

# Schools Tree Day – Research the benefits of nature – Years 9 & 10

## Teacher preparation

**Overarching learning goal:** Students will undertake a scientific inquiry into the impacts of spending time in nature. They will undertake first-hand investigations and use a secondary source ([Planting trees: just what the doctor ordered](#)) to examine the impacts of nature time on mental, physical and emotional well-being. Students will communicate their findings through a short video that may be shared with the wider community.

**Teacher content information:** There is an emerging body of local and international research linking childhood contact with nature to a wide range of benefits in human health and wellbeing. Planet Ark's 2012 report [Planting trees: just what the doctor ordered](#) includes two elements:

1. A review of local and international research of the intellectual, psychological, physical and mental health benefits of contact with nature for children; and 2. the results of a new Australian study called the Nature and Children's Health Survey, which was commissioned by Planet Ark and conducted by research company Pollinate. This survey focuses on how Australians, particularly those who regularly care for children, perceive the link between nature and children's health, wellbeing and development. Below is a summary of the findings:

- **Contact with nature is good for mental health -**  
Researchers have found that contact with nature helps reduce stress in children and that a deeper, more active contact with nature can provide children with calming and stabilising memories that they can draw on during stressful periods later in

life.

- **Contact with nature is good for the mind** - Research has shown that contact with nature can provide a wealth of learning opportunities and improve academic achievement.
- **Contact with nature is good for the body** - Research has shown a link between body mass index (BMI) scores in children and their access to “green” areas and levels of outdoor play. BMI is often used by health authorities and researchers to indicate healthy weight ranges. In addition, natural environments improve balance and coordination in children and can have a positive impact on eyesight.

**Hot tips:** Before starting this project in class, students can read through the [Planting trees: just what the doctor ordered](#) report for homework. That way they are familiar with the report prior to commencing the activities in class.

## Student and classroom organisation

**Preparation activity** - Ask students to read through the [Planting trees: just what the doctor ordered](#) report - focusing on the benefits of spending time in nature.

### Part 1: Making the case and background research

This activity allows students to read and summarise the main findings of the research. Students may need support in order to develop a deeper understanding of the research and to start formulating their own scientific hypotheses about the effects of spending time in nature.

Students can use the Student Worksheet to evaluate the research using De Bono's Thinking Hats. In groups of six, students can use De Bono's framework to develop a deeper understanding of the research while using various critical thinking techniques. They can record their answers on the Student Worksheet.



## Part 2: Planning and conducting the investigation

Students can use a process of scientific inquiry to test a hypothesis about the effects of time in nature. They will be asked to gather, record and collate their findings from first-hand investigations and secondary sources of data.

Students may be given the choice of self-selecting their groups, or you may determine the groupings according to ability/aptitude and give each group an appropriate hypothesis to test. An example hypothesis might be, "if students spend more time in nature they feel more relaxed". Or alternatively, you could encourage students to create their own testable hypothesis.

*Note: you can differentiate the task for students with lower abilities by asking them to investigate a question rather than a hypothesis.*

Next, students need to develop a plan for their investigation and clearly identify what data/information they need to gather. A range of strategies could be used to collect data. Students should also complete a risk assessment to ensure they comply with safe work practices. They may need some assistance with this aspect of the task.

Once students have conducted the study and collected their data, they should analyse patterns and trends in the data. This could include describing relationships between variables, identifying inconsistencies in the data and proposing reasons for the results obtained. Students should be encouraged to draw on their ability to critically evaluate their own data and the methods they used to collect it.

The Student Worksheet scaffolds the process of inquiry and presents students with steps to help them carry out, conduct and report their research.

An example of one particular experiment to test the hypothesis "if students spend more time in nature they feel more relaxed", would be for students to conduct before and after surveys with a sample of

students, parents or teachers. They should formulate the parameters of the experiment and create questions on the survey that allows them to collect valid data. They should then analyse the data and report their findings.

### Part 3: Communicating findings

Students can create a video highlighting the key findings of their research. They could imagine they are the marketing manager for nature and it's their job to create a short commercial. You could set some time constraints for this aspect of the task so students develop the ability to work under pressure. For example, they could be informed that they have no more than 40 minutes to create a 2 minute video. Ideally, they would record their video outside in nature.

Students should be encouraged to share their videos with the class and could use the [Peer Assessment Rubric - Film](#) to assess the films of other groups.

It would be great if you also shared your students work with [Planet Ark](#) to help them celebrate their achievements.

## Assessment

Student videos could be assessed by their peers as well as the teacher. Students could submit a final report of their findings. Or they could answer individual assessment questions on the Student Worksheet.

## Extension

Write a persuasive piece about the benefits of spending time in nature. Students can draw on both personal experiences and research.

Get involved in Planet Ark's Schools Tree Day! Venture into the great outdoors and connect with nature.



Remember that you don't have to be planting trees to take part in Schools Tree Day. You could be growing a vegetable garden, weeding a previously planted area, adding shrubs to the building surrounds or venturing out to the local bush to lend a helping hand to community bushcare groups.

So, get growing! It only takes a minute to [register](#).