

SAA LECTURE No C4

UNDERWATER NAVIGATION



Natural Navigation

Cold can affect your senses in relation to bottom and surface
Murky water=low visibility
Sound travels faster underwater
On land – two dimensional
Underwater – three dimensional
No datum point – zero gravity

Topographical Navigation

An experienced diver is aware of tidal flow and how it affects navigation underwater

Sand ripples – which way they lie
Underwater vegetation – movement
Seaweed – the way it lays – all indicate the diver's route
Shelving seabed indicated increasing depth
Large and unusual objects underwater can aid in navigation.
A diver must always change direction the same way. If no current the diver should return to the starting point
10 fin strokes, change direction
10 fin strokes, change direction etc

Vision

Without artificial light vision is dependant on the clarity of the water and penetration of daylight (depth, time of day)
Intensity of daylight reduced to $\frac{1}{4}$ @ 4-5 metres
 $\frac{1}{8}$ @ 15 metres

Colours are deceptive underwater, blood appears black

Refraction

Due to refraction, objects underwater appear to be about $\frac{3}{4}$ distance, $\frac{1}{3}$ larger

Compass

Do not buy a cheap compass

They are liquid filled and are affected by certain metals, (cylinders, metal boats, mooring chains). This effect is called "deviation".

Can be worn on wrist, on a lanyard or sited in a console (instrument panel) but not next to your watch