

## **Mirror, Mirror, on the Wall ... [Activity]**

Beware of treating this activity too lightly. Nearly all your students will fail to distinguish between mirror size and image size. They all know image size is less with increased distance – which it is. But mirror size is also, in the same proportion. So a half size mirror lets you see your full size image at any distance. This is evident in a pocket mirror that you can hold near or far. You'll see a part of your face that's twice the height of the mirror.

The question often arises why a mirror inverts left and right but not up and down. Well quite simply, it doesn't reverse left and right; the hand on the east is still on the east – the reason for this misunderstanding has mainly to do with left right convention of the human body. What *is* inverted is back and front. That person facing you in the mirror points to the east when you do, and looks upward when you do. The only difference is his or her nose is pointing in a direction opposite yours. So front and back are inverted, not left and right.