



A place and environment teaching unit for Yrs 4-10 brought to you by:



Biosecurity New Zealand
Ministry for Primary Industries
Manatū Ahu Matua

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INTRODUCING 'WILDINGS'

- Discover how familiar your students are with wilding pines? Have they heard about them? Do they know the problems they have caused and continue to cause for our natural New Zealand environment? Do they know why we are trying to control them and remove them? Have students share their current knowledge about wilding pines.
- Introduce the idea that trees that produce their seeds in cones rather than flowers, berries, fruit or nuts are called 'conifers'. When these cones produce seed, it is quickly and easily spread by the wind. There are at least 50 conifer species in NZ. These include pines, larches, firs, spruces, and some native conifers such as kauri. 17 species of pine, larch and fir spread easily and create 'wilding conifer' infestations. Tell students that trees that are not planted by people and are self-seeded are called wildings. In NZ, wilding conifers, aka wilding pines, are our biggest weed problem. A wilding is 'the wrong tree in the wrong place'.
- Play the video at: www.youtube.com/watch?v=1Ef97U3vUIM and have students discover the following:
 - why don't we want pests destroying our precious biodiversity?
 - how do trees such as wilding pines become a pest?
 - what different areas of our land are threatened by the seeds of these wilding pines being blown by the wind and what effects do they have on the land, birds, water, animals, and places sacred to Māori where they grow?
- Focus on the fact that if we don't stop the spread of wildings they will take over **90,000 hectares** of land each year. To help students understand how much land this is, tell them that a rugby field is about 120 metres long by 60 metres wide which is about .72 of a hectare in area. Have them divide 90,000 by .72 to find that wildings could cover an area equal to **125,000 rugby fields** each year.

WILDINGS ARE A PROBLEM FOR ALL OF US

- Introduce the idea that the more New Zealanders who become aware of the serious problems caused by wildings and learn about the actions we can take to overcome them, the greater the chance we will all have to solve the problem in the places we love that are affected.
- Have students visit their local regional council website or look on the map at: wildingpines.nz/assets/Documents/Wilding-Pines-DLE-info-leaflet-WEB.pdf to find out if wildings are a problem in their region. Introduce the idea that while a tree may be fine ...

Place and Environment Curriculum Links: Years 4-10

- Develop awareness and sensitivity to the environment.
- Gain environmental knowledge and understanding of the impacts that people can have on the environment.
- Develop values that reflect concern for the environment.
- Develop skills in identification, investigation and problem solving.
- Develop a sense of responsibility through participation and take actions to address environmental problems.

Links to Social Sciences, Science, English, Arts.

... to grow or even hard to grow in one region, it can grow and spread too quickly in another region because of NZ's different regional environments and climates, and this is why 'the right tree in the right place' is so important.

- Have students discover the following messages they need to get out by working through the following videos and discuss answers to the following questions:

Can a tree be a pest? (General Introduction)

www.youtube.com/watch?v=1Ef97U3vUIM&t=3s

- what is a wilding pine and in what ways does it threaten our precious biodiversity?
- what are some of the different environments that wilding pines can take root in and how do they affect these areas?
- what actions must we all take to give this land a new future?

Where are the wilding pines?

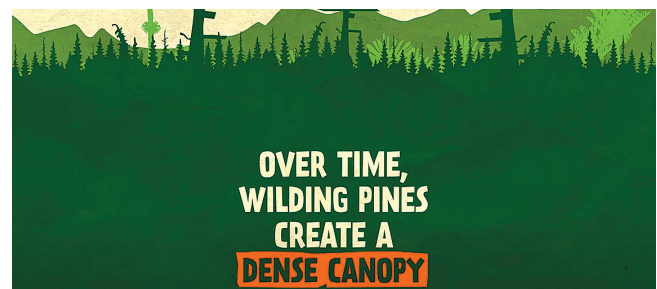
www.youtube.com/watch?v=7hGP4aRBWmw&t=5s

- how many hectares in NZ are infected with wilding pines
- what iconic landscapes are infected with 'wildings'?
- how do they force out native species?

