

Ice Excavation

A great way to engage your child in a physically challenging experience is to create blocks of ice containing interesting objects. Your budding scientist can then chip away to uncover the treasure within.

How to Do It

Ask your child to help you fill the plastic container with water. Look around the house with your child for interesting toys and other objects or materials. Add them to the container of water and place in the freezer overnight.

When the ice is frozen, carefully run a little hot water around the bottom of the container so that the ice slides out. Put the block of ice in the bucket or roasting dish.

Using the hammer or meat tenderizer, discuss hammer safety and the importance of the goggles and listening to instructions and demonstrate chipping away at the ice in order to access the treasure. Spoons can be used to assist with digging and scraping away the ice.

Alternatively, put your block of ice in an open container and leave to melt over the day. There are wonderful opportunities to talk to your child as the ice slowly melts away and the objects are revealed.

What Learning is Occurring?

- Development of fine motor skills and upper body strength as your child grips the hammer and meat tenderiser and hammers the ice.
- Hand eye coordination – as your child directs and connects with their object
- Language skills – talk with your child about what you did to make the water freeze and what is happening to the ice as it is hammered and gets warmer. Use words such as *cold*, *frozen*, *melting*, *solid* and *liquid*.
- Scientific concepts – when water freezes it becomes solid (ice), when it melts it becomes a liquid and becomes water again. the ice slowly melts away and the objects are revealed.

Things you will need

- A plastic container
- Water
- Interesting objects from around your home like flowers, bark, plastic animals etc.
- Low sided plastic bucket or a roasting dish
- A light hammer or meat tenderiser
- A metal spoon
- Safety or swimming goggles
- Space in your freezer

Tips

- This experience needs to be supervised by an adult and the introduction of a tool such as a hammer clearly demonstrated and discussed.
- Repeat this experience using your child's ideas about what they would like to embed in the ice.
- Designate a 'hammer spot'. Perhaps use a brightly coloured, folded tea towel as a visual reminder to place the hammer carefully when it is not being used, e.g. when they put it down to use their fingers or a spoon

Age Considerations

- You might combine this experience with a treasure hunt to help find items to freeze and excavate. For younger children you could hunt together and use photos to encourage them to find items in familiar places.
- For older children a written list of things to find, or a list with symbols for non-readers. Consider other fun technological additions you could create in a treasure hunt. E.g. QR codes with a QR app, voice or video prompts or a rhyming game. "*Go and find something that sounds like 'phone' – Yes, go and find a stone!*"
- Take photos (or an older child might draw pictures) of the materials chosen to freeze. Make a list together and children can mark off what they discover as they go. E.g. photos of different plastic dinosaurs to find. Budding Palaeontologists might identify these, and younger children might give them creative new names. to your child as the ice slowly melts away and the objects are revealed.

