

## Teacher's notes

### Classroom Activity: What Does “Extinct” Mean?

Explore extinct Irish animals at the museum from the comfort of the classroom. Using a series of short curriculum-linked videos, your class will be introduced to the topic of extinction and will meet some of the most special museum specimens, which have one thing in common – they are extinct! Detailed teacher's notes with suggested lesson plan and accompanying classroom activities are provided and can be used to complement the learning outcomes.

**Level:** 3rd to 6th Class

**Format:** Classroom activity – resources to be used within the classroom

**Duration:** 30+ mins

**Availability:** Online and self-guided

#### Curriculum links:

SESE Science

- Investigating and experimenting
  - Collect information and data from a variety of sources
- Living things
  - Human life; Plant and animal life
- Environmental awareness and care
  - Environmental awareness; Science and the environment; Caring for the environment

#### Learning Outcomes:

On completion of this classroom activity pupils should be able to:

- Describe the meaning of “extinct” and recognise examples of different extinctions throughout the Earth's history.
- Describe animal extinctions specific to Ireland in the distant past and more recent past e.g. case studies of Giant Irish Deer and Wolf
- Describe “extinction” versus “local extinction”.
- Describe the role of conservation and identify how animals can be re-introduced into a habitat, and describe the pros and cons e.g. re-introduction programme example of Wolves in Yellowstone, USA versus Ireland.

#### Video Resources Featuring in this Classroom Activity:

1. What Does “Extinct” Mean? (1 min 07 sec);
2. Giant Irish Deer (1 min 39 sec);
3. Hyena (1 min 17 sec);
4. Wolf (3 min 27 sec).

Total time: 7 min 30 sec.

Subtitles/closed captions are available for all videos. These can be turned on by clicking the CC icon found to the lower right corner of the video player bar in YouTube.

### Suggested Lesson Plan:

1. Explain to your class they are going to make a virtual visit to the museum today. They are to listen out for examples of animals that used to live here in Ireland in the past. Ask your pupils do they know of any animals that can no longer be found in the wild in Ireland.
2. Ask them to watch the videos, and think about which animal they like best, whether they would like that animal to still live in wild in Ireland today, and why.
3. Play the “What Does Extinct Mean?” Video Playlist for the class (found on the National Museum of Ireland YouTube Channel here <https://www.youtube.com/playlist?list=PLjqQWoV8sdN5ULGMC5pj6nFwsuYgwpZYm>).
4. Once the videos are completed, the class can have a discussion on the animals they saw. Options for follow-up activities are below.

### Options for Classroom Activity Follow-Up:

- Pupils can develop their imagination further, by asking them to imagine what Ireland might look like if their favourite extinct animal was re-introduced or put back into the wild. Ask the class to draw their favourite extinct animal as they imagine it would look in an Irish habitat.
- Using the 3D Virtual Visit (link & instructions below) and map(s) provided (see below), find the different animals featured in the videos. Pupils must look at the animals in the cases and compare their drawings to the real animal. Pupils can develop this imaginary Ireland further, talking about what kinds of habitat their animal lives in, what food they might eat and where they would find that food.
- A classroom lesson or independent pupil research project. This can focus on the conservation and re-introduction of a large predator to the Irish countryside, using the case study of the Golden Eagle Re-introduction Project in Co. Donegal. The project should focus on the pros and cons of the re-introduction of a large predator to the Irish ecosystem. See the Useful Websites and Resources list below for more information on this project.

### Instructions for Using the 3D Virtual Visit:

- Click on the link (<https://www.museum.ie/en-IE/Museums/Natural-History/Visitor-Information/3D-Virtual-Visit>). These interactive presentations require up-to-date versions of Internet browsers (Chrome, Safari, Internet Explorer, Firefox).
- We strongly recommend to practice using the 3D Virtual Visit in advance of using with your class. It can be tricky at first but gets easier with practice!
- Begin with the Ground Floor – Irish Fauna, click the play button. The 3D Virtual Visit will launch and automatically zoom in to a view of the Giant Irish Deer at the entrance. Please see image below.



