Science Ambassador's Winter Activity Mat

Winter snow storm in a jar

The Snow Storm Experiment – make your very own snow storm in a jar! A new take on the homemade lava lamp experiment! Observe the chemical reaction that happens when the tablet is dropped into the cup.

https://littlebinsforlittlehands.com/winter-snow-storm-in-a-jar-science/

What's the best material for a paper chain?

Try making a paper chain using sticky tape and different kinds of paper: tissue paper, crepe paper, different kinds of gift wrap. You might want to try other materials too! (Tinfoil might be interesting.) Which paper chain is strongest? Try pulling gently on each one and see which is hardest to break. Make a long chain out of your chosen material to decorate your house!

Snowman milk

Frosty the snowman is back in town!
This is a lovely colour changing experiment

https://littlebinsforlittlehands.com/winter-magic-milk-science-project/

Christmas boats

Oh No! Santa's sleigh has broken down and he needs to cross a river.
Build two different kinds of Christmas boats that will float and hold the weight of some decorative bells or other Christmas trinkets.
https://www.science-sparks.com/christmas-boats-sink-or-float/

Have you ever wondered why we put salt on the roads in winter?

https://youtu.be/RRWUhHoi8OA

Ice Fishing Science Experiment

Try fishing for ice cubes in an experiment that can be done no matter the temperature outside is. Everything you will need can be found in your kitchen.
Click on the link for details
https://littlebinsforlittlehands.com/ice-fishing-winter-science/

Grow Your Own Sugar Crystals

Growing your own sugar crystals is a great experiment for kids as you can observe the results over a few days and watch how the crystals form on lolly sticks. Who doesn't love science that you can eat? To make it even more fun, you experiment with different colours and flavours. How about peppermint for Christmas? Or including edible glitter? https://www.science-sparks.com/how-to-grow-sugar-crystals/

Gingerbread Bake Off STEM activity

Test the strength of the material used to join the house together (royal icing, marshmallow fluff, sugar syrup, golden syrup, water icing, butter icing)

https://www.science-sparks.com/gingerbread-house-test-for-strength/

Ice Art

You will need

Shallow containers, string, woodland items, a freezer

1. Collect acorn cups, pine needles and cones, leaves and feathers.
2. Place the string into the containers – make sure it overlaps the sides.
3. Now place your items into the containers.
4. Carefully pour cold water over the items.
5. Gently put the containers in the freezer overnight.
6. Remove your sculptures and hang them up outside.

An Ice Excavation Experiment

You are an Archaeologist. You are looking for fragile fossils. You come across something interesting in a glacier and you want to explore more. How are you going to keep the glacier frozen to preserve the fossil or how quickly can you get the fossil out so you can investigate it?

Choose which question you would like to investigate from below:

How long does it take for ice to melt and release the object inside it?

How can you keep ice from melting and releasing an object inside it?

Which place keeps the ice frozen for the longest or shortest period of time?

Prediction: Make a prediction as to what you think will happen.

Method:

1. In an ice cube tray or small containers, freeze 2 or 3 small toys e.g. Lego character, pebbles or small objects (anything that can get wet).
2. Place the ice cubes (on a plate or container so they don't wet the surface) in a variety of places in your house/garden.
3. Time how long it takes for the ice cubes to melt and the object to be freed or after a specific time period see which ice cube has melted the most.

Results:

What happened?

What did you find out?

Was your prediction correct/incorrect and why?