DIEBACK WORKING GROUP INC.
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Invitation to participate in updating a *science and education program* with a *professional development opportunity*!

The Dieback Working Group Inc. (DWG) recently received a State NRM grant to update its **Discovering Dieback Education Program**, an award-winning program that has reached more than **2275** students and **25** primary and high schools in WA. The following pages include "Your invitation", a program summary with history and list of existing lesson plans that we will update, based on feedback received.

DWG is an active not-for-profit organisation who promotes and delivers environmental education, training and awareness in partnership with government, industry and community stakeholders. We use a common and devastating plant disease called Phytophthora Dieback as a theme to convey a wide range of learning on sustainability, biosecurity, biodiversity, ecosystems, life-cycles, responsible and ethical behaviours, and best-practice land management. Our coverage is extensive from Enneabba north of Perth to Esperance in the south coast.

Importantly, updating the **Discovering Dieback Education Program** is simple. But we need your input and have funds to support teachers to deliver it initially within two **south west regional schools**. The current program is 20 years old and although it is still being used is WA schools, some content and teaching methods have changed. This update aims to engage with students and illustrate learning in an interdisciplinary and applied involving science, technology, engineering, maths, arts, language or technology, using Phytophthora Dieback as the topic. We are aiming to ensure that this program also aligns with the current national curriculum outcomes for year 5's and 6's but that won't limit its use in other teaching environments.

We are inviting your feedback on existing short lesson plans (see attached), such as:

New ideas - What's good? – What's bad? - Advice? ALL IDEAS WELCOME

Your invitation

- Choose 1 or more lessons and please email or phone through your "Constructive" feedback to: Project.Officer@dwg.org.au / M: 0400 208 582 by **Friday 7 July 2017**.
- Meet with us - we can provide a professional scientist and educator to meet or skype with a group of 6 or more educators/teachers to present this opportunity further and how it can benefit you.
- Call us - we can also receive phone enquiries from interested individuals.
- Send us your feedback on any lesson plans – Your name will be acknowledged in the final document.
- We have funds to provide participating teachers with a "free-lunch" and Professional Development session to inform you of the final product and how simple it is to deliver this already proven program. (Date and location TBD, subject to proximity to maximum participants, Perth and/or Bunbury)

I hope this message conveys the flexibility we are offering to incorporate your experiences and ideas when updating this important educational resource so that it remains current and effective. If you are a teacher or educator I would gladly like to hear from you regarding this invitation and if any of the points above interest you? I can them email you copies of the existing 2-4 page lessons for your input.

Regards

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Discovering Dieback Education Program - Summary

The current program consists of 30 lesson plans (see pp. 3 - 4).

It can be delivered over approximately 1 term or choose individual lessons.

The program starts with an introduction to new terminology and concepts of bushland value then delves into biology and life-cycles of similar organisms.

At lesson 18, a DWG Officer/Scientist delivers an engaging Phytophthora Dieback lesson to the students, introducing them to the disease and its impacts.

Lessons 19 to 29 expands on students understanding of the issue and encourages responsible behaviours in local environments.

The program typically concludes with an incursion/ excursion to local bushland where students are given practical activities to participate in biosecurity hygiene and a hands-on treatment exercise to help protect vulnerable endemic Australian trees from the south west regions biggest threat to biodiversity, Phytophthora Dieback!

Program History

It all started with a group of innovative teachers at Armadale Primary School in 1996 who developed the program with the Dieback Working Group and funds from the Australian Government's Natural Heritage Trust. Their students went on to produce a musical performance about the issue called 'Stop the Rot' which was presented at the J-Rock competition in Perth (1996) and won! It can be seen here https://youtu.be/ADoYXtTm1LQ and inspired others around the world by demonstrating the enthusiasm and ability of students to understand and convey learnt messages. We're proud of this program and every student that participated in it, but we're keen to see many more students educated through the program and its future versions across Australia.

