

**Ice Ice Ice Baby!**



Ideas for learning about Science at home and in Early Learning and Childcare. Collated by Charlotte Tennant.

**Creative Ice Painting**

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Method:

You can use ice cubes or fill balloons with water and put them in the freezer. Once frozen place either the ice cubes or balloons in a tray – cut off the exterior balloon (be aware of latex allergies). Fill pipettes with food colouring or paint and have fun watching the ice change colour and melt.

**By investigating how water can change from one form to another, I can relate my findings to everyday experiences -**

**Investigates the different properties of water and shares their findings with others (SCN 0-05a).**

**Drawing with Ice**

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Method

Add various colours of paint and water to individual ice cube trays then place a lollypop stick in the middle. Next freeze them. Once they have frozen tease them out and let the children explore mark making, writing their name or creating patterns such as shapes and numbers.

**Explore sounds, letters and words, discovering how they work together, and I can use what I learn to help me as I read or write.**

**ENG 0-12a / LIT 0-13a / LIT 0-21a*.***

**I have spotted and explored patterns in my own and the wider environment and can copy and continue these and create my own patterns - Copies, continues and creates simple patterns involving objects, shapes and numbers (MTH 0-13a)**

**Global Warming/Floating/Sinking**

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Method

Fill up water balloons or small containers with water and freeze them. Take them out of the freezer cut them out of the exterior balloons and place them in a water tray or basin. Add toy penguins and polar bears or any other small toy you have. (Available from Amazon etc. for around £6 a set). While your child is playing with these, you can talk together about global warming and its effects. Your child can also explore floating and sinking. They may notice that when the ice is frozen it falls to the bottom of the water tray due to its weight. As it melts it rises to the top.

**SCN 0-05a By investigating how water can change from one form to another, I can relate my findings to everyday experiences – identifying three main states of water (ice, water and steam) and uses scientific vocabulary such as ‘*melting’, ‘freezing’* and ‘boiling’ to describe the changes of state.**

**Penguins on Ice**

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Method

Fill up large trays with water and freeze them. Then fill up ice cube trays with water and place a penguin in each one (see link below to buy toy penguins). Tease the penguins out of the ice cube trays and place on the larger tray. Observe the children experience forces such as pushing and pulling, speed – faster and slower etc. You could freeze various sizes of penguins too so that the children can experiment with size and order.

**SCN 0-07A Through everyday experiences and play with a variety of toys and other objects, I can recognise simple types of forces and describe their effects – demonstrates, through play, how a force can make an object stay still, start to move, speed up, slow down and change shape.**

[https://smile.amazon.co.uk/Toyvian-Penguins-Adorable-Realistic-Figurine/dp/B07MBDTZP4/ref=sr\_1\_1\_sspa?crid=3KXNI5ZJA02WU&keywords=toy+penguins+plastic&qid=1585483429&sprefix=toy+pengui%2Caps%2C373&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUE4UkxaVDIzUjdEVTImZW5jcnlwdGVkSWQ9QTA4NTc4MTkxTVNVRzVJSFBLRkZGJmVuY3J5cHRlZEFkSWQ9QTA5MTg4NzJNUzBYNUZJQjJXVU8md2lkZ2V0TmFtZT1zcF9hdGYmYWN0aW9uPWNsaWNrUmVkaXJlY3QmZG9Ob3RMb2dDbGljaz10cnVl](https://smile.amazon.co.uk/Toyvian-Penguins-Adorable-Realistic-Figurine/dp/B07MBDTZP4/ref%3Dsr_1_1_sspa?crid=3KXNI5ZJA02WU&keywords=toy+penguins+plastic&qid=1585483429&sprefix=toy+pengui%2Caps%2C373&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUE4UkxaVDIzUjdEVTImZW5jcnlwdGVkSWQ9QTA4NTc4MTkxTVNVRzVJSFBLRkZGJmVuY3J5cHRlZEFkSWQ9QTA5MTg4NzJNUzBYNUZJQjJXVU8md2lkZ2V0TmFtZT1zcF9hdGYmYWN0aW9uPWNsaWNrUmVkaXJlY3QmZG9Ob3RMb2dDbGljaz10cnVl)

**Float the Boat**

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Method

Tie bands around three corks for the base. Place a blunt wooden skewer through between the last cork and add paper for the sail, punch two holes so the skewer can fit through the paper. Possible discussions could be floating and sinking. You could add objects to see if you can make the boat sink. Or add straws and blow to make them move. Children can use Plasticene/tin foil/recycled containers to make different boat designs and experiment to find out which shapes float or sink.