**Image 1: 3D Virtual Visit – View upon launching Ground Floor – Irish Fauna**

- The viewer can be expanded to fullscreen by clicking the Fullscreen icon in the bottom right-hand corner. See highlighted icon in the image below:



**Image 2: 3D Virtual Visit – Expand to Fullscreen**

- Click and drag the cursor to move the camera view 360 degrees.
- Double-click any area on the floor of the museum to move your virtual position and get different views and perspectives on animals.
- Double-click on the walls, cabinets, or animals to zoom in for a closer view.
- To navigate to a different animal represented on your map, click the Floorplan icon which is highlighted in the image below. This will zoom out to provide an overhead floorplan view corresponding with that on the maps provided. Click on an area of the floorplan that corresponds with the number of your chosen animal on the map provided. An example of this process is given in images below. Remember, you may then have to click and drag the cursor to move the camera view around to face your animal of interest!

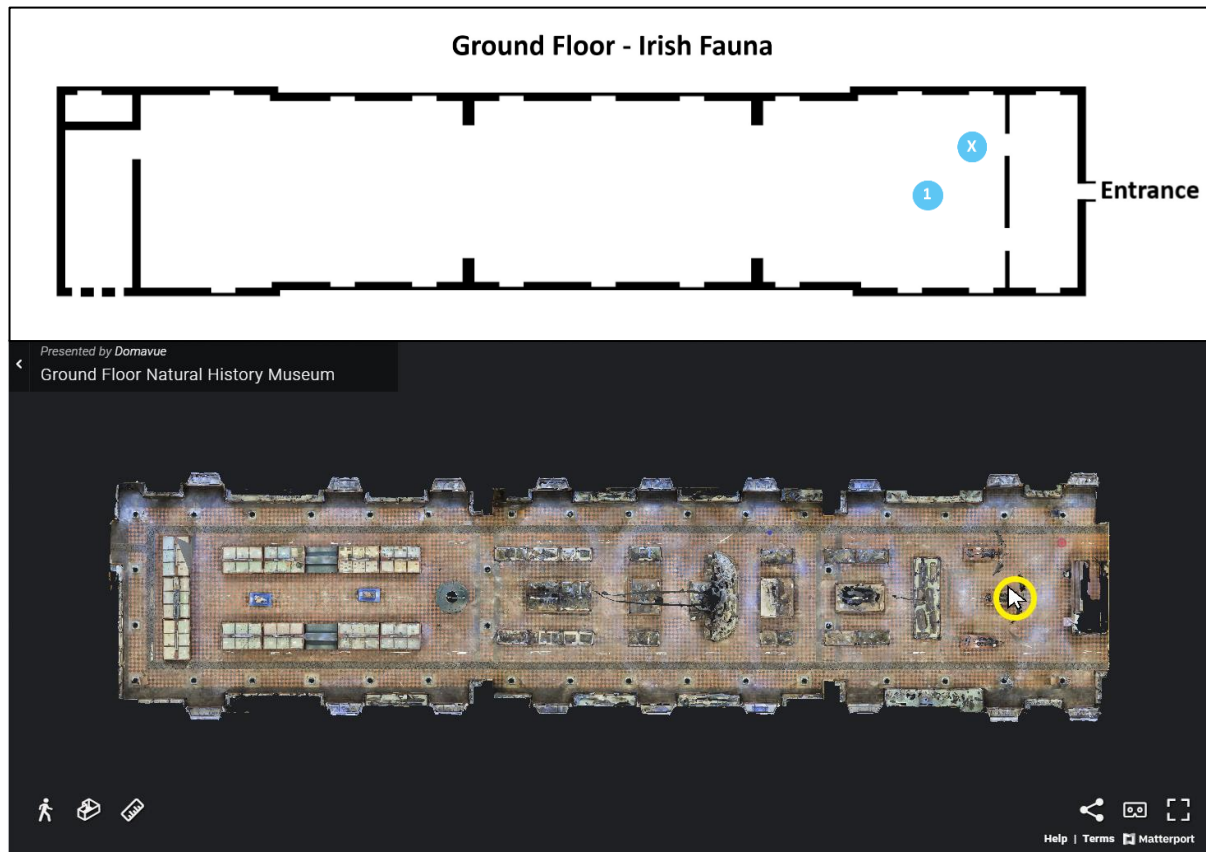




Image 3: 3D Virtual Visit – Change to Floorplan View



Image 4: 3D Virtual Visit – Floorplan View



**Image 5: 3D Virtual Visit – Double-click an area corresponding with your map to zoom in**

- Note the 3D Virtual Visit also contains a Ruler function to allow real measuring of animals in the museum! Simply click the ruler icon as indicated in the image below and follow the instructions on-screen to measure the size of an animal, or the size of their head, jaws, legs etc. Play around and explore!



**Image 6: 3D Virtual Visit – Ruler Function**

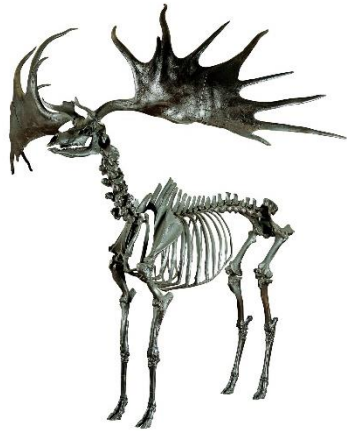
- Once the Ground Floor map has been completed, press the “Esc” key on your keyboard to exit out of full screen mode. Scroll down the webpage to the First Floor – Mammals of the World. Click play, and once the 3D Virtual Viewer launches, click the floorplan icon and navigate to the area corresponding with the next animal of interest on the map(s) provided. Use the features of the viewer to examine this animal.
- Play around and explore!

