

# LESSON PLAN

CREATED FOR TEACHERS BY EDEN'S EDUCATION TEAM

## Rainforest Arrangers

**Summary:** A pair of science lessons encouraging students to research a variety of unfamiliar rainforest organisms before discussing and grouping them based on their characteristics.

### Key info

2 x 1 hour lessons  
Suitable for Years 4-6  
Focus on Science

### Activity Details

Tropical rainforests support the greatest diversity of living organisms on Earth. In this activity your pupils begin by discussing the conditions in a tropical rainforest and researching the characteristics of plants and animals that make it their home. They are then tasked with summarising and sharing the most important information with their classmates and then grouping the organisms as they see fit. Finally, they are presented with some new information and are given the opportunity to reassess their current groupings during a round of 'classification bingo'.

Several of the activities in these lessons are designed to promote group discussion and exploratory talk. Research has shown that thinking is encouraged when pupils talk about science and that this can lead to better reasoning and scientific understanding.

### Outcomes and curriculum links

These lessons enable students to:

- describe various observable characteristics of different living organisms and name them.
- discuss and categorise living organisms into broad groups based on physical characteristics.
- justify their classification decisions.

We've designed the lesson to help teachers cover the following subject areas:

#### Year 4 Science

Children will recognise that living things can be grouped in a variety of ways.  
Children will explore how to group, identify and name a variety of living things in a wider environment.

#### Year 6 Science

Children will describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. They could research unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system.

#### Key stage 2 Geography

- Children will be able to identify the position and significance of the Equator and the Tropics of Cancer and Capricorn.

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## Resources

To set up the lesson you will need:

- tropical rainforest organisms framework diagram (downloadable PDF)
- list of tropical rainforest organisms (downloadable PDF)
- Internet access, computers and a printer
- pencils
- scrap paper
- large world map or globe
- washing line and pegs
- bucket of assorted pebbles and stones – a variety of shapes, sizes, textures, rock types and colours

## Lesson plan: part 1

### Getting started: What are tropical rainforests like? (0-10 minutes)

Share the challenge with the class.

'Your challenge is to research and summarise the characteristics of living things from the tropical rainforest and then to classify them into groups.'

Working in small groups, ask the children to discuss what they know about tropical rainforests. Where do we find tropical rainforests? What is the climate or weather like? What plants and animals live there? What might they expect to see, hear or feel in a tropical rainforest?

Collect feedback from the groups recording the information on the board. Using a globe or world map highlight to the group that we find tropical rainforests between the Tropic of Cancer and the Tropic of Capricorn.

### Researching the Rainforest (10- 50 minutes)

Allocate each child a different living thing taken from the 'list of tropical rainforest organisms' PDF. Set them the task of using the internet or other resources to research their organism. You may wish to consider in advance which organisms you allocate to particular students as some of the organisms are more unusual and perhaps harder to understand or research.

*\*Note: The ferns have been listed with both their common name and Latin name. This is because the common name contains the word 'fern' and so it wouldn't require any work in order to classify it. Therefore, you could give the students the Latin name instead. In a similar way we have given the Latin family names of the moss species in order not to give it away. The Linnaeus classification system and binomial naming system is not discussed in these lessons but if you have already covered it then it will slot nicely into the research the students will be doing. The names of all the organisms could even be given to the students in Latin should you wish.*

They will come across a vast amount of information about their organism on the internet. Therefore, before they begin researching discuss and record on the board a list of the kinds of information that

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may be most useful, bearing in mind they will need to classify these living things in the next lesson. For example – If it is a plant then does it have flowers, produce seeds or spores? If it is an animal then does it lay eggs? What body parts does it have? Where does it get its food from? Where does it live? What conditions does it like? What eats it? What is its life cycle like? Does it live on its own or in a group? Does it move?

We recommend the students find at least one good photo or drawing of the organism as well as selecting or summarising three to eight bullet pointed facts or short pieces of information about it based on the list recorded on the board. Students can use Microsoft Word, PowerPoint, or Publisher, to produce their living things summary card. They can then print their summary card out.

## **Finally: Reviewing the ecosystem (50 – 60 minutes)**

Set up a washing line in the classroom and ask each child to peg their living things summary card to the line. They have created a virtual tropical rainforest ecosystem!

