooking the syrup:
    - In a medium sized sauce pan with heavy bottom add: water, corn syrup and sugar. Make sure all of the sugar is touching the water, but not touching the sides of the pan. Set over medium-high heat. Do not jostle or stir. Allow the sugar to dissolve on its own. When it starts to bubble, periodically wash down the sides of the pan using the spatula. When the sugar starts to bubble mix continuously for 6-12 minutes or until the mixture reaches 293F or 145C.
    - When the sugar mixture reaches the correct temperature remove from heat and plunge bottom of pan into ice water for 5 seconds.
  + 3: Making the spun sugar:
    - Allow the sugar to cool in the pot until it reaches the viscosity of honey. Dip a fork into the pot, raise it up and allow it to fall in a narrow stream. Allow the syrup to stream over dowels as you move the fork back and forth rapidly. Work quickly. Gently loosen the strands from the dowels before the syrup is completely hardened. Carefully gather into a ball using cool, dry hands. Place on prepared sheet.
  + 4: Storage:
    - Use as soon as possible. Will begin to melt from moisture in the air in as little as one hour. Storage can be prolonged by keeping in airtight containers
* Precautions:
  + Be careful when working with hot sugar. It is very dangerous because sugar reaches very high temperatures that can burn the skin. Also, because of sugar’s sticky nature, if it gets on you when hot it will stick to the skin and continue to burn for as long as it is on you. It is difficult to remove quickly.
  + Make sure to wear long pants and shoes when working with sugar, so that if any is dropped you are protected.
  + Watch the pan carefully at all times to ensure sugar does not bubble over or get tipped.
  + Make sure not to splash or spill sugar mixture. Take extra care when pouring and washing utensils that have sugar on them.
* Clean up:
  + Clean quickly with hot water. Hot water will heat up the sugar and melt it so that it is easier to remove.
  + Remove any large pieces of sugar and put into the garbage.
* Caramelization:
  + What it is:
    - Non-enzymatic browning
    - A process that occurs when heating carbohydrates
    - It leads to a desirable colour and flavour in baked goods, coffee, beer and peanuts.
  + Steps:
    - 100C – evaporation of water
      * Sugar is melted and impurities rise to the surface
    - 102C – small thread
      * No colour, no flavour change
      * Used in frostings
    - 104C – large thread
      * No colour, no flavour change
      * Used in preservatives
    - 110-115C – small ball
      * No colour, semi-soft cooling, no flavour change
      * Used in cream candies, fondant, fudge and marshmallows
    - 119-122C – large ball
      * No colour, firm cooling, no flavour
      * Used in soft caramels
    - 129C – light crack
      * No colour, firm cooling, no colour change
      * Used in semi-hard candies
    - 165-166C – hard crack
      * No colour, hard cooling, no flavour change
      * Used in butterscotch and hard candies
    - 168 - Extra hard crack
      * Slight colour, shatters like glass during cooling, no flavour change
      * Used in hard candies
    - 180C – light caramel
      * Pale amber to golden brown
      * Rich flavour
    - 180-188C = medium caramel
      * Golden brown to chestnut
      * Rich flavour
    - 188-204C –dark caramel
      * Very dark, bitter, smells burned
      * Used for colouring but not for flavour
    - 210 – black jack
      * Also known as monkey’s blood
      * Sugar breaks down to pure carbon
      * Burning scent and flavour