## Maps:

### Ground Floor – Irish Fauna

**X** You Are Here

**1**



**Giant Irish Deer**

### Ground Floor - Irish Fauna





First Floor – Mammals of the World

**X** You Are Here

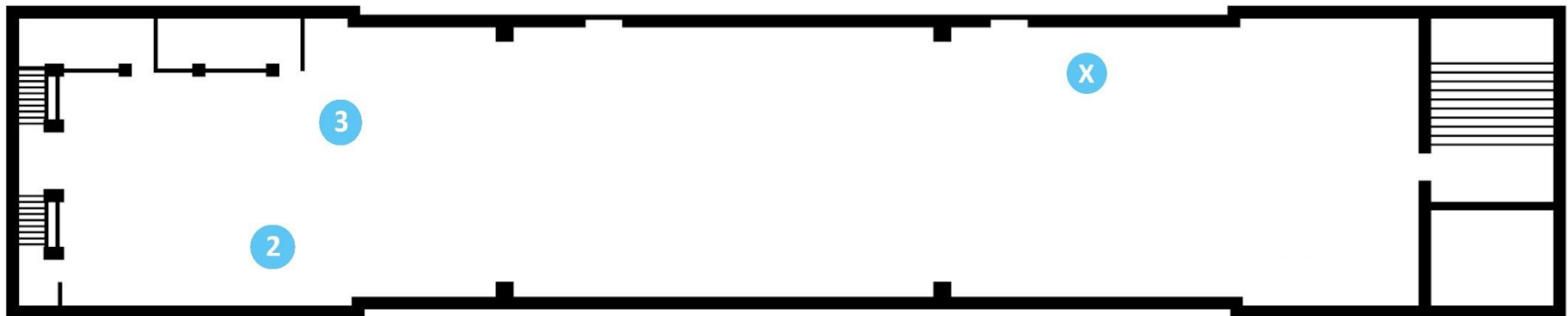


**Spotted Hyena**



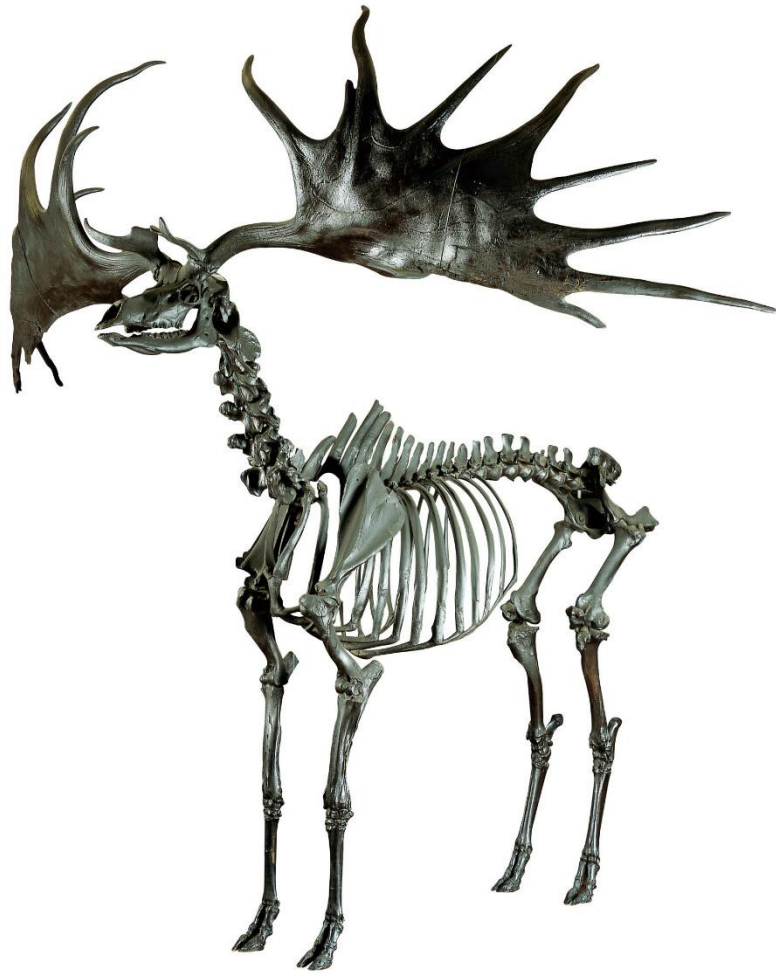
**Grey Wolf**

First Floor - Mammals of the World





Images of Featured Animals:



**Image 7: Giant Irish Deer Skeleton**



**Image 8B: Spotted Hyena visible on 3D Virtual Visit**



**Image 8B: Spotted Hyena – See fossil jawbone found in Cave in Co. Cork to the lower left)**



**Image 9: Grey Wolf**

## Useful Websites and Resources:

- The IUCN Redlist of Threatened Species: <https://www.iucnredlist.org/>
- The Golden Eagle Re-introduction Project: <http://www.goldeneagle.ie/>  
Re-introductions information [here](#)  
Schools Information [here](#)
- “How Wolves Change Rivers”: A 4min30s YouTube Video based on TED Talk by George Monbiot. Note, some terminology used in this video is very advanced and aimed at an adult audience. However, the images and story are excellent  
<https://www.youtube.com/watch?v=ysa5OBhXz-Q>



Featured Video Resource Transcriptions:

**What Does “Extinct” Mean?**

**Video Length - 01:07**

<b>Time Stamp</b>	<b>Audio Transcript: Museum Educator Emma speaking</b>
00:04	These animals are all very different, but they all have one thing in common. Can you think of a word people use to describe when a species or type of animal is no longer found living somewhere? That’s right, it’s “ <b>extinct</b> ”. To be “extinct” means to no longer exist, like the dinosaurs.
00:28	But there are many more examples of animals that have become extinct over the history of life on earth, and there are many different reasons why an animal might go extinct. Can you think of any?
00:40	Some examples are through over-hunting, climate change, natural disasters, habitat loss (or losing the places where they live), or pollution. These things can be natural, like how dinosaurs became extinct, or can be caused by humans



