



## Spacey Spin-offs

Sneakers and space technology have more in common than you might think. In 1990, an athletic shoe manufacturer used space technology to create a new sneaker mid-sole, which showed no visible signs of

wear after the equivalent of almost 650 km (400 mi.) of running.

Over the years, space technology has found its way into everyday life here on Earth. These secondary uses of space technology, called spin-offs, include an advanced pacemaker and wheelchair,

infrared thermometer, computer reader for the blind, retail store bar codes, quartz timing crystals, household smoke detectors, radiation-blocking eyeglasses, self-righting life raft, portable computer, heart rate monitor, scratch-resistant sunglasses coating and cordless products.

## CRYSTAL GROWING FOR EARTHLINGS

Using salt, you can grow crystals right here on Earth — although they won't be perfectly formed like the ones the 'nauts grow in microgravity. Make sure you look at the shape of the Epsom salts crystals before you add them to the water. Use a magnifying glass so you can see them clearly. After your crystals grow, look at *their* shape.

### You'll need:

- ★ 125 mL ( $\frac{1}{2}$  c.) water
- ★ 50 mL ( $\frac{1}{4}$  c.) Epsom salts (bath crystals)
- ★ a shallow container or dish
- ★ a sponge (optional)

**1** Get an adult's help to carefully boil the water in a pot. Remove the pot from the heat and add Epsom salts. Stir until dissolved.

**2** Pour the mixture into a shallow container. There should be just enough to cover the bottom. (You can pour the mixture over a sponge if you want. It will make the crystals a bit easier to see, because they will form around the sponge.)

**3** Put the container in a safe, sunny place. As the water evaporates, crystals will start to form.

### What's Happening?

You boil the water because salts dissolve in hot water better than in cold water. As the solution evaporates, salt crystals are left behind on the sponge or in the container. What shape are the salt crystals you grew?