Give the children five minutes to walk along the washing line in order to get a sense of the variety of life in a tropical rainforest and read some of the information. Ask them to stand next to the living thing that they think is the most interesting, unusual, or surprising. They cannot stand next to their own organism. They must be ready to explain their choice to the rest of the group.

Ask all the students to explain their choice to the person next to them. Then select several students and ask them to share their justification for their choice with the rest of the class.

Refer back to the challenge set at the start of the lesson and explain that they will be using the fact cards in their next lesson where they will look at how to classify these living things. If safe to do so then leave the washing line up with the living things pegged to it for the next lesson.

## **Lesson plan: part 2**

### **Getting started: How and why do we classify? (0-20 minutes)**

Remind the class of the challenge and what they covered in the last lesson.

'Your challenge is to research and summarise the characteristics of living things from the tropical rainforest and then to classify them into groups.'

Explain that in this lesson they will be classifying the living things they have researched. Ask the group what they think classification means and then why we might want to classify living things?

Classification is about sorting things into groups based on their characteristics. It's useful because it helps us to make sense of the variety of life (biodiversity) on the planet. This in turn will help us to look after that life (conservation).



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Before we look at classifying the living things from the tropical rainforest we are going to practise our skills using some non-living things.

Give each group a supply of assorted pebbles and stones. Ask the children to sort them into groups of their choosing. They can have as many groups as they wish. Collect feedback from the groups and find out what their sorting strategy was – how did they decide which pebbles should be grouped together? You could ask them to repeat the activity but using a different sorting strategy.

Ask the students what they have noticed about the ways that the pebbles and stones have been sorted and highlight the fact that there are different ways of sorting or 'classifying' them.

It is worth mentioning to students that the ways in which we have classified things over the years has changed and will continue to change as technology develops. Originally, living things were classified based on observable characteristics but today we also use other sources of information to help us classify. For example now we use genetic information (DNA) from living things to help us classify and work out how closely related different living things are.

## **Middle section: Classifying your organism (20 – 40 minutes)**

Remind students of the washing line they set up last lesson. 'We're now going to turn our attention to classifying these organisms.'

First, ask the students to find the organism that they researched in the last lesson and then to review the information they collected about it. Now, ask the students to examine all of the organisms on the washing line and jot down the names of those which they believe their organism should be grouped together with.

Ask all the students to collect their own organisms from the washing line and sit down in their seats. Explain to the students that in a moment they are going to move and group together as they see fit. They will need to hold their cards up in front of them so that it can be clearly seen. You may wish to kick start this process off by selecting four to eight students (with very different types of organisms) and getting them to stand in locations around the room. As the students begin to group together ask them to justify their choice to each other. Encourage the children to support any of the other children who have possibly made a wrong judgement and help them to decide which group they should be standing with instead. It doesn't matter at this stage if some of the students have classified their organism incorrectly.

## **Finally: Classification Bingo (40 – 60 minutes)**

With the children still standing in the groups that they have decided upon, clear a space in the classroom. Alternatively, you could do this activity in a hall or playground.

Explain to the students that they are about to be put into six teams so we can play a round of 'Classification Bingo'. Create six equal sized teams ensuring that each team contains a wide variety of living things. Ask each team to sit down and show the rest of their team what organism they have.



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Show the students the tropical rainforest organisms framework diagram (downloadable PDF) on the board. This shows the accepted way in which we classify living things. (\*Note: it does not include all living things. It includes the groups needed to classify the organisms the students have researched).

Draw a basic representation of the framework on the floor using chalk. The teacher then clearly reads out one clue at a time. The clues are from the bullet point descriptions of each group. After each clue is read allow the teams to briefly discuss and decide if any of the organisms their team possess fit into that group. If they do then they place that organism onto the framework on the floor. After they have done this allow the group to see which organisms have been placed down and to challenge their placement if they feel any of them have been classified incorrectly.

The aim is to get all of the organisms placed on the floor and classified correctly. The first group of children to put all their cards down needs to shout 'BINGO!' and they are the winners. Carry on playing the game until all the organisms are classified.

Once the game has been completed if the teacher can get to a high vantage point they could take a photograph which could then be put up on display on the wall of the classroom so the class have a visual reminder of what they have learnt. Alternatively, if you wish, you could print out copies of the framework for the students and the students could then record the organisms that fit into each group in the space below the descriptions.

Review the learning outcomes with the group. Well done!