

Irish Fossils

Slide number	Title	Information	Questions for students
2	Irish Fossils What fossils can you find in Ireland, what did Ireland look like in the past?		
3	Common Irish Fossils	Ireland's landscape is made up of rocks that were formed over hundreds of millions of years. Some of these rocks contain fossils, which are the remains of plants and animals that lived millions of years ago. Here are some of the most common fossils found in Ireland.	<p>Q. Do you know what any of these animals are?</p> <p>Q. What do some of these fossils look like?</p> <p>A. Shells, coral, sea creatures</p>
4	Coral Solitary coral	This is a fossil coral. Corals are marine animals that have lots of tentacles like anemones but live at the top of a hard skeleton. They use their tentacles to gather food particles from the surrounding water. There are many different types of fossil corals. Some lived alone like this one - these are called solitary corals.	<p>Q. Have you ever heard of corals?</p> <p>Q. Do you know any famous places where corals are found?</p> <p>A. Great Barrier Reef</p>
5	Coral Colonial coral	This is another type of fossil coral. It is called a colonial coral as it lived in large groups and shared a common skeleton. Corals still live in the oceans today, mostly in shallow tropical seas. Corals have been discovered living in cold deep waters in deep-sea canyons hundreds of kilometers off the west coast of Ireland.	
6	Gastropods	Gastropods are snails - animals with a hard coiled shell. They live on land, in freshwaters (lakes and rivers) and in the ocean. The shell is spiralled or coiled, sometimes vertically into a cone shape and sometimes horizontally along a flat plane. Fossil gastropods in Ireland are mostly marine.	<p>Q. What kind of animal do you think a gastropod is?</p> <p>A. A Snail</p>
7	Ammonite	Ammonites are a type of cephalopod animal related to modern-day squid and octopus. They had large eyes for finding prey and many were built for speed, with hydrodynamic shells with tapered edges. Their shells have beautiful patterns made by the very	

		complex sutures or joins between the body chambers in the shell. The shell is the part most often preserved as a fossil. Ammonites moved backward through the ocean by expelling water from a funnel like opening below their tentacles.	
8	Trilobite	Trilobites are arthropods and look like woodlice, but they lived in the sea and their closest living relatives are horseshoe crabs, spiders and sea spiders. Some trilobites crawled on the sea floor, whereas others burrowed into the sand and mud on the sea floor or swam. The hard exoskeleton of a trilobite is the part that is preserved as a fossil it has lots of segments, divided into three sections lengthwise by two deep grooves in the skeleton.	
9	Brachiopod	Brachiopods are shellfish with two shells that are hinged on one side (like a door) and can open on the opposite side. Long ago these fossils were called 'lamp shells' because they look like old-fashioned lamp shades. Brachiopods attach to the seafloor using a strong ligament and feed by filtering particles out of the seawater – they are filter feeders. Fossil brachiopods are usually preserved as only one shell. This is because the ligament that holds the two shells together in life rots away when the animal dies. The two shells are then easily scattered by waves and currents before being buried and fossilised.	
10	Crinoid	Crinoids are marine animals, commonly called sea lillies (but they are not plants!). Fossil crinoids from Ireland were attached to the seafloor by a stalk up to 1.5 m long. At the top of the stalk were several long feathery arms attached to a swollen area called the cup. The crinoid's arms could open like an umbrella to collect food: tiny floating particles drifting by on ocean currents. Most of the crinoid's hard skeleton is made up of circular plates called ossicles (shaped like polo mints) joined together by ligaments. These are the parts most often fossilised. When	

		crinoids die the ligaments rot away and the ossicles can become scattered by waves and currents.	
11	Common Irish Fossils	These common Irish fossils are lived in the sea, that is because Ireland used to be covered by a warm tropical ocean.	Q. What do all of these fossil creatures have in common? A. They all lived in the sea
12	Ireland Today Map of the world	Today Ireland is in the northern hemisphere – about 53 degree north.	Q. Where is Ireland on this map? Q. Did the world always look this way? Q. Were all the continents always in the same place as they are now?
13	The Carboniferous Period Map of the world 300 million years ago	300 million years ago Ireland was located here, about 20 – 30 degrees south of the equator in the middle of a warm tropical ocean.	
14	Ireland 300 million years ago Tropical sea	This is what it might have looked like! Covered in a shallow sea – no land exposed!	
15	300 million years ago Artists recreation of Carboniferous sea	This is how it might have looked under the sea. Here we can see lots of crinoids swaying in the water with some other big predators swimming around.	Q. Can you spot any other creatures in this picture? A. There are two sharks swimming around, one in the top right and one in the middle at the bottom among the crinoids.
16	Other Irish Fossils	Carboniferous limestone is the most common rock in Ireland and so are most common fossils are from this time. However, Ireland’s rich fossil heritage spans over 500 million years of Earth history and includes some of the earliest evidence for fossil animals and for life on land. The Valentia Tetrapod Trackway is most famous because it is one of only three trackways in the world made by early land animals during the Devonian (ca. 400 million years) Period. On Valentia Island there are in fact almost 20 trackways preserved in different rock layers laid down in a swampy area	

		<p>beside a river channel. The longest trackway has more than 145 imprints of the feet of an early amphibian, and the smaller forelimb prints can be distinguished from the larger hindlimb prints. Some of the shorter trackways show traces of a tail being dragged along the silty mud.</p> <p>Keraterpeton is an extinct type of small amphibian, about the size of an adult human's hand, that lived in lush swamps in Co. Kilkenny during the Carboniferous Period, about 310 million years ago. It had a long body like a salamander and a very long tail that made up two-thirds of its total body length.</p> <p>Ireland also has lots of different fossil plants. This is Archaeopteris. It has frond-like leaves similar to a fern. Multiple species of fossil ferns have been found at Kiltorcan Quarry in Co. Kilkenny. These fossil plants evolved around 400 million years ago during the Devonian period. Archaeopteris was a tree-like plant with fern-like leaves but it wasn't a true tree as it didn't have woody tissue. These plants typically grew up to 30 m in height and their trunks could reach up to 1.5 m in diameter. These plants grew in wet swampy environments.</p>	
18	Ireland's Fossil Heritage website	To find out more about Irish fossils you can check out our website, we have information on fossils, a fossil map and even a fossil video game!	