Dr. Seahorse Searches for Polaris

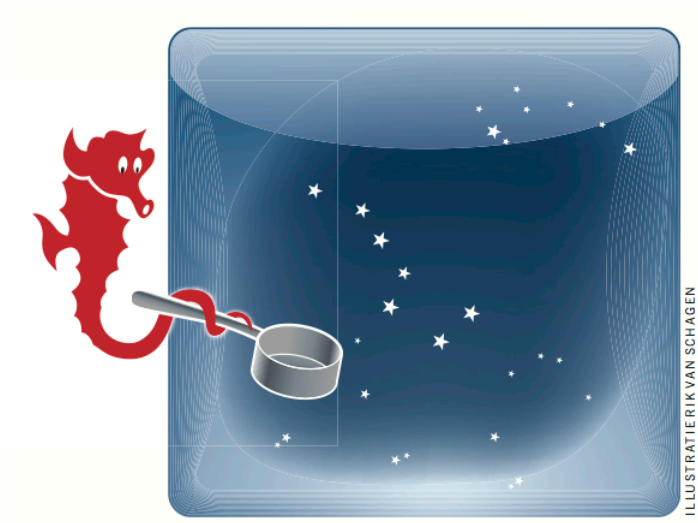
How can you find your way when it is really dark at night? Well, just look up!

What do you need?

– A clear, cloudless night sky (on a grass field for example) and the constellations Ursa Major and Ursa Minor.

How to do it?

- When it is completely dark outside, look for an open spot or field where the (street)lights won't bother you.
- Look up to the sky and search for the seven stars in the shape of a long-handled saucepan, that shape is called the Big Dipper. You may also know this constellation as the Ursa Major, but actually the Big Dipper is only a part of the Ursa Major, which consists of more stars.
- Look for the two stars that form the outer side of the pan (furthest from the handle). Draw an imaginary line through these two stars.
- Extend this line upwards (out of the pan) about five times its length until you hit another, bright star.
- This star is called *Polaris*. It is the outermost part of another constellation, called the Little Dipper, or Ursa Minor.
- Now remember the position of these stars.



- Come back to the open spot a couple of hours later and search for the Polaris in the same way as you did before. Repeat this before you go to bed. Do you notice anything special?

How is that possible?

The stars seem to move across the sky, just like the Sun does. But it is actually the Earth that is moving! As the Earth is rotating around its own axis, it looks as if the stars and the Sun are moving instead. But why does Polaris stand still? That is because Polaris is positioned exactly above the rotation axis of the Earth, above the North Pole! This is very convenient when you are lost at night: just look for Polaris, then you will know which way north is!

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