Jurassic forest - Overview

Natural History Adventurers’ mission
Use imagination and creative skills to recreate lost worlds.

Episode journey
Children discover the living things that existed in a Jurassic forest and create a Jurassic forest in their classroom. They film a first-person perspective journey through their forest using a tablet or camera, and make and record Jurassic forest sounds to accompany it.

Curriculum learning outcomes
- Children will learn the names of more than two living things in their local and wider environment (Science / The world around us)
- Children will be able to identify and describe the functions of different parts of flowering plants (Science)
- Children will understand the life cycle of flowering plants (Science)
- Children will be able to describe the life processes of reproduction in some plants (Science)
- Children will apply multiplication (Mathematics)

The postcard introduces the children to the Jurassic Coast and the fossils found along it, including the dinosaur footprints on the front of the card. It introduces the fossil Jurassic forest discovered in the cliffs of Dorset – a snapshot in stone of the sort of world where the Diplodocus Dippy was cast from would have lived.

The children’s challenge is to create a Jurassic forest in their classroom. They will explore the animals and, in particular, the plants that lived there. If feasible they will find ferns, conifer twigs and pine cones from a nearby woodland or parkland, to make their own Jurassic forest. The enclosed resources and lesson ideas give further tips on how to transform the classroom, and challenge the children to explore the similarities and differences between ferns and the flowering plants of today.

Possible additional activities
- Children write stories set in the Jurassic forest that they have created.
- Children invite younger years to visit their Jurassic Forest with the lights off, complete with sounds and maybe even children disguised as dinosaurs.
- Children investigate fiction books for younger children with dinosaurs in them. How realistic do they think the dinosaurs are? What do we know about how dinosaurs might have looked? What evidence can we base our ideas on?

Activities and lessons summary
Not all activities will be relevant for all classes. The activities were developed to be broken up and used over a period of time and as is suitable for your particular class.

- Read the introductory postcard and discuss it with the class, using the glossary as required. Share the lesson script 1 with the children. Discuss the map showing how the world looked in the Jurassic Period. What are the similarities and differences between how the British Isles looked in the Jurassic Period and today? How was the climate different? Use the picture of the Jurassic forest (image 1) to answer the following questions. What creatures lived in the UK at the time? What plants grew there? What plants did not exist then? This could be a class discussion or you could divide the children into groups to research the answers to their additional questions.

- The fact that one type of plant is missing from the Jurassic forest is posed as a puzzle at the end of lesson script 1. The answer is revealed in lesson script 2. Teachers can build tension by keeping lesson script 2 hidden until pupils have come up with their answers. Children should understand that:
  - The British Isles did not exist as we now know them, as some of the land was under the sea and some was joined to Europe as a different land mass. It was also much warmer, as we were closer to the Equator.
  - Many different types of dinosaur (and pterosaur) lived back then and we can sometimes find their fossilised remains.
  - Creatures living at the time included reptiles (dinosaurs and pterosaurs), insects, scorpions and early types of birds and mammals.
  - There were no flowering plants in the Jurassic Period.
• Share lesson script 2 with the children. This reveals that there were no flowering plants in the Jurassic Period. Look at the diagram (or a living example) of a modern flowering plant and compare it with the diagram of a fern. What differences and similarities can they see?

• Discuss how flowering plants reproduce. This may be considered revision or learning for the first time depending on the age of the children. Discuss how ferns reproduce without flowers, using research materials as appropriate.

• What would Dippy have eaten? Point out that Dippy was a herbivore. What sort of plants would he have eaten? How would his long neck have helped him? Ask the children to use the statistics they have been sent (lesson script 3) to work out how much food Dippy would have eaten in a year. You could photocopy this sheet for reference for the children, or model equations on the whiteboard for younger Key Stage 2 groups.

• If possible, take the children on an expedition to a nearby woodland, parkland or school grounds to search for ferns and conifers to photograph and collect. If it is not possible to carry out this expedition please skip to lesson script 4.

• lesson script 3.5 introduces the children to the excursion and its rules. Show the children pictures of ferns (pupil resource 1) and conifers (pupil resource 2) and discuss what they are looking for. Point out that conifers have cones and often have flat, needle-like leaves. Take copies of these images with you to help the children remember what they are looking for.

• Following the excursion ask the children to investigate their finds using the images provided (pupil resources 1 and 2). What are the features of the ferns and conifers they have found? They may wish to do close observational drawings of the plants.

• Share lesson script 4 with the children. Discuss with them how they could transform their classrooms into a Jurassic forest. If it is not feasible to attach or hang large leaves in the classroom, smaller environments could be made in boxes (individually or in groups). Ask the children to make leaves and branches with paper and card to represent a Jurassic forest and build their environment in the classroom or box. Another alternative would be to expand on computer science lessons to create their forest on computers.

• Read lesson script 5 to the pupils and discuss the sounds that would have been heard in the Jurassic forest. Use the tips to create an authentic soundscape. Divide the children into groups to prepare and rehearse their soundscapes using percussion instruments and their voices. Orchestrate these so that one group’s composition merges into the next. Record these, play them back and discuss what is most effective.

• Read lesson script 6 to the pupils and discuss how they could film a journey through their forest. Whose viewpoint would it be from? What would make it most evocative (eg lighting and sound effects)? Online films of wildlife documentaries can be used as examples – here’s a film of Sir David Attenborough describing the jungle: www.youtube.com/watch?v=H9MV5CqPqlQ8.

• Choose roles – eg director, narrator, camera operator, lighting technician and sound effects artist – and use tablets or cameras to film a first-person perspective journey through their Jurassic forest. You could use these Jurassic sound effects: nhm.ac.uk/dippy-sounds.

• Send confirmation to Dippy’s team at DippyOnTour@nhm.ac.uk with the subject line Forests. This triggers an automated reply acknowledging receipt.

Resources required

Provided in the Natural History Museum package:

• introductory postcard
• glossary
• lesson scripts 1–6
• pupil resources 1–2
• image 1
• sound effects of the Jurassic: nhm.ac.uk/dippy-sounds

Provided by the school:

• photocopying for pupil resources (they do not need one each)
• materials for creating a Jurassic forest (card, paper, shoebox etc)
• filming device (tablet, phone, camera etc)
• percussion instruments

A note on the expedition

If this element is impossible in your case, the episode will still work effectively using only foliage crafted in the classroom.

The expedition can take place in a variety of ways and locations. For schools close to a woodland, this is the perfect opportunity for children to explore using the spotter sheets (pupil resources 1 and 2) to look for samples to build their forests with. Some school grounds have patches of woodland or at least a few trees and green patches where bracken might grow.

Lesson script 3.5 from Dippy’s team makes it clear to children that while it is okay to select foliage such as ferns from woodlands and public spaces, they should avoid picking flowers or uprooting any plant entirely and only take a few samples.