Nanotechnology size and scale

Further activities on nano chemistry size and scale can be found in the RSC publication Contemporary chemistry for schools and colleges, London: Royal Society of Chemistry, 2004

Name	Symbol	Number in standard form	Image
Terametre	Tm	10^{12} m	Bigger than the diameter of the solar system, less than the distance to the closest star
Gigametre	Gm	10^{9} m	The sun is 1.5 Gm across.
Megametre	Mm	10^{6} m	Earth
Kilometre	km	10^{3} m	Angel Falls, Venezuela – 980 metres
Hectometre	hm	10^{2} m	Football pitch
Decametre	dm	10 m	Orca
Metre	m	1 m	Royal Python snake
Centimetre	cm	10^{-2} m	Width of a fingernail
Millimetre	mm	10^{-3} m	Mite
Micrometre	µm	10^{-6} m	Bacterium
Nanometre	nm	10^{-9} m	Buckyball – approximately 1 nm
Picometre	pm	10^{-12} m	Atom diameters range from 30–600 pm

Nanotechnology – size and scale

Look at the images below and decide which best represents the unit. One has been done for you as an example.

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Terametre	Tm	10^{12} m	
Gigametre	Gm	10^{9} m	
Megametre	Mm	10^{6} m	Earth
Kilometre	km	10^{3} m	
Hectometre	hm	10^{2} m	
Decametre	dm	10 m	
Metre	m	1 m	
Centimetre	cm	10^{-2} m	
Millimetre	mm	10^{-3} m	
Micrometre	ìm	10^{-6} m	
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Picometre	pm	10^{-12} m	

Orca (killer whale)

Bacterium

Insect mite

Football pitch

Diameter of the sun

Distance to nearest star

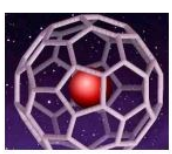
Royal python snake

?

Too small for any image...

Angel falls, Victoria

Earth



Bucky ball

Width of a fingernail