



Lesson 2 plan : Invasive species

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| <p>Subject This lesson can form part of an English or Science lessons with curriculum links for both subjects. All experiences and outcomes are identified below.</p> | | |
| <p>Phase 2-7 This lesson plan can be adapted for use with any Primary age phase. Designed for teachers to pick and choose activities suitable for their children and adapt activities for different abilities.</p> | | |
| <p>Learning Intention:</p> <ul style="list-style-type: none"> To introduce the concept of an invasive species and how they can be introduced into an ecosystem. To understand the effect invasive species can have on a stable food chain. To develop understanding of the need to remove invasive species (stoats) from Orkney and what part RSPB can play in this. | | <p>Success criteria</p> <ul style="list-style-type: none"> I can define what makes an animal an invasive species. I can explain how non-native invasive species are introduced into ecosystems. I can give (insert number here) reasons for how the stoat is an invasive species. I can demonstrate how the stoat is affecting food chains in Orkney. <p>Advanced level.</p> <ul style="list-style-type: none"> I can explain that not all non-native species are invasive species. |
| <p>Key words Native, non-native, Orkney, invasive, stoat, food chains, ecosystem.</p> | | |
| Timings | Lesson structure | Resources |
| Video 4 mins | <p>Starter</p> <p>Remind class of how the stoat was introduced as a non-native species to Orkney in the last video. Recap what non-native means.</p> <p>Watch this Youtube video - https://www.youtube.com/watch?v=HqKkCKzp50U&list=PLL6KEI0oZPfs81r5sjjaEv9XyEzQUXtU-&index=23 from Department of Conservation in New Zealand who have a similar invasive species project running and try to work out how the stoat got to the island.</p> | <p>Youtube video link</p> <p>Invasive species teacher guidance notes.</p> |

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| <p>Discussion 5 mins</p> | <p><i>Warning: This video contains images some children may find disturbing, please watch and assess video suitability for your class before sharing.</i></p> <p>Discuss what we have learnt from the video. How did the stoat get to the island in the video? <i>Brought to the island by humans.</i> This is why it is non-native. Something similar happened on Orkney. Explain the stoat is also classed as an invasive species. Why is the stoat classed as an invasive species? <i>Because of the impact it has on native species, through predation from so many individual stoats.</i></p> | |
| <p>30 mins (8 mins on each table)</p> | <p>Main – carousel of activities</p> <p>Task 1: Stoats</p> <p>Part 1: Children to read each of the facts about stoats. Using the Stoat ID leaflet, sort the facts into true or false. Part 2: Using the Stoat ID leaflet, sort the images into stoat, weasel or rat.</p> <p>Task 2: Food chains</p> <p>Get children to form a food chain based on native Orkney species. Give each child an animal from the food chain/web (excluding the stoat) reading the statement on the back, get them to create a food web using the string. Introduce the stoat to the food chain, remove species lower down in the food chain that the stoat predate on (those children drop the string). Discuss what impact lower prey numbers would have on the population of the native predator species.</p> <p>Task 3: Importance of Orkney’s native wildlife</p> <p>Group discussion to feed into possible project: Children to brainstorm all feasible options for how they can share their learning about the importance of Orkneys native wildlife and why invasive species need to be managed. Write all their ideas on post it notes and put onto A3 paper in middle of the table. Who needs to know about it? How do we make people aware?</p> <p>Task 4: Monitoring and tracking – continued from previous lesson.</p> <p>Two different versions depending on previous activities. Version 1: If you put out a monitoring/tracking tool. Collect the tracking tool put out in the school grounds. Get children to analyse the results to work out what animals may be visiting your</p> | <ul style="list-style-type: none"> • Resource 1: Stoat ID leaflet • Resource 2: True or false facts • Resource 3: Stoat, weasel or rat • Teacher or TA to support • Resource 4: Food webs • String <ul style="list-style-type: none"> • Post it notes • A3 paper <p>Version1:</p> |

