

CLASSIFICATION and RAINFORESTS

The series of lessons that are described here are aimed at Level C/D (Scottish 5-14 National Guidelines). The children who undertook this topic were ten years old.

We have not provided a detailed description of each lesson in terms of aims and objectives, but have described the intent and purpose of the lesson in terms of the science, the activity and the ICT. Please view the video clips to see and hear how these lessons manifested themselves in the classrooms of several teachers.

Attainment Target

- Level C**
- Give some of the more obvious distinguishing features of the five vertebrate groups.
 - Name some common members of the vertebrate groups.
 - Name some common animals using simple keys.
- Level D**
- Create and use keys to identify living things.

The children who did this topic really enjoyed it. The teachers, many of whom knew very little about PowerPoint initially, found that the children very quickly picked up the basic skills and were keen to create PowerPoint presentations. Please view the PowerPoint presentations of the children's work to see what is possible at this level.

Introductory lesson

Make pupils aware that

*Comparing and organising things in groups is called **classifying** and is something scientists do when they look at plants and animals.*

Select four common objects, e.g. pens, toys or books.

- Encourage pupils to discuss their properties and group them by common property, e.g. shape, colour, size or smell.

Helpful questions – *Can you sort these into different groups?*

- Children should justify their groupings, giving good explanations for their reasons.

This could be repeated for different objects.

- Pupils are then chosen to classify the rest of the pupils in the class and to explain their choices for classification, e.g. hair colour, clothing, height.

Lesson 2

Make pupils aware that

*Scientists identify and classify animals by looking for **distinguishing features**.*

You could start by asking the children to group a range of toys. What do they use to help them group these toys?

- Ask the pupils to identify common animals or pets and then draw/paint these.
- The children can work in groups to classify these. Ask them to justify their classifications.
- Accept any justifications at this point.
- The groups then share their views. Accept any answers at this point, e.g. we can eat them, farm animals etc.

Lesson 3

Make pupils aware that animals can be divided into two sub groups:

- vertebrates – those with a backbone
- invertebrates – those with no backbone.

Make pupils aware that scientists use

*Five common **vertebrate groups**:
birds, reptiles, amphibians, fish and mammals.*

Explain that just as they have classified things in different ways, scientists have classified things. The classifications that scientists have used for animals and plants are now used by all scientists to try to avoid confusion between different people using different classifications.

Explain what the five vertebrate groups are.

- Ask the children to work in groups to research the five classification categories and their features. They could use the Internet, CD-ROMs, books, etc.
- Each of the groups should look at one of the classification categories in more detail and define the characteristics relating to one particular category.

Birds

e.g. Common crow, penguins

have feathers covering their body

have wings

lay eggs with hard shells

have two legs.

Reptiles

e.g. Lizards, snakes, crocodiles

have skin covered in scales

lay eggs (which are soft shelled) on land.

Amphibians

e.g. Toads, frogs, salamanders, newts

have a body that is covered in soft skin – no scales

are able to live in water and on land

lay eggs in water.

Fish

e.g. Salmon, trout, goldfish

live in water

scales covering their body

have fins

breathe using gills.

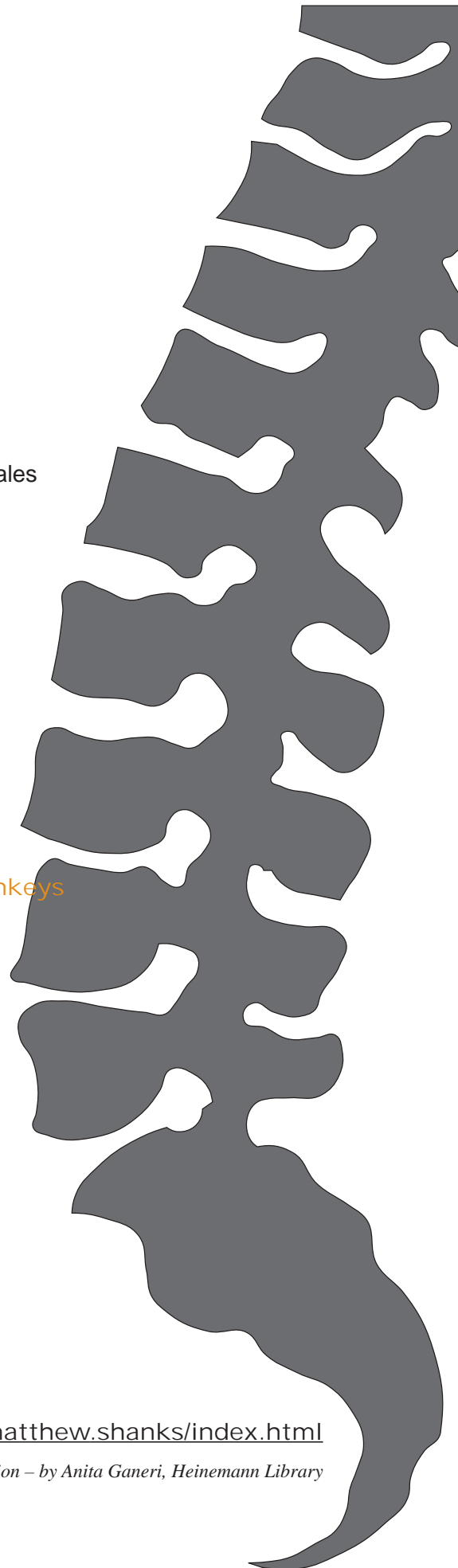
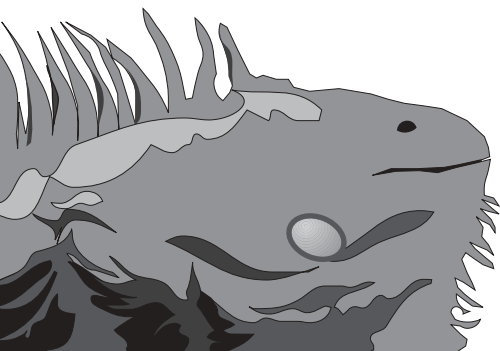
Mammals