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The 30 activities for review are outlined below:

Key: Already booked Still Available

Activity 1 - Conservation Vocabulary:
To introduce vocabulary the children will encounter during the program.

Activity 2 - Bushland Retrieval Chart:
To create an awareness of the variety of different forests and bushlands in WA.

Activity 3 - Biodiversity Classification Chart:
To introduce the concept of biodiversity in the context of the WA forest and woodland.

Activity 4 - Lorax Role Play:
To develop an understanding that species in natural systems are interdependent.

Activity 5 - Graphing Animal Species in the Jarrah Forest:
To develop mathematical understandings about the construction of bar graphs.

Activity 6 - Why is Bushland so Important?
To develop an understanding of the values of healthy bushland/sustainability.

Activity 7 - Bushwalk:
To provide a first-hand experience as a basis for future art and writing activities.

Activity 8 - Water Colour Painting of a Gum Tree:
Students reflect on their sketches from their bush walk and respond artistically.

Activity 9 - Quarantine:
To develop an understanding of the importance of quarantine and how it works.

Activity 10 - Introduced Species Report:
Investigate the impacts of introduced plant / animal pests in Australia.

Activity 11 - Introduced Species - Oral Presentation:
Collaborative learning with student oral presentations - public speaking practice.

Activity 12 - 3D Bird Art:
To create a colourful representation of three-dimensional flying birds.

Activity 13 - What are Fungi?
To provide an understanding of fungi in preparation for the idea that Dieback is neither a plant nor an animal.

Activity 14 - How does mould grow?
An experiment.

Activity 15 - What is in the soil?
To develop an understanding that the soil has layers and consists of many living things.

Activity 16 - Soils just ain't soils:
To explore the macroscopic and microscopic components of different types of soils, especially bush soils.

Activity 17 - Stop the Rot DVD:
This is the J-ROCK performance that began our excursion into dieback. This can be shown just for interest and a general overview of the whole dieback story or you can use it more as a viewing activity.

Activity 18 - *Phytophthora cinnamomi* – Life Cycle:
To understand the life cycles with Phytophthora cinnamomi as one example.

Activity 19 - Size Matters:
Understand the microscopic nature of Dieback zoospores and how difficult it is to prevent its spread.

Activity 20 - How does Dieback Kill Plants?:
To simulate the mechanism by which plants die.

Activity 21 - Natural Sculpture:
To design and create a sculpture using natural materials as a cooperative group.

Activity 22 - Phytophthora Dieback Geodome:
To construct a twelve-sided paper globe to display facts learned while studying *Phytophthora cinnamomi* (PC)

Activity 23 - *Phytophthora cinnamomi* Acrostic Poem:
To write a descriptive and emotional poem to respond to the dieback theme.

Activity 24 - Dramatic Presentation or Two Minute Documentary:
To recap on the theme and consolidate concepts by using drama to work with thematic information.

Activity 25 - Aboriginal Style Art:
To look at the issue of dieback from the point of view of the aboriginal people and try to represent the issue artistically using dot painting, cross sectioning and cross hatching.

Activity 26 - Environmental Stewardship:
To introduce the concept of humans being caretakers of the environment.

Activity 27 - What Can Be Done? - Posters:
To give students the opportunity to be pro-active and help educate the community on how to minimise the spread of dieback.

Activity 28 - DIEBACK Board game:
To create a board game which incorporates information about the dieback theme in order to review all that has been learnt.

Activity 29 - Letter Writing:
To engage in active stewardship of the environment by writing letters to real people outlining the issue of dieback to raise awareness of the importance of supporting management programs and using the bush responsibly in order to minimise the spread of Phytophthora cinnamomi.

Activity 30 - DIEBACK Busting Expedition (Excursion):
To provide a first-hand experience of spraying and injecting susceptible trees and plants with phosphite.

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GOVERNMENT OF WESTERN AUSTRALIA
natural resource management program