

## Teacher's notes

### Activity 6: Adaptation, hunting and feeding

KS 2/3

**Aim:** to identify the different ways in which the red kite is adapted to live in its *environment* and to examine its feeding relationships at different times of the year

#### Learning objectives:

- Pupils will find out about how animals are suited to their *environment*.
- Pupils will use secondary evidence to examine the diet of a red kite and link this to food chains.

#### Resources

Copy sheets A and B for Activity 6  
Simple data handling software

#### What to do

Whole class, group or individually  
Ask the children to;

- Read the description on Copy sheet A of a kite feeding, noting the adaptations that the kite has.
- Complete the table, matching body parts to their function and adaptation.
- Complete the rest of the activities on Copy sheet B, looking at the diet of a red kite at different times of the year.

#### Extension activity

- Use the red kite, birds of prey and Rockingham Forest fact sheets to draw up food chains in Rockingham Forest, which end with red kites or other birds of prey.
- Look at how a woodland food chain would be different to one in a farmland or grassland/*pasture habitat*.
- Make a mobile that shows a red kite food chain – like the one shown here.



# Adaptation<sup>★</sup>

**Kites are wonderfully adapted to the lives they lead**



- Read the description below of a kite flying and feeding.

*As I crossed the brow of the hill, I watched a red kite soar on long narrow wings, its eyes scanning the field for any likely meal. With a twist of its forked tail, the kite swooped down low for a closer look. After two or three swoops, the kite carefully landed next to a dead rabbit. Its sharp beak tore at the flesh, while long curved talons held it firm. Contented after its feed, it took off to soar once more, riding high above the hills.*

- Label the parts of the body that help it to feed and fly.



# Adaptation<sup>★</sup>



- Using the headings given below, say how each part of the kite's body will help it to do its job. (See example)

Body part	Job	How it is suited to do this job
<i>Wings</i>	<i>Flight</i>	<i>Long and narrow which means the birds can glide easily and manoeuvre quickly</i>

# Hunting and Feeding



Although it is a large bird, the red kite is not particularly strong or aggressive. It is mainly a *scavenger* and an opportunist; it feeds on *carrion* such as dead rabbits and other small mammals whenever it gets the chance. Many roads criss-cross the Rockingham Forest and animals and birds are often killed by cars. This provides plenty of *carrion* items for the kites to eat.

The red kite is also a predator. It will sometimes take live prey, ranging from earthworms to small mammals and chicks.

Like all birds of prey, the red kite cannot digest some parts of the food that it eats, including feathers, wool and the cases of insects. The birds form these parts of the food into pellets and then regurgitate them. If you study these pellets, you can find out what the kites have been eating.

### The contents of red kite pellets in England

Species/group	Occurrence in pellets Winter (%)	Occurrence in pellets Breeding season (%)
Rabbit and hare	30	47
Rat	17	7
Mice and voles	21	7
Pheasant	5	6
Woodpigeon	6	16
Earthworms	7	–
Crows	–	2

# Hunting and Feeding



- 1 Use the table of information about kite pellets to answer the following questions:
  - a) What is the most important food for red kites in England?
  - b) Compare the diet of the red kite in winter and the breeding season – what differences are there? Can you think of any reasons for this?
  - c) Are there any food items that surprise you? Which ones and why?
- 2 Can you find a way to represent this data – eg a bar chart? Decide on the best way and produce a chart for each season.

**Aim:** to understand the inter-relationships of species in woodland *habitats* in Rockingham Forest

**Learning objectives:**

That *habitats* support a *diversity* of plants and animals that are interdependent  
(Pupils understand that food webs are composed of several food chains)

**Resources**

*Rockingham Forest and Woodland Birds fact sheet* – enough copies for all the students to be able to access the information easily  
Copy sheet for Activity 7 and plain paper

