

Recommended style of activity

Public engagement: Self-led family drop-in activity.

Schools: Introduced topic then self-led sheets.

Suggested age range: 9-18 years

Approximate time : 15 minutes for developing identification keys, 10 minutes for taxonomy challenge

Background Science

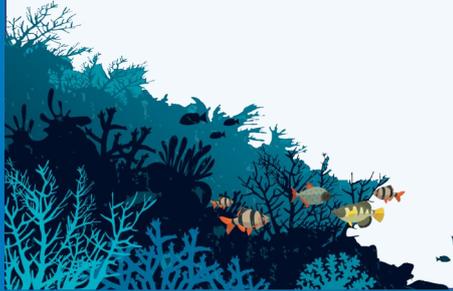
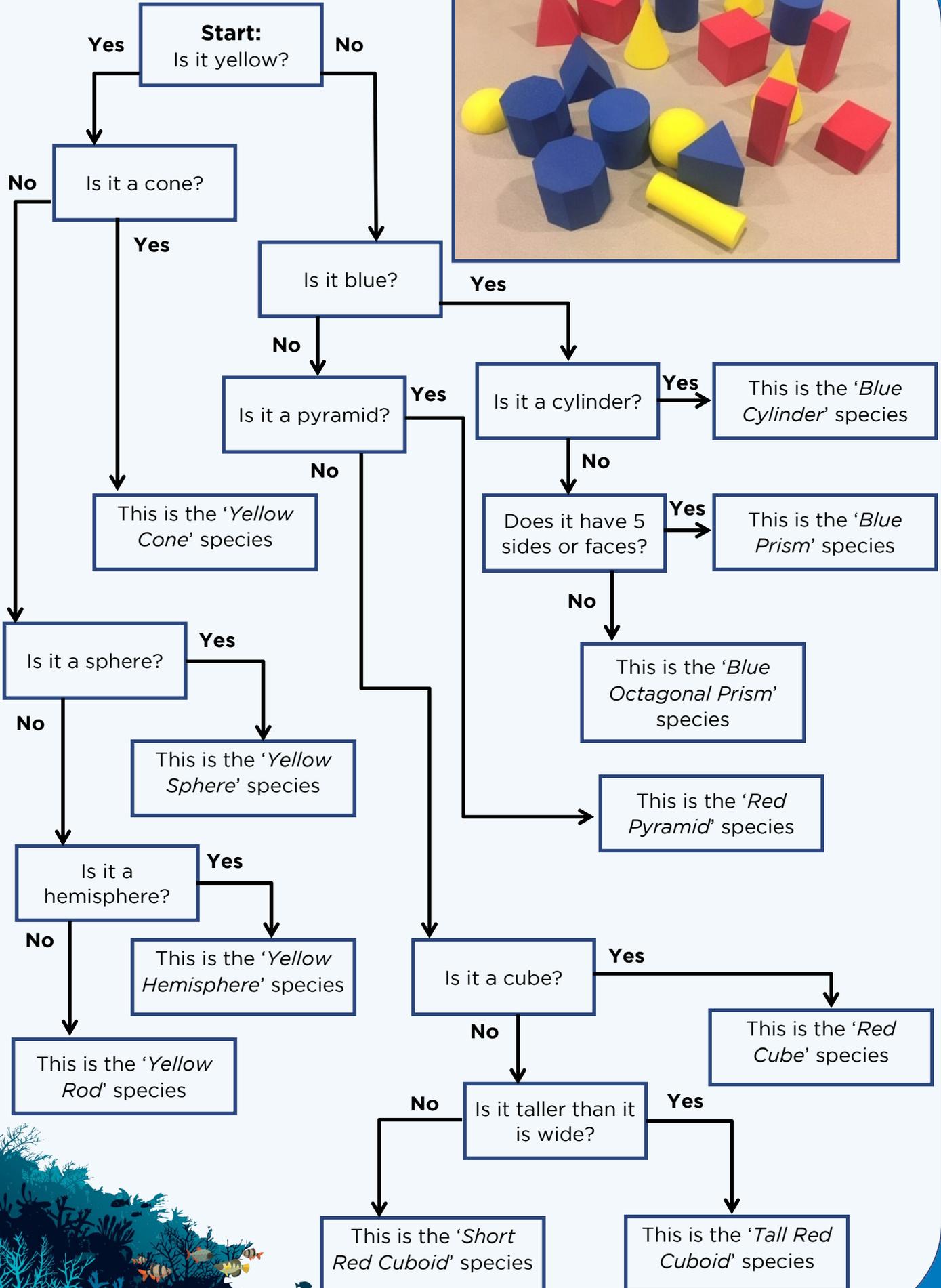
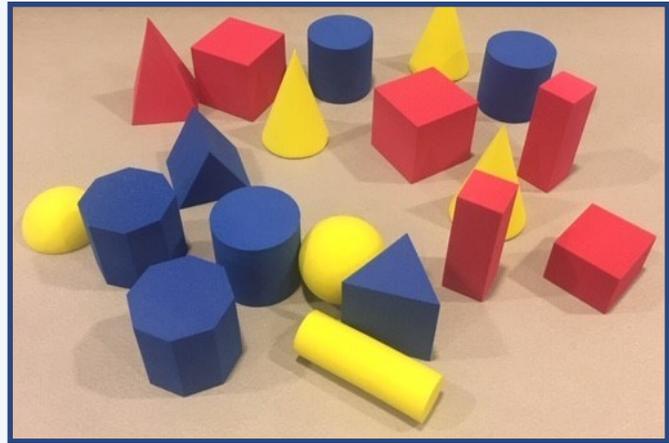
Much of the life in the deep sea is unknown and scientists around the world are still discovering new species. Identifying species (living things which can interbreed) is important for many reasons other than just curiosity. Scientists in the ATLAS project are looking to identify 'Vulnerable Marine Ecosystems' or VMEs. This is where the creatures and the area they live in have been designated as ones that might be very badly affected by activities which damage the seabed such as trawling. Knowing which species are there will help with this aim. Identifying a range of species from an area will build up a picture of the biodiversity and any potential connections between the different species. Patterns of species diversity and numbers might also be revealed which could be changing in response to changes in temperature, food supply or ocean currents. This knowledge could help scientists predict how these creatures will be affected by a changing ocean in the future.

Identifying the species is the job of a taxonomist. They will start by sorting out collected creatures (specimens) into groups which they think are different species. Then they need to find out if they have already been named, or if they are potentially new to science! One way to do this is working through identification guides, some of which may have been written hundreds of years ago. Sometimes a taxonomist can just look at the outside of a creature but they may also need to dissect it or even take samples for DNA analysis.

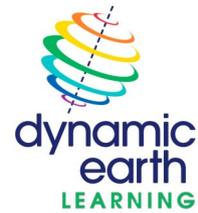
In the following activities, you can develop your own identification guide and test out your taxonomic skills using a simplified identification guide based on some 'Ophiuroids' or Brittle Stars (a bit like a starfish) collected from the Mingulay Reef in Scotland.



Example identification key:



For more oceans-themed activities and experiments, please visit
<https://www.eu-atlas.org/education/education-packs>



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