

**BEES Day 2021 – for Years 9, 10 and 11**

Date: Friday 4th June 2021
Location: Curtin University
Cost: \$4/student

The Biology, Earth and Environmental Sciences Day (BEES Day) is an annual event that showcases some of the exciting career choices and opportunities in science. It is designed to increase students' awareness about real science jobs and encourage them to consider science pathways when selecting subjects at high school.

Presenters from a wide range of industries will share experiences from their work and engage students in hands-on activities. For our 2021 event we are pleased to offer activities and presentations below.

Representatives from various Perth Universities, TAFE and some private consultants will be available during the lunch break to answer questions and provide materials about opportunities to study science at a tertiary level.

School groups of approx 25 students are invited to attend and participate in 4 x 45 minute sessions. If your school would like to register for this event please complete the information below and email to: <pearsonjo@iinet.net.au>

School _____

Staff attending _____

Year Level/s _____ **Number of students** _____

Contact phone number _____ **Email** _____

Schools are required to notify us if they need to CANCEL, by 21st May, so that schools on the waiting list can be included. Email personjo@iinet.net.au

Please number, from 1 to 4 your preferred presentation and we will endeavour to ensure the first 3 choice. If you are bringing more than one group use A/B etc before the number.

There are 4 scheduled sessions 9.45 – 10.30 / 10.45 – 11.30 / Lunch / 12.15 – 1.00 / 1.15 – 2.00 finish. Let us know if you have to make alternative start and finish times, otherwise we will assume you are here for the whole day.

Organisation Presenter	Presentation	Selection Number 1- 6 options
DPIRD Fisheries Joshua Brown	From whiting to white sharks. The role of a fisheries scientist is extremely diverse. In this session students will be exposed to the wide range of sampling techniques used by fisheries scientists to monitor aquatic species and make sure they are sustainably managed.	
SERCUL Rose Weerasinghe	Mozzie Wise. You can find out about how Ecologists and Natural Resource Management officers help protect us from mosquitoes and how they work to manage mosquitoes in the environment. Our research targets to better understand mosquitoes and develop an ecologically sound mosquito management plan in an integrated way; cultural, physical, biological and chemical. Participate in an activity with macro invertebrates and identify natural predators of mosquitoes.	
City of Perth Shelley Harrington	Urban catchment management. Urbanisation makes managing ecosystems challenging. In this workshop students will hear from an environmental officer discuss her work and how the City of Perth works to meet social, environmental and economic needs. You will also participate in a short activity designing your own water monitoring program for a hypothetical catchment area.	
Notre Dame University Linda Davies	Coastal Management What are we most concerned about when it comes to protecting our coastal zones? Some of the current issues to consider are sea level rise, disappearing beaches, recreational rubbish, public access, encroachment of development, and loss of biodiversity. In this session students will work in groups to identify and prioritise issues for coastal management in a broad context. The outcomes will be discussed along with potential solutions. The aim of the workshop is to get students listening to and valuing different viewpoints regarding coastal management, and to voice their perspective(s) on priorities for the future.	
Perth Natural Resource Management Wayne Walters	Bring in the Beach! Join Perth NRM's Adopt A Beach program to experience a beachcombing investigation without getting sandy or wet. Participants will handle and examine real objects that have been washed up along our coasts, with a focus on biodiversity, classification and human impacts such as marine pollution.	
Perth Zoo Kate McMurtrie	Perth Zoo #Dream Job. If you just love animals, working at a Zoo is the aspiration of many. Find out about the role of a modern zoo and different careers at Perth Zoo. Discover what's involved in a typical day of a Zoo Keeper or Zoo Vet and some of the different pathways to fulfil that dream. This session will also include some problem solving hands on activities'	
WALGA Renata Zelinova Business Development Officer	Local Government Planning for Environment. Expertise is required to inform land use planning decisions, delivery of local projects like new bike trails, community centers or playgrounds, the management of many reserves protecting native vegetation or wetlands, and responding to emergencies like bushfires or flooding. Local Governments are key to delivering environmental objectives to address a broad range of environmental issues to develop feasible and relevant solutions to the local settings. To see the range of issues being considered in decision making by Local Government, students will be able to assess mock development scenarios using WALGA's LGmap, a sector specific mapping tool.	

<p>UWA</p> <p>Isobel Sewell</p>	<p>Increasing sustainability in aquaculture Have you ever wondered where your fish comes from? In this workshop you can find out how the process of growing fish works, and the troubles the industry faces in terms of sustainability. You will participate in a short activity to understand some of the techniques used by scientists to combat these issues.</p>	
<p>Australian Earth Science Education</p> <p>Cecily Arkell</p>	<p>The warming ocean as a CO2 sink The ocean is known as a carbon sink. It has been calculated that the ocean stores around 38,000 gigatons of carbon. This is 16 times as much carbon as the biosphere and 60 times as much as the atmosphere (World Ocean Review, 2010). The ocean absorbs carbon from the atmosphere. With global ocean temperatures rising, it is important to know how the oceans will cope and if they will still be able to absorb carbon dioxide as well as they have been. This workshop will explore how temperature affects waters ability to dissolve CO2 and discuss the possible impacts this will have in the future.</p>	
<p>Gun Dolva</p> <p>NMTAFE</p>	<p>Protecting invertebrates in urban bushlands. Invertebrates contribute significantly to biodiversity in urban bushlands. They are involved with many processes in ecosystem, These range from litter decomposition, pollination, seed predation and dispersal as well as predate and being predated upon. In this session you will explore the different types and roles of invertebrates in urban bushlands and how urbanisation may impact on them. Using information provided you will then develop a plan to protect the integrity of these communities in a specific bushland.</p>	
<p>Edith Cowan University</p> <p>Jessica Billingham and Final Year Undergraduate Student Eva Robinson</p>	<p>Adventures in Marine and Conservation Sciences at ECU. Are you passionate about the plants and animals that live in our marine and fresh waters? Find out about the amazing field and study opportunities that we have experienced during our time as students at ECU. From seagrasses to turtles and orcas, including stunning drone footage from beautiful locations such as Walpole and the Ningaloo reef. In this session, we will share with you how the experiences gained from our studies at ECU, as well as volunteering with government and industry have helped us develop our research skills to become better scientists in the field.</p>	
<p>Curtin University</p> <p>Assoc Prof Sarita Bennet</p>	<p>Sustainable farming means a sustainable world - Sarita has always wanted to work in agriculture, and loves being in the field talking to farmers about the research that she is doing, as well as teaching and mentoring the next generation of agricultural scientists. Her research has always been very applied because it is important to her that it can be used by farmers and helps them to farm more efficiently, sustainably and profitably.</p>	
<p>Curtin University</p> <p>Liam Olden</p>	<p>Through the looking glass: using the past to look into the future - Liam is a passionate geologist with a wide variety of interests, all of which ultimately come together to better understand how life evolved and the palaeoenvironmental conditions of Earth through time. Liam has worked on basin modelling for hydrocarbon and heavy mineral exploration to fossil evidence of some of the earliest lifeforms on Earth.</p>	