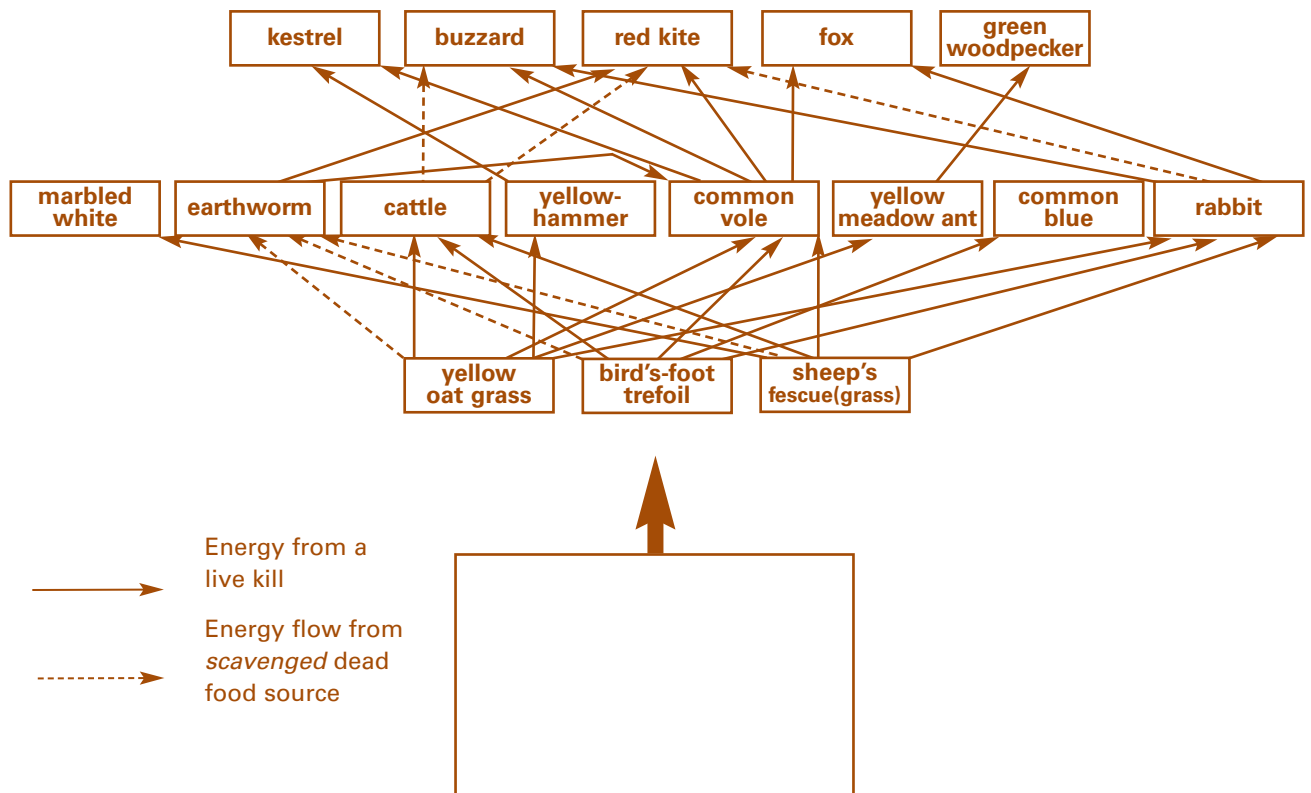
**What to do**

- Discuss the woodland *habitat* found in Rockingham Forest and how it supports different species.
- Discuss the terms 'producers', 'consumers' and 'top predator'. Can your pupils identify these within each *habitat*?
- Ask your pupils to look up information about different species on the fact sheets.
- Ask pupils to complete the activity sheet and draw their own food webs from the species given for each *habitat*.

# Food Webs in Rockingham



1 Look at the example of a food web for farmland in Rockingham Forest. Answer these questions.



- The arrows show the flow of energy through the species in a *habitat*. What is the *origin* of the energy? Add this to the food web.
- Identify which species are producers, which are primary consumers and which are secondary consumers. Devise a method of showing this on the food web, eg colours or symbols.
- Which species are top predators?
- What type of creature are common blue and marbled white? Can you find out what predators they might have?
- Complete the table on the next page. Use the fact sheets or identification books to decide which species would live in a woodland. Put a tick in the column.

# Food Webs in Rockingham



List of species	Woodland	List of species	Woodland
kestrel		dead leaves	
barn owl		beech	
hobby		wild cherry	
red kite		oak	
sparrowhawk		caterpillar	
field vole		leaf hopper	
earthworm		bluebell	
skylark		primrose	
hawfinch		foxglove	
swallow		woodpecker	
dragonfly		greenfinch	
<i>clover</i>		grey squirrel	
<i>poppy</i>		rabbit	
beetle		grass	
corn		spider	
wheat		bee	

**2** Draw a food web like the one on the previous page for a woodland. Show how the species are inter-related.

**3** From 1790 until the mid-1900s, what was mainly made from timber from Rockingham Forest? What would happen to woods that were left alone and not managed?