Fun Fact Sheet - Incredible Invertebrates

1. The term invertebrate means “without a backbone”, so marine invertebrates are animals without backbones that live in the ocean. There are just over 30 different phyla of marine invertebrates (Gould 1990).
2. The earliest known animals on the Earth were invertebrates (Gould 1990).
3. Coral reefs are made entirely of marine invertebrates (corals!) and make up less than 1% of the ocean floor, but they are home to 25% of all marine species (Worm et al. 2006).
4. Fossilised cnidarians (the family containing corals, jelly fish, and sea anemones) have been found in rocks formed about 580 million years ago (Zhang 2011).
5. Today’s coral reefs are between 5,000 and 10,000 years old, but ancestors of these reefs formed almost 250 million years ago (Knowlton and Jackson 2008).
6. Most modern-day marine invertebrates have evolved to have a hard shell or exoskeleton (Gould 1990).
7. Coral reefs are the largest living organism in the world. The largest reef system is the Great Barrier Reef in Australia, which is just over 4,000 km long and can be seen from outer space (Belfield 2002).
8. Corals are an animal, a plant, and a rock all in one (Nothdurft 2009).
9. Coral reefs act as the world’s carbonic sink, trapping carbon. Excessive carbon dioxide (CO_2) is being emitted into our atmosphere, and as the atmosphere becomes supersaturated excess carbon is forced into our oceans resulting in ocean acidification. However, coral reefs are taking up this excess carbon in their nutrient cycle and helping to clean our oceans (Anthony et al. 2011).
10. Ninety-five per cent of nutrients that corals need to survive is obtained from the zooxanthellae living inside the coral polyps, undergoing photosynthesis. The other 5% comes from the coral polyps using their tentacles to reach out and grab food that floats by in the water column (Cheal et al. 2010).
11. Coral reefs are important to the development of new medicines linked to the treatment of cancer, Alzheimer’s, bacterial infections, and other diseases (Reaka-Kudla 1997).
12. It is estimated that we have lost approximately half of the world’s coral reefs over the last 30 years, and we could potentially lose more than 90% by the year 2050 if we don’t take drastic measures (Gates 2016).
13. Coral reefs are the connecting ecosystem between nursery grounds (such as seagrass beds or mangrove forests) and the open sea. This is where most developing fishes spend a portion to the majority of their lives reaching sexual maturity before moving to the open ocean (NOAA 2015).
14. Recently scientists have discovered deep sea “cold coral reefs” off the coast of Norway and deep in the Mediterranean Sea (Goodbody- Gringley et al. 2014).