**STEM Challenge – 1**

**Investigating Ice**

**Can you investigate the properties of ice using the following activities? These activities are suitable for all the family so you can work together.**



*Task 1 - Explore*

* Put a few items in a small container and then fill it with water. These could be small toys such as lego or natural resources such as stones.
* Put the container in the freezer and leave until the water is frozen.
* Remove the container from the freezer and leave it to sit for 5-10 minutes until the ice loosens and then tip it out onto a tray or plate.

How can you rescue your toy? Experiment with different methods.

*Task 2 - Investigate*

Using ice cubes can you investigate what is the best method to melt ice?

Choose one or more of these options to test:

* Temperature – leave ice cubes in a container in different place (in the sun, in the shade, in the fridge etc)
* Type of liquid – water, salt water, oil, milk
* Size of ice cube – do smaller ice cubes melt quicker?



*Learning Tools*

Early Level – Nursery/P1

Allow your child to explore frozen block and take the lead from them. Some questions to ask your child to prompt learning:

* Can we use tools such as a spoon to rescue the toys?
* What happens if we pour cold water on the ice?
* What happens if we use warm water instead?
* Do you think salt will help the water melt?
* What is working the best?
* What would be the fastest way to rescue the toys?

First Level – P2/P3/P4

* Can you explain why the water has frozen? How do you know the water is frozen?
* Use the questions above to think about what you have learned in Task 1.
* What are you going to test in Task 2?
* What do you think the results will be?
* Can you record what happened? You could write a few sentences or draw a picture.
* What did you learn?

Second Level – P5/P6/P7

When completing the tasks use the following investigation tools:

* Prediction – What do you want to test? What do you think the results will be?
* Measuring – how can you measure your results? For example using a stopwatch.
* Fairness – How do you make sure your results are reliable? What will you keep the same in your experiments and what is the one thing you will change?
* Recording – How can you record your results?
* Conclusion – What have you learned from completing your experiments? What would you do differently next time?

Choose one of your experiments to share. You could write a report, take photos or make a poster.