

## Irish Fossils Workshop – Activity 1 Fossilisation

### Description

This activity introduces the students to what fossils are and how they form. Each group is given a set of six laminated cards with graphics representing each stage of fossilisation. The group is asked to arrange the cards in chronological order, from the first stage of fossilisation to the last.

### Curriculum Learning Outcomes

#### 3<sup>rd</sup> and 4<sup>th</sup> class

##### Science

Living things: Plant and animal life

- Develop an increasing awareness of plants and animals from wider environments
- Sort and group living things into sets according to observable features
- Become aware of some of the basic life processes

##### Environmental awareness: Science and the environment

- Identify the interrelationship of the living and non-living elements of local and other environments

#### 5th and 6th class

##### Science

Living things: Plant and animal life

- Recognise the great diversity of plants and animals in different regions and environments
- Become familiar with the characteristics of some major groups of living things
- Become aware of some of the basic life processes

### Skills Development

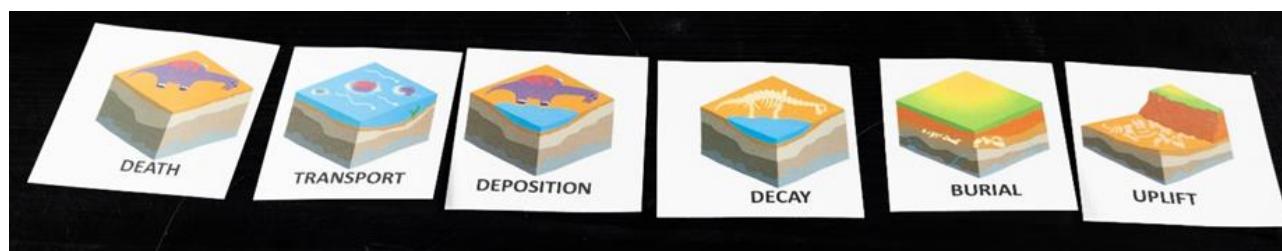
- Working scientifically
  - Questioning
  - Observing
  - Analysing
    - Sorting and classifying

### Learning Intentions

- Understand that fossils are the remains of prehistoric animals and plants
- Learn to identify fossils
- Learn that fossils can be found in Ireland
- Learn that fossils can tell us about how life evolved over time

### Materials

- Laminated cards with images representing each stage of fossilisation; Death, Transport, Deposition, Decay, Burial, Uplift



## Irish Fossils Workshop – Activity 2 Geological Time

### Description

This activity introduces the students to how old fossils are. Each group will be given a long piece of string, some pegs, laminated cards with pictures of historical events and the date when they occurred. They must arrange the events along their timeline using a scale of 1 cm = 100 years.

### Curriculum Learning Outcomes

#### 3<sup>rd</sup> and 4<sup>th</sup> class

##### Mathematics

###### Length

- Estimate, compare, measure and record lengths of a wide variety of objects, using appropriate metric units, and selecting suitable instruments of measurement

###### Time

- Consolidate and develop a sense of time passing

##### History

Early people and ancient societies

- Egyptians, Romans, Celts

#### 5th and 6th class

##### Mathematics

###### Length

- Select and use appropriate instruments of measurement
- Rename measures of length

##### History

Early people and ancient societies

- Egyptians, Romans, Celts

### Skills Development

- Applying knowledge
- Problem-solving
- Communicating and expressing
- Time and chronology
- Working scientifically
  - Estimating and measuring
  - Recording and communicating

### Learning Intentions

- Learn how old fossils are
- Understand the concept of geological time – become familiar with scales of millions of years

### Materials

- Laminated cards with well-known historical people/events: Normans, Romans, Egyptians, Oldest settlement in Ireland, Last Ice Age, First humans in Ireland
- String
- Pegs
- Measuring tape
- Geological Time Recording Template (in worksheets folder)



## Irish Fossils Workshop – Activity 3 Irish Fossil ID

### Description

In this activity students will learn about some common Irish fossils and how to identify them in cross-section. Each group will be given a set of images of fossils and a corresponding set of schematic cross-sections of each fossil. Each group will be asked to match each cross section with the picture of the corresponding fossil.

### Curriculum Learning Outcomes

#### 3<sup>rd</sup> and 4<sup>th</sup> class

##### Science

Living things: Plant and animal life

- Develop an increasing awareness of plants and animals from wider environments
- Sort and group living things into sets according to observable features
- Become aware of some of the basic life processes

##### Mathematics

Shape and Space: 2-D and 3-D shapes

- Use 2-D shapes and properties to solve problems
- Explore and describe the relationship of 3-D shapes with constituent 2-D shapes
- Solve and complete practical tasks and problems involving 2-D and 3-D shapes

Shape and Space: Symmetry

- Identify line symmetry in the environment
- Use understanding of line symmetry to complete missing half of a shape, picture or pattern.

### Curriculum Learning Outcomes

#### 5th and 6th class

##### Science

Living things: Plant and animal life

- Recognise that there is a great diversity of plants and animals in different regions and environments
- Group and compare living things into sets according to their similarities and differences
- Become familiar with the characteristics of some major groups of living things
- Become aware of some of the basic life processes
- Observe and explore some ways in which plant and animal behaviour is influenced by, or adapted to, environmental conditions

##### Mathematics

Shape and Space: 2-D and 3-D shapes

- Use 2-D shapes and properties to solve problems
- Identify and examine 3-D shapes and explore relationships, including tetrahedron (faces, edges and vertices)

### Learning Intentions

- Understand that fossils are the remains of prehistoric animals and plants
- Be able to identify fossils
- Be aware that fossils can be found in Ireland
- Understand that there are clues left in the rock that can tell us about how these animals died

### Skills Development

- Working scientifically
  - Questioning
  - Observing
  - Analysing
    - Sorting and classifying
  - Recording and communicating

## Irish Fossils Workshop – Activity 3 Irish Fossil ID

### Materials

- Laminated images of six common Irish fossils: Brachiopod, Solitary coral, Colonial coral, Conispiral gastropod, Planispiral gastropod, Trilobite
- Schematic cross sections of these fossils
- Plastic 3D prints of these fossils (1 set)



## Irish Fossils Workshop – Activity 4 Being a Palaeontologist

### Description

In this activity students will learn how to investigate rocks and fossils to understand about ancient environments and how to use clues in the rocks to learn how fossil animals lived and died. Each group will receive five photos of rocks and a description of how they formed. They must read the descriptions of these rocks and decide which one is most likely to contain fossils. They will then examine a sample of limestone containing real fossils and investigate how the crinoids died.

### Curriculum Learning Outcomes

#### 3<sup>rd</sup> and 4<sup>th</sup> class

##### Science

Environmental awareness: Science and the environment

- Identify the interrelationship of the living and non-living elements of local and other environments

##### Geography

Natural environments: Rocks and soils

- Compare and contrast materials, focusing on certain criteria
- Begin to explore the influence of soils and rocks on animal and plant life

#### 5th and 6th class

##### Science

Environmental awareness: Science and the environment

- Identify the interrelationship of the living and non-living elements of local and other environments

##### Geography

Natural environments: Rocks and soil

- Learn about the characteristics of some common rock types and where they may be found in Ireland and in other parts of the world

### Learning Intentions

- Understand that rocks and fossils can tell us about ancient environments
- Understand that there are clues left in the rock that can tell us about how these animals died

### Skills Development

- Working scientifically
  - Questioning
  - Observing
  - Investigating and experimenting
  - Analysing
    - Sorting and classifying
  - Recording and communicating

