OCEAN OBSERVATORY SCOTLAND

MAERL BEDS - ANSWERS

1. Which two species form maerl beds according to this fact file?
   - ***Maerl beds are formed by Phymatolithon calcareum and Lithothamnion glaciale.***
2. What is maerl, and what colour is it usually described as?
   - ***Maerl is a hard coralline algae and is usually purple-pink in colour.***
3. How do maerl beds form on the seabed?
   - ***Maerl beds form when unattached, twig-like pieces of maerl build up into interlocking carpets on the seabed.***
4. What shape is Phymatolithon calcareum often compared to?
   - **Phymatolithon calcareum is often compared to stag's horns.**
5. What kind of seabed and conditions does maerl prefer to grow in?
   - **Maerl prefers sand, mud, or gravel seabeds in shallow, protected waters with limited strong wave action.**
6. Name two types of animals that use maerl beds as habitat.
   - ***Animals that use maerl beds include burrowing bivalves, sea urchins, worms, sea cucumbers, and anemones (any two correct).***
7. Why are maerl beds important for scallop fisheries in Scotland?
   - ***Maerl beds are important because young scallops depend on them as nurseries, supporting Scotland's scallop fisheries.***
8. What does it mean that maerl beds act as a "blue carbon store"?
   - ***Being a blue carbon store means maerl beds capture and lock away carbon, helping regulate the climate.***
9. What natural feature found across western Scotland is made from fragments of dead maerl?
   - **White beaches across western Scotland are made from fragments of dead maerl that have been crushed by waves and bleached by the sun.**
10. Why is damage to maerl beds difficult to reverse, and why does this matter for marine ecosystems?
   - ***Maerl beds are slow-growing and fragile, taking decades to centuries to recover, so their loss causes long-lasting damage to marine ecosystems and fisheries.***