**SCN 0-07A Through everyday experiences and play with a variety of toys and other objects, I can recognise simple types of forces and describe their effects – demonstrates, through play, how a force can make an object stay still, start to move, speed up, slow down and change shape.**

**Ice Gardens/hanging Ice decorations**

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Method

Collect leaves, twigs and small flowers from the garden or local walk. Fill a shallow dish/plate with a rim with water and let the children add a variety of natural materials. Place a small piece of string at the top to hang it with, then place it in the freezer. You can also use recycled plastic tubs/ice cube trays and repeat the process – no string is needed this time. Creating beautiful ice decorations to display, you can hang these outdoors, for example in a tree. Children love to see it turning back to water as the ice melts.

**SCN 0-05a By investigating how water can change from one form to another, I can relate my findings to everyday experiences – identifying three main states of water (ice, water and steam) and uses scientific vocabulary such as ‘melting’, ‘freezing’ and ‘boiling’ to describe the changes of state.**

**I need a Hero!**

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Method

Freeze a toy hero figurine in ice. Use a paper cup. Tie a small piece of wire/ string/wool around their hands and around the cup to keep it in the middle of the cup then add water and freeze. Children love to save a super-hero. Children can use warm water, salt, or a hammer, chisel and goggles (please use tools safely) to free the superhero from the ice. You can make stories together about the superhero, how they got into the ice and how you rescued them. Your child could act out the story with other family members taking part as various characters.

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**As I play and learn, I enjoy exploring interesting materials for writing and different ways of recording my experiences and feelings, ideas and information – (Lit 0-21b).**

**Which will melt first?**



Method: Place ice into water trays and freeze. Take out the frozen ice cubes and pop them into baking trays. Each one is to be of equal measure. Put a small amount of salt into a cup. Fill different cups with a small amount of sugar, warm water and cold water. Ask your child to add a small amount of each ingredient to different ice cubes and leave one ice cube free from any ingredient. Ask the children to make predictions about which ice cube will melt first using which ingredient. For further challenge use stop watches/clocks etc. to see how long it takes – time each one and record it.

***I am aware of how routines and events in my world link with times and seasons and have explored ways to record and display these using clocks, calendars and other methods.***

***MNU 0-10a.***

**SCN 0-05a By investigating how water can change from one form to another, I can relate my findings to everyday experiences**

**Anyone can be an engineer** – let’s not stay frozen in time with gender bias attitudes - let’s educate young people and work together for a more neutral society.

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Method

Set up a tray and let the children experiment with sugar cubes building castles or bridges etc with toy characters from the Frozen movies. Let your child take the lead and invent their own stories. Add blue edible glitter and battery operated fairy lights/torches to encourage creativity. Another family member could video or take photos of the work and role play, then your child could swap and take turns of being the movie director.

**Inspired by a range of stimuli, I can express and communicate my ideas, thoughts and feelings through activities within art and design EXA 0-05a**

**Working on my own and with others, I use my curiosity and imagination to solve design problems. EXA 0-06**

**I enjoy taking photographs or recording sound and images to represent my experiences and the world around me. TCH 0-04b**

**Fruit Cubes**

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Place fruit into ice cubes and add them to your drinks – you could use watermelon, mint, lemon, orange, blueberries etc. Your child can help to prepare the fruit. Encourage them to hold the knife safely and show them how to use a claw grip to hold the fruit.

Talk with your child about the tastes as they enjoy their drink. What words can they use to describe the taste? Which one is their favourite? Encourage them to observe what happens to the ice cube over time.

**SCN 0-12a can identify my senses and use them to explore the world around me.**

**HWB 0-47b *-* Uses their senses to describe the world around them, giving examples of things they see, hear, smell, taste and feel.**

Please Note: All areas in bold throughout this booklet with a code e g (SCN 0-05a) are curricular outcomes relative to the Curriculum for Excellence.

We are aware that some of these items may not be in your home, but there will be other alternatives if you have a look around.

**PLEASE BE MINDFUL IN THESE TIMES TO BE RESOURCEFUL WITH WATER and other resources.**