

If It Doesn't Freeze

As we get nearer winter, we can look forward (?) to frosts. Surfaces like roads and pathways become very slippery if there is water present because the water has turned into ice. Nan gets to X-ray some people who have fallen over on icy paths and broken bones.

In countries with cold winters like Europe and the USA they spread salt over the road to stop water from turning into ice on the road



What you need

- Containers (beware – some containers break when ice freezes in them)
- Water
- Salt
- Freezer

Some background for parents (so you don't waste endless salt)

% salt solution	Freezing Point (°C)
0	0
10	-6.5
20	-16.5
26	-19

What to do

- Put equal amount of water in each container
- In first container put only water
- In second container add one measure of salt. What is a measure – depends on amount of water. It could be a tablespoon of salt or two tablespoons of salt. That's why we call it an experiment.
- In the third container add two measures of salt
- Put all containers in the deep freeze and see how long it takes the water to freeze

What do you see?

Question – does sea water freeze? Why or why not?

You Tube clip

The audio is not loud enough but it does give you ideas on how to do it

<https://www.youtube.com/watch?v=-nCDcsb43Uk>