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| | <p>school. Use animal tracks sheet (Resource 3 from Lesson 1) to help. Take photos of any tracks/signs they do know/recognise to take away and research in another lesson or as a take home task.</p> <p>Version 2: If you did not put out a monitoring/tracking tool. Take groups outside to look for tracks and signs of animals visiting their school grounds. Look along the paths for poo, food trails, trails in grass or hedges, feathers, footprints.</p> <p>Suggested resources:</p> <ul style="list-style-type: none"> • RSPB Spot it! Tracks and signs (Resource 7) • RSPB Nature Detectives Spring and Summers (Resource 5) • RSPB Nature Detectives Autumn and Winter (Resource 6) <p>Take photos of any tracks they do know/recognise to take away and research in another lesson using the animal track sheet (Resource 2) or as a take home task.</p> | <ul style="list-style-type: none"> • Chosen monitoring/tracking tool • Resource 3 from Lesson 1: Tracking <p>Version 1 and 2:</p> <ul style="list-style-type: none"> • Teacher or TA to support • Camera <p>Version 2:</p> <ul style="list-style-type: none"> • Resources 5-7 |
| 10-15 mins | <p>Plenary</p> <p>Predator/prey tag game. Split class into two groups. One group has four stoats and the rest of the class are Orkney voles. Line up on either side of the classroom/hall/playground. Stoats are going to run to the other side and tag vole. Tagged voles become stoats and join the stoat's team. Highlight how the stoat population is increasing as the vole population declines. Until all the voles are gone and the whole class are stoats. Explain the more stoats there are in Orkney the more of the voles are predated on and their numbers decline, while the stoats rise.</p> <p>Make the playing area smaller. Imagine we are on a small Orkney island now. Play the game again and see how much quicker it is for the stoats to spread and reduce the vole numbers.</p> <p>Go back to larger playing area. Introduce some traps (from the vole team). Four stoats and two traps. If a trap tags a stoat they are out, but the trap cannot move. Highlight how it takes longer for the vole population to go down as stoats are trapped but it takes a long time to trap them as traps cannot move.</p> <p>Introduce more traps. Explain how with more traps catching the stoats, the population of voles is now improving as less stoats are predated on them.</p> <p>What would happen if we removed the traps? The stoat's population would increase, and the voles decline again. Which is why it is so important to remove all stoats and ensure they do not return.</p> | |

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| | <p>To achieve this, we need to put in place biosecurity measures. Introduce the Orkney Native Wildlife Project work, explaining it is similar to that which was seen in the Youtube video at the start of the lesson.</p> <p>If moving onto biosecurity, suggest children research what this means. Lesson plan 3 focuses on biosecurity.</p> | |
| | <p>Extension/project:</p> <p>Groups/pairs to choose the most feasible idea from task 3 and plan the creation of this to help with informing people about Orkneys wildlife and the threat of invasive species. The final piece can be shared with ONWP. Possibility of idea to be developed for practical use.</p> <p>For project inspiration see 'Project brainstorm'</p> | |
| <p>Link to Curriculum for Excellence Experience and Outcome</p> <p>Sciences Planet Earth – Biodiversity and interdependence</p> <ul style="list-style-type: none"> • SCN 1-01a I can distinguish between living and non-living things. I can sort living things into groups and explain my decision • SCN 2-01a I can identify and classify examples of living things, past and present, to help me appreciate their diversity. I can relate physical and behavioural characteristics to their survival or extinction. <p>Topical science</p> <ul style="list-style-type: none"> • SCN 1-20a I have contributed to discussions of current scientific news items to help develop my awareness of science • SCN 2-20a I can report and comment on current scientific news items to develop my knowledge and understanding of topical science <p>Literacy and English Listening and talking – Finding and using information</p> <ul style="list-style-type: none"> • LIT 1-04a As I listen or watch, I can identify and discuss the purpose, key words and main ideas of the text, and use this information for a specific purpose. • LIT 2-04a As I listen or watch, I can identify and discuss the purpose, main ideas and supporting detail contained within the text, and use this information for different purposes. <p>Listening and talking – Understanding, analysing and evaluating</p> | | |

- **LIT 1-07a** I can show my understanding of what I listen to or watch by responding to and asking different kinds of questions.
- **LIT 1-08a** To help me develop an informed view, I am learning to recognise the difference between fact and opinion.
- **LIT 2-07a** I can show my understanding of what I listen to or watch by responding to literal, inferential, evaluative and other types of questions, and by asking different kinds of questions of my own.
- **LIT 2-08a** To help me develop an informed view, I can distinguish fact from opinion, and I am learning to recognise when my sources try to influence me and how useful these are.

Reading - Finding and using information

- **LIT 1-15a** I am learning to make notes under given headings and use them to understand information, explore ideas and problems and create new texts.
- **LIT 2-15a** I can make notes, organise them under suitable headings and use them to understand information, develop my thinking, explore problems and create new texts, using my own words as appropriate.
- **LIT 2-18a** To help me develop an informed view, I can identify and explain the difference between fact and opinion, recognise when I am being influenced, and have assessed how useful and believable my sources are.

Health and Wellbeing

Mental, emotional, social and physical wellbeing - Social wellbeing

- **HWB 012a, HWB 1013a, HWB 2-13a, HWB 3-13a** Through contributing my views, time and talents, I play a part in bringing about positive change in my school and wider community

Social studies

People, place and environment

- **SOC 0-08a** I explore and appreciate the wonder of nature within different environments and have played a part in caring for the environment.
- **SOC 1-08a** I can consider ways of looking after my school or community and can encourage others to care for their environment
- **SOC 2-08a** I can discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally responsible way