

# CRYSTAL CREATIONS

## GLASS SHARDS

### Ingredients

- cup or small, deep bowl
- 1/2 cup of Epsom salt
- 1/2 cup of hot water

### Instructions

- 1) Pour the salt and water into the cup or bowl.
- 2) Stir the solution for about a minute to dissolve the salt. There will be a few undissolved crystals at the bottom.
- 3) Place the cup into the fridge. Within about 3 hours, needle-like crystals will form.

### Tips

- Using boiling water results in thread-like needles. Controlling the temperature of the water control the concentration of the solution.
- You can place a small object (ie. a coin) at the bottom of the cup to make removing it easier.
- Don't drink the solution. It's not toxic, but not good either.

# SHIMMERY SNOWFLAKES

## Ingredients

- string
- wide-mouthed jar
- white pipe cleaner
- Borax
- pencil
- boiling water
- stove or microwave
- scissors
- optional:
  - > food colouring

## Instructions

- 1) Cut the pipe cleaner into 3 equal sections and twist them together at their centres to form a six-armed snowflake shape. Make sure the snowflake can fit in the jar and trim it down if it doesn't.
- 2) Tie one end of the string to one arm of the snowflake, then tie the other end of the string to the centre of the pencil.

- 3) Fill the jar with the boiling water and add in Borax, one tablespoon at a time, stirring to dissolve after each addition. The solution should be 3 tablespoons of Borax per 1 cup of water. Add food colouring if you wish.
- 4) Suspend the snowflake into the solution with the pencil sitting horizontally across the top of the jar, forming a 'T' shape. The snowflake should be completely submerged and not touching the sides or bottom of the jar.
- 5) Set the jar aside overnight. Hang the completed snowflake in the window to catch sunlight.

## Tips

- Because of the use of boiling water and Borax, adult supervision is needed.

# ROCK CANDY

## Ingredients

- 3 cups of sugar
- 1 cup of water
- clean glass jar
- cotton string
- pencil
- pan
- stove or microwave
- optional:
  - > food colouring
  - > 1/2 -1 tsp of flavouring oil/extract

## Instructions

- 1) Pour sugar and water into pan. Bring mixture to a boil and stir constantly until all sugar dissolves. Don't overheat and make the mixture hard and ensure that it becomes clear and not sparkly.
- 3) At this point you may add food colouring and/or flavouring. Remove the pan from the heat and place into fridge to cool.

- 4) Tie one end of the string to the middle of a pencil. Dampen the loose end of the string with a bit of the syrup and then dip it in sugar. For a chunkier rock candy, soak the string in the syrup and then hang it to dry.
- 5) Pour the cooled syrup into the clean glass jar, then suspend your sugared string into the syrup with the pencil sitting horizontally across the top of the jar, forming a 'T' shape. Ensure that the string does not touch the sides or bottom of the jar.
- 4) Set the jar aside in a quiet area for 3-7 days or until you are happy with the size.

## Tips

- Help your crystal grow by removing (or eating) the sugar crust that may form on the top of the liquid.
- Keep it clean from dust by storing the growing crystal with a paper towel on top.
- If storing the finished rock candy, coat with confectioner's sugar to prevent it from becoming sticky.

# GREAT GEMS

## Ingredients

- table salt
- boiling water
- clean clear container
- piece of cardboard
- string
- pencil

## Instructions

- 1) Stir the salt into the boiling water until no more salt will dissolve (you will notice crystals collecting at the bottom of the container).
- 2) Quick Gems: soak the piece of cardboard in the solution, then place on a plate in a warm, sunny place to dry out.
- 3) Perfect Gems: tie the string to the middle of the pencil, soak the loose end of the string in salt solution, then hang to dry. Pour the dissolved portion of the solution into the container and suspend the string into the solution with the pencil sitting horizontally across the top of the

jar, forming a 'T' shape. Ensure that the string does not touch the sides or bottom of the jar.

- 4) Set the container aside to allow the crystal to grow.

## Tips

- Experiment with different types of table salts (ie. iodized, uniodized, sea, or substitutes) and different types of water (ie. tap or distilled) and compare. Use uniodized salt and distilled water for 'Perfect Gems'.
- You are more likely to get a perfect gem, rather than a mass of smaller ones, if you allow it to grow slowly in a cool, shaded, and disruption-free location.

# DIY DIAMONDS

## Ingredients

- 1/2 cup of hot tap water
- 2.5 tbsp of alum
- nylon fishing line
- pencil
- 2 clean jars
- spoon
- paper towel

## Instructions

- 1) Pour the water into a jar and stir in the alum slowly, little by little, until no more alum can be dissolved.
- 2) Place a sheet of paper towel over the jar and set aside undisturbed overnight.
- 3) Pour the solution into the second jar. You will see small crystals at the bottom of the jar. These will start the growth of your diamond.
- 4) Tie one end of the nylon fishing line around the largest and best-shaped of these crystals and the other end to the centre of a pencil.

- 5) Suspend and fully submerge the crystal into the jar with the solution with the pencil sitting horizontally across the top of the jar, forming a 'T' shape. Ensure that the string does not touch the sides or bottom of the jar.

- 4) Set the container aside to allow the crystal to grow and until you are satisfied with the size.

## Tips

- If you see other crystals forming on the side or bottom, carefully remove your diamond, pour the solution into a new jar, and rehang the diamond in the new jar.