The threat of wilding pines

www.youtube.com/watch?v=p7JU_OykYhk

- how are wildings different from beneficial planted forests?
- how old are they before they can start to seed?
- what are they able to do when they get older and larger and when is the best time to start removing them?
- what happens to the environment if they get established?



The impact of wilding pines

www.youtube.com/watch?v=p7JU_OykYhk&t=1s

- how is native bush different from wildings in what it supports?
- what do wildings take out of the environment?
- what happens when they start producing cones and an area becomes infested with wildings?

Preventing (the spread of) wilding pines

www.youtube.com/watch?v=J8-N6LCg3el&t=41s

- what is it difficult to do after an area has become infested?
- what do wilding pines do to or take away from the native plants and animals that live in that environment?
- when they invade an area, how do wildings change it?

Removing wilding pines

www.youtube.com/watch?v=pfsABlq8WtY&t=2s

- what must we do to the tree to control the wildings?
- why is pulling them out when they are seedlings the best option?
- what are the other control options?
- how many hectares of New Zealand has the Wilding Conifer Control Programme protected?



LET'S START SPREADING THE WORD

- Enthuse students with the idea that they are the best people to get these messages out to as many people in their area or place they care about. Why is this a good idea and how could it help reduce the spread of wildings? Brainstorm.
- Tell students that the best place to start is to share these messages with their immediate family and wider family members and family friends. Working in groups, have students make a summary of what these messages should be and report back. As a class, have students agree on a common set of messages that they all should get out to their their families. Tell them that a good way to do this is to have students share and play the videos to their families over a period of time as a long term homework assignment. Links to the videos including a Youtube link can be found at: www.wildingpines.nz/spread-the-word/wilding-pines-videos
- Encourage students to report back regularly on the reactions of family members to the videos and the problems they show.
- If possible, plan and take a walk in a nearby native environment with family members or friends to see if the area has been affected in any way with wildings, and report back on what they found.

LET'S ALL GET INVOLVED

- Involve your students in placing links and explanations to the videos on social media sites and the school and/or class website to get these messages out to a much wider audience.
- Make contact with your regional or local council and DOC reps or local environment trusts and invite them to talk to the class or school about wilding problems in or nearest to your local district.
- Have students offer to become involved and discover how they can take part in local efforts to eradicate the problem such as wilding spotting, or even wilding clearing.
- Tell students that throughout New Zealand in affected regions there are community groups helping to get the wilding pines/ conifers under control and that most of these groups run volunteer days that people can join. Visit the web links to these groups to discover the important work they carry out at: www.wildingpines.nz/get-involved/join-a-community-group
- Explore videos about wilding pine control across the country at: www.wildingpines.nz/wilding-case-studies/video-stories/



Young volunteers who helped clear the Ben Lomond Track in Central Otago of 10,000 wildings

FURTHER DIRECTIONS

- Download the wilding pine information leaflet at: wildingpines.nz/assets/Documents/Wilding-Pines-DLE-info-leaflet-WEB.pdf Using the map, find the area closest to your school where wilding pine control is being carried out or locate a region they visit and care about where there is a problem. Have students compose a letter to send to students at a school in that area to request information about the problems caused and efforts being made locally to control the wildings.
- Have students prepare colourful posters about the problems that wildings cause for our landscapes and environments for a display at school, the local library or information centre. Suggest students use the style featured in the 6 part video series about wildings and each poster should have only one simple message about the problems they cause, **eg** *wilding pines kill our native plants; wilding pines block out the sun; wilding pine seeds are carried by the wind.*
- Plan a 'wilding-free day' at school for parents and the local community for students to share what they have learned about the problems wildings cause and the ways New Zealanders in affected regions can take action.
 - have student groups each play the videos to highlight the serious problems wildings cause and the measures we can take to overcome these
 - representatives from DOC, local councils and environmental trusts could also be invited to share their expertise.
- Have students write letters to local newspapers highlighting and informing readers about the wilding problem.