

**Aims:**

Learn about how and why non-native species arrived in Great Britain

You will need:

- Crib sheet (p2 of this document)
- Large space to run around in (hall or playground)

Instructions:

Introduce: Ask the group how they think aliens/non-native species arrived in Great Britain.

Explain: All introductions were caused by humans, either directly (on purpose) or indirectly (by accident). The main reasons can be grouped as:

- **Travel and Trade** - Hitchhikers that might have got a lift on a boat hull, on or in cargo, on truck wheels or even in a tourist's luggage.
- **Ornamental Plants** – plants brought back to botanic gardens or private gardens and collections because they looked impressive. They spread from gardens into the wild or were dumped as garden waste.
- **Ornamental Animals and Pets** - animals were brought back to keep in estate parks, zoos or as pets and either escaped or were deliberately released into the wild.
- **Commercial Use: Food, Fur etc** – animals/plants were brought back because they were useful to us. Some were bred for food or for their fur.

Play the game:

This is a take on the “Port, Starboard” or “Corners” game.

1. Designate the 4 sides of your hall by the way aliens were introduced - you might want to make signs to help. Travel & Trade; Ornamental plants; Ornamental Animals & Pets; Commercial - Food & Fur
2. Shout out the name of an invasive animal or plant from the list on next page.
3. The pupils must run to the wall which matches the introduction method for that species.
4. Explain after each species the correct answer.
5. Once you've gone through all the species, play again but this time any pupils who get it wrong are out, or if everyone is correct, the slowest to the wall is out.

Handy notes:

All non-native species introductions were and are caused by humans.

Introductions were either *direct* (ornamental plants/animals and food/fur) or *indirect* (travel & trade).

Introductions started as early as the Roman times and are still taking place today.

Actions to prevent the introduction or the spread of non-native species are called *Biosecurity*.

Do more:

For another version instead of ‘how’ introduced, use ‘when’ introduced. If you did activity 1.3 Scene of Crime reports, you should have the years when many different species were introduced. Designate the four sides of the hall by centuries/time periods that non-native species were introduced.

Aliens to shout out (not in order!)

Travel & Trade

- **New Zealand flatworm** – arrived in contaminated soil of plants sent to botanic gardens and garden centres
- **Zebra mussel** – attaches to boat hulls, propellers etc
- **Chinese mitten crab** – carried in ballast water in ships
- **Harlequin ladybird** – arrived from Europe (where had been introduced as a biological control agent) on fruit, vegetables and flowers from Europe. Also, in packing cases from Canada.
- **Asian hornet** – arrived in contaminated soil, in cut flowers, garden furniture, plant pots, untreated timber. Also, possibility could fly across the channel from France.
- **Slipper limpet** – on ships hulls, in ballast water and in silt (soil) with imported Dutch oysters

Ornamental Plants

All were brought back by plant hunters, usually as looked attractive or impressive, were planted in gardens or ponds but later escaped and spread into the wild.

- | | |
|----------------------------------|---------------------------------|
| • Giant hogweed | • White butterbur |
| • Japanese knotweed | • American skunk cabbage |
| • Himalayan balsam | • Cotoneaster |
| • Giant rhubarb (Gunnera) | • Canadian waterweed |
| • Rhododendron | • Buddleia |

Ornamental Animals and Pets

- **Grey squirrel** – introduced by Victorians as a fashionable addition to private estates
- **Sika deer** – brought back to London Zoo and to estate deer parks, then wandered and escaped into the wild
- **Canada geese** – brought by wealthy landowners as an ornament to park lakes
- **Red-eared terrapin** – Common pet species in 1980's (after the Teenage Mutant Ninja Turtles cartoons and films) but many released into the wild when grew too big for household tanks
- **Goldfish** – unwanted pets released deliberately into wild
- **American bullfrog** – unwanted pets deliberately released or escaped from garden ponds
- **Muntjac deer** – brought as ornamental animals for estate parklands
- **Ring-necked parakeet** – kept as pets, but both deliberate and accidental releases
- **Ruddy duck** - introduced into the Slimbridge Wildlife Bird Collection but spread into wild

Commercial Use - Food & Fur etc

- **Rabbit** – introduced by the Romans for food
- **American mink** – brought for fur farming but spread into wild through escapes and deliberate releases
- **American signal crayfish** – brought to be farmed for food but escaped into and then spread via waterways
- **Pacific oyster** – introduced for commercial aquaculture industry but escaped (also Travel & Trade via ships hulls)
- **Hottentot Fig** – coastal plant used to stabilise dune systems but then spread out of control
- **New Zealand pigmyweed** – sold as an oxygenating plant for garden ponds but then spread into the wild