## Giant Irish Deer

Video Length – 01:39

Time stamp	Audio Transcript: Museum Educator Emma speaking
00:05	<p>One of the most amazing things you can see at the museum are these giant <b>skeletons</b>! Have you seen a similar-shaped animal anywhere in Ireland before? You may have seen deer, such as the Red Deer in Killarney National Park in Co. Kerry, or the Fallow Deer in The Phoenix Park in Dublin.</p> <p>These are the fossil skeletons of <i>another</i> type of deer that also used to live right here in Ireland, The Giant Irish Deer. These amazing animals roamed the grasslands of Ireland over 10,000 years ago! Unfortunately, we can't see them today because they are <b>extinct</b>.</p>
00:46	<p>So, how do we know that they lived here in the past? We know this because their fossil skeletons were found under the bogs in Ireland! Scientists think that these Giant Irish Deer went extinct even before humans arrived in Ireland, and some think that they went extinct as a result of natural <b>climate change</b>.</p> <p>There was a long period of cold in Ireland about 10,000 years ago which lasted for 500 years. During this time, Ireland was covered in a blanket of ice and snow. Plants disappeared and the deer could no longer find food to survive, so they eventually went extinct.</p>

## Hyena

Video Length – 01:17

Time Stamp	Audio Transcript : Museum Educator Emma speaking
00:05	<p>This jawbone belongs to an animal that used to live in Ireland over 30,000 years ago! Look at those sharp teeth! This is a <b>fossil</b> which was found in a cave in Co. Cork, and it belonged to a spotted Hyena, like this one from modern day Africa.</p>
00:25	<p>Ireland was once home to hyenas, brown bears, and even woolly mammoths! At the museum we have <b>evidence</b> that all of these animals once lived in Ireland. They came to Ireland by walking from Europe! Back then, the sea levels were much lower, and that meant there were “land-bridges” between neighbouring countries.</p> <p>When the sea levels rose over many thousands of years, Ireland became cut-off from other countries. When the climate changed during the Ice Age, many of these animals could no longer survive in Ireland and were unable to move back to warmer parts of Europe. This is how many of these animals became <b>extinct</b>.</p>

## Wolf

Video Length: 03:27

Time Stamp	Audio Transcript: Museum Educator Emma Speaking
00:05	When we think of extinction, we imagine animals that are <b>extinct</b> throughout the world and can no longer be found anywhere today. But did you know that an animal can be extinct from just one part of its natural range? This happens when an animal becomes extinct in one area but can still be found in other areas. This is called " <b>local extinction</b> ".
00:32	This animal is called the Grey Wolf, and although it can be found in other parts of the world, it has become extinct in Ireland. Did you know that wolves used to live in Ireland? The Irish word for wolf is "Mac Tíre", meaning "son of the land". There is <b>evidence</b> of wolves living in Ireland from about 30,000 years ago, long before humans arrived, and they continued to live alongside us right up until 1786. There are many mentions of wolves in Irish legends, and in many Irish place names and surnames. Under English rule, the government saw the presence of wolves in Ireland as a bad thing, and they began to try to get rid of them. Rewards were offered to anyone who killed a wolf. Soon their numbers declined, and it is thought that the last wolf in Ireland was shot in 1786 on Mount Leinster on the Wexford/Carlow border.
01:38	Though wolves are now extinct in Ireland, they still live in many other countries around the world. Recently, they have even been <b>reintroduced</b> or put back into areas where they used to live. Protecting an animal like this is known as <b>conservation</b> . Examples of wolf reintroductions include Yellowstone National Park in America, and France and Spain. Can you think of any reasons why it might be important to save or return extinct animals?
02:12	One reason is that they have an important job; keeping nature in balance. Wolves hunt deer, and without wolves, deer numbers can go very high, and those deer eat too many of the plants and trees, which then stops other animals from living in the same area. Wolves help keep deer populations at healthy levels and hunt the weak and sick deer, so the herds are healthier overall. A great example is Yellowstone in America where they were reintroduced in 1995. Wolves have made the entire habitat a healthier one with more wildlife than before. However, wolves need an awful lot of wild habitat and space to live in, and the Irish countryside has changed a lot in the last 200 years. There are much less forests and wild spaces, and many more farms and houses. Some people have spoken about the idea of maybe returning or reintroducing wolves to Ireland. Do you think it would be a good or bad idea and why?