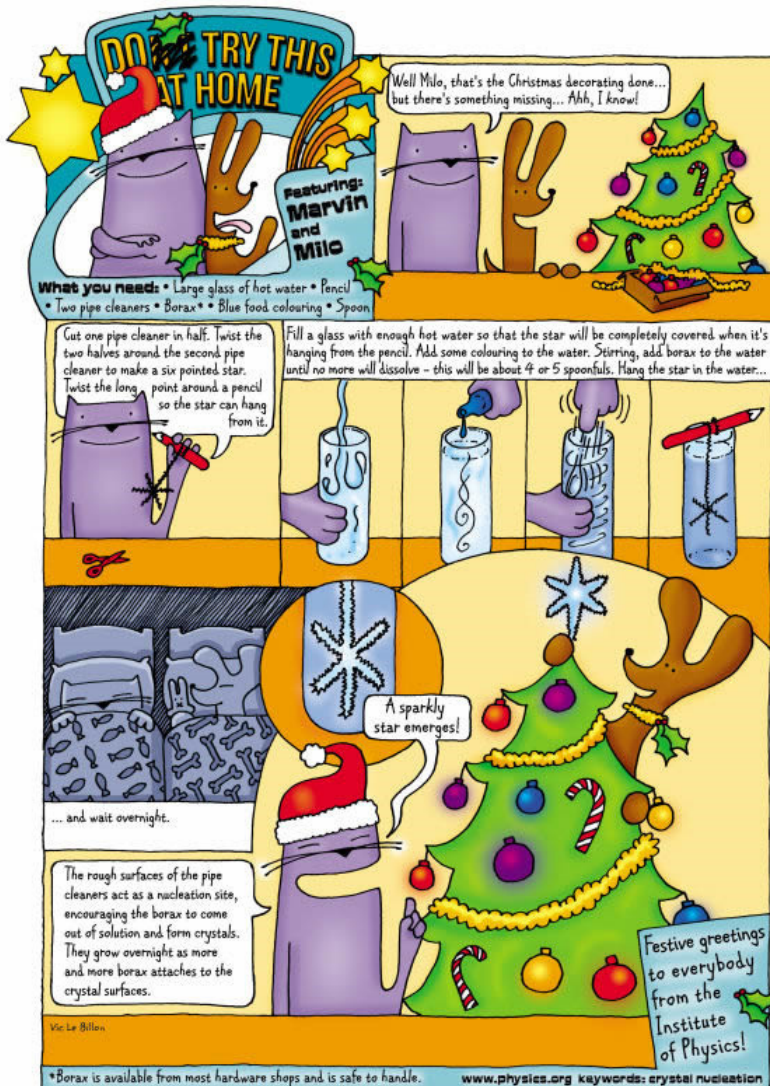


# An Institute of Physics Idea



**DO TRY THIS AT HOME**

Featuring: **Marvin and Milo**

Well Milo, that's the Christmas decorating done... but there's something missing... Aah, I know!

**What you need:** • Large glass of hot water • Pencil  
• Two pipe cleaners • Borax\* • Blue food colouring • Spoon

Cut one pipe cleaner in half. Twist the two halves around the second pipe cleaner to make a six pointed star. Twist the long point around a pencil so the star can hang from it.

Fill a glass with enough hot water so that the star will be completely covered when it's hanging from the pencil. Add some colouring to the water. Stirring, add borax to the water until no more will dissolve - this will be about 4 or 5 spoonfuls. Hang the star in the water...

... and wait overnight.

The rough surfaces of the pipe cleaners act as a nucleation site, encouraging the borax to come out of solution and form crystals. They grow overnight as more and more borax attaches to the crystal surfaces.

A sparkly star emerges!

Festive greetings to everybody from the Institute of Physics!

\*Borax is available from most hardware shops and is safe to handle.

www.physics.org keywords: crystal nucleation