



Herts and Middlesex



Wildlife Watch

Water Vole Survival Game

Background information

Water voles were once a common sight along our waterways but are now Britain's fastest declining mammal. Populations have fallen by over 90% in the last century and as a result, the water vole now needs protection nationwide.

Destruction of the water vole's natural habitat – river banks and wetlands – has resulted in a direct loss of water vole colonies as well as the isolation of remaining populations. However, the biggest threat facing water voles is predation by the non-native American mink. Having originally escaped from fur farms, this species can wipe out an entire water vole colony in a matter of weeks.

What you will need

1. The class or large group.
2. An open area – this could be indoors but ideally outside near a river to get them thinking about the game in real terms.
3. Several small bean bags.
4. Printed out results table (see additional sheet 8a – optional).

** Use this to record the results of each round – this could be allocated to a different child each time to fill in and then discussed at the end of the session.

Activity objectives

This game aims to show how a number of factors affect the survival of a species and its ability to reproduce successfully. Habitat destruction, predator/prey relationships, disease, weather and pollution can all affect wildlife populations over time. Some of these are natural factors but others are man-made. It is the latter which we can do something about – for example by restoring damaged or lost habitat. This game aims to teach children that:

- Good habitat is key to a population's survival.
- Populations will continue to increase until limiting factors are imposed – i.e. when there is not enough food for the whole population.
- Limiting factors will often contribute to fluctuations in wildlife populations – i.e. as numbers of prey increase, so will the number of predators. However, once the predators have reduced the prey population, the predator population will also decrease allowing the numbers of prey to increase again! This is a natural predator/prey cycle.
- Nature is constantly changing!



Now turn over...



and play the game!



Water Vole Survival Game

How to play

1. Divide the class into two - one group will be water voles, the other group will act as the following three habitat factors (things that all water voles need to survive):

- Food (riverside plants)
- Water (for travelling through and hiding in)
- Shelter (their burrows)

** Starting with a small group of one or two water voles will show the population growth better.

2. Each habitat factor will be identified by a different symbol. Get the children to practice these symbols:

- Food – hands on their stomachs
- Water – hands over their mouths
- Shelter – hands on their heads

3. Establish two horizontal lines (about 10m apart). Ask the water voles to stand behind one line and the habitat factors behind the other. Ask them to turn around so that their backs are to each other.

4. Tell everyone that they need to decide on their habitat factor. The water voles should decide on whether they need to find food, water or shelter, and the habitat factors should decide which of these they want to be. Each child should make the symbol for their chosen habitat factor. Once they are ready, count slowly to three and allow both groups to turn around.

5. Allow the groups to mingle in the space between the two lines as the water voles look for what they need. Once the water vole has found their

habitat factor, they link arms with them and walk back behind the 'water vole' line. This habitat factor then becomes a water vole. Any water vole that fails to find what they need "dies" and becomes a habitat factor themselves. Any unused habitat factors return to their line.



Water vole

** Habitat factors cannot be shared – only one water vole to each factor!

** During each round, neither the water voles or habitat factors can change symbols once they have decided on one!

6. Repeat the process and play about 10 rounds with the water voles and habitat factors choosing different symbols each time. Using the results table, record the number of water voles at the beginning and end of each round, as well as the number of habitat factors you start with.

7. After 10 rounds, introduce one or two predators – American mink. The mink can "catch" the water voles by tossing small bean bags at them as they look for their chosen habitat factor. Water voles can only be caught when they are in the mingling zone between the two lines. Any water vole that is caught then "dies" and becomes a habitat factor. Record how quickly the water vole population declines now.



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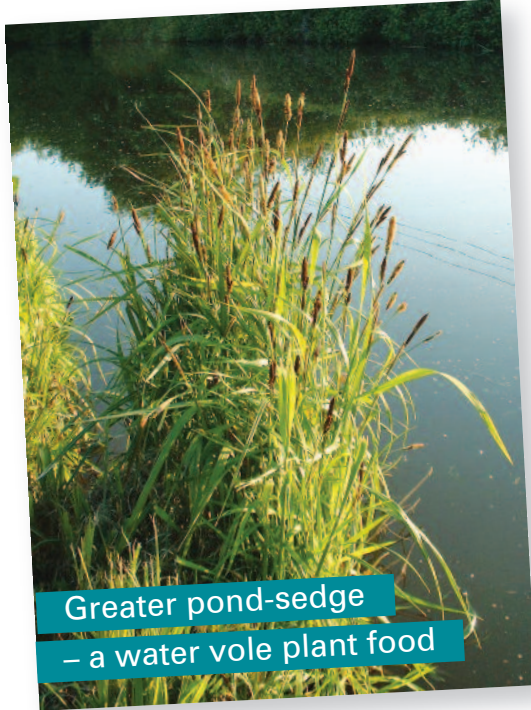


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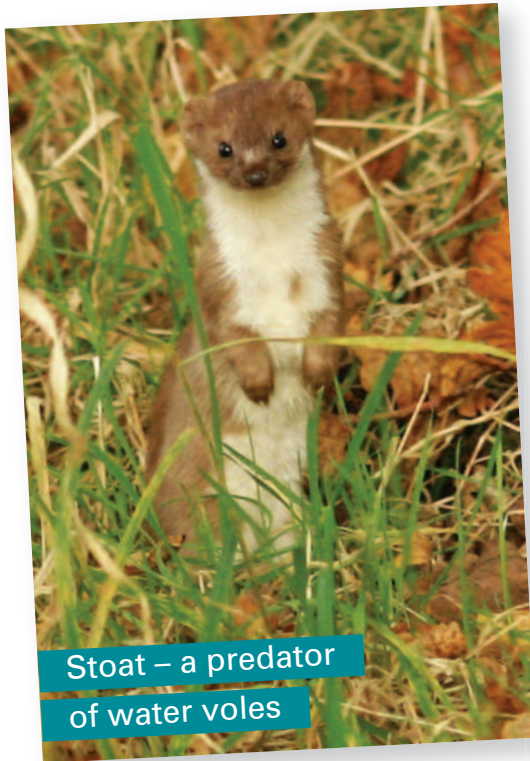
Greater pond-sedge
– a water vole plant food



Water vole feeding



American mink – main predator of water voles



Stoat – a predator
of water voles



Grey heron – a predator of water voles