e.g. Human beings, dolphins, dogs, monkeys

give birth to live young

feed their young milk

have fur or hair covering their body



www.homepages.which.net/~matthew.shanks/index.html

Classification – by Anita Ganeri, Heinemann Library

Lesson 4

Make pupils aware that

Scientists identify and classify animals by looking for distinguishing features.

*They can use **common keys** to classify and identify animals.*

Give children some playdough, plasticine or clay.

- Ask them to design an animal that could live in a particular habitat, such as a forest, or a patch of grass near a road, or a field.
- Ask them to describe their animal and explain why their animal is best suited to where they live. What do they eat? How do they survive? Who are the predators?
- Then ask the children to use a classification key to group their animals. What sorts of criteria do they use?

This also provides a tenuous but useful link to the topic of rainforests. Would their animal survive in a rainforest? What sorts of animals live in a rainforest?

Lessons 5 and 6

Make pupils aware that

*They can use **common keys** to sort animals.*

*They can use **PowerPoint** to share information with others*

PowerPoint is a dynamic slide-show presentation which will allow you to include text, images, sound, graphics, and video. The following sites have information to help teachers create PowerPoint presentations.

Key resources

<http://www.knc.lib.umich.edu/guides/>

An American site which includes help guides for PowerPoint – you will need Adobe Acrobat to read the pdf files for PowerPoint instructions.

<http://www.oucs.ox.ac.uk/ltg/reports/ppt.shtml>

This site, from Oxford University Computing services, has brief instructions.

Do a 'Blue Peter' and show the children one you made earlier, or show them a PowerPoint presentation made by other children. Explain that they are going to collect information about particular animals that live in the rainforest and that they are going to create their own PowerPoint presentations for a certain audience. The audience may be their parents or carers at an open evening, or children in another class.

- If the children are using PowerPoint to create their presentations, storage can become an issue if they include several graphics, animations or video clips, so you need to set limits.
- Encourage the children not to include too many multimedia components if you want the presentation to be portable. Sound and video clips require a lot of disk space.
- You can build in differentiation because you can either ask the children to use the templates available on the PowerPoint package or they can create their own presentation starting from basics.

Group working Organise the children to work in groups. Each member has to collect information about a different animal that lives in the rainforest. Each member of the group can create one slide for the slide presentation. They will have to collate their information, analyse it and determine which bits they want to include.

Saving work Once they have collected their information they can begin to investigate fonts and slide transitions. Ask the children to create and save their presentations in their own folders. Remind them to save their work frequently.

Printing A hard copy of their presentation is useful when working off-machine. However, they should be encouraged to print only the sections to which they have made changes.

Time management Give the children a set period of time to research, collect, prepare and present their information. You will notice that they want to spend all their time PowerPointing!

Extension exercises

The following are just brief suggestions for extension exercises.

- 1 Once the children have designed their animals for a rainforest or a particular habitat, ask them to explain how the animal would survive if a forest fire swept through, or another natural disaster happened?

What characteristics would enable their animal to survive?

- 2 Once they have managed to create a simple PowerPoint presentation, using clip art or inserted pictures, teach them how to scan and import the images they have drawn.

Teach them how to use action buttons to link to various screens.