ParksWide Education Program Descriptions – Secondary

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9 & 10 7 & 8 Program Geog History History Science Science Geog Water Landforms and Landscapes **Human Impact** Cultural Heritage (Juby's Garden) Living things Habitats and Ecosystems Adaptations Daily and Seasonal Change Earth's Resources **Environmental Change and** Management Food Production (Juby's Garden) **Global Systems**

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VCE

Biology Unit 1

AoS 2 – How do living things sustain life?

Chemistry Unit 2

AoS 2 – How are substances in water measured and analysed?

AoS 3 – Practical Investigation

Food Studies Unit 1

AoS 2 - Food in Australia

Geography Unit 3

AoS 1 – Land use change

Aos 2 – Land cover change

Water (7-10 Geography, 7-8 Science)

- Water cycle sources of water (groundwater, soil moisture and surface water)
- Value of water and waterways (spiritual, economic, cultural, aesthetic) different values for different users
- Amount of the World's water suitable for drinking
- Rainfall patterns in Melbourne (compare to Northern Australia)
- Compare the Kulin seasons to the 4 season model using climate data contrast with Yolgnu seasons
- Lake (or creek) and its path out to the ocean
- Aboriginal use of area (BL was a creek) lived near waterways and beaches, moved during winter and summer
- Human impact on the water cycle Water quality and testing use sustainability ways to improve quality
- Impact of weather events drought, floods, storms community response
- Water quality and testing

Landforms and Landscapes (7-10 Geography, 7-8 History)

- Aboriginal and Torres Strait Island flags and language maps
- Traditional Aboriginal creation stories from Victoria (comparison to other parts of Australia) Connection to the land
- Whitehorse over time (aerial photos from 1945, paintings from Artist's Camp, sketches) how use has changed over time different scales (Whitehorse, Suburb, School) Stats about use of the area
- Land degradation erosion, sedimentation, urban development
- Soil/land/water quality
- Introduced plants and animals
- Comparison of Bushland to Riparian habitats
- Protection of plants and animals at Blackburn Lake and Yarran Dheran
- Effect of urban environment on Bushland areas

Human Impact (7-8 Geography, 7-10 History)

- How do plants and animals use the area? How do they interact?
- How do humans use the area? How do they interact with the environment and the plants and animals?
- How have humans impacted on the environment? What can you do to help?

Cultural Heritage (7-8 History & Science)

- Aboriginal and Torres Strait Island flags and language maps
- Traditional Aboriginal creation stories from Victoria (comparison to other parts of Australia) Connection to the land
- Timeline activity
- Evidence of Aboriginal and Torres Strait Islander society (including Mungo and Budj Bim) complexity of society significance
- Ways of passing on knowledge
- Trading pathways and songlines
- Use of fire and other techniques to manage the land
- Conservation of cultural heritage sites and artifacts World Heritage Site National Parks Land council (TO groups)
- Exploring the diaries of early explorers and settlers, sketches and paintings as an historical source
- Effect of European settlement in Australia and Melbourne

Juby's Garden

- Aboriginal use of area (BL was a creek) lived near waterways and beaches, moved during winter and summer
- Aboriginal use plants from Victoria What and how used

Living Things (7-8 Science)

- Living / non-living /once living
- Classification Structure and function using a key
- Interactions between animals and plants Food chains and food webs, feeding relationships, energy cycle
- Microorganisms (decomposers, bacteria and fungi) importance in the energy cycle
- Human Impact on habitats
- Growth, development and offspring
- Effect of environment on growth and development

Habitats and Ecosystems (7-10 Science)

- Interactions between animals and plants producer, consumer, decomposer feeding relationships, predator, prey, parasite)
- Needs of plants and animals, what happens when those needs are not met
- Living on land and living in water (mini beasts and pond life)
- Living / non-living /once living Requirements for life
- Body function and systems to aid survival Response to changes in the environment
- Interactions between animals and plants Food chains and food webs, feeding relationships, energy cycle
- Microorganisms (decomposers, bacteria and fungi) importance in the energy cycle
- Abiotic and Biotic components of the environment
- Human Impact on habitats
- Growth, development and offspring Population size
- Effect of environment on growth and development
- Effect of fire, drought and flooding

Adaptations (7-8 Science)

- Animal and plant structure to help them survive
- Animal body parts
- Plant parts
- Living on land and living in water (mini beasts and pond life)
- Classification (grouping due to features)
- Environmental factors (eg fire and seed germination)

Daily and Seasonal Change (7-8 Science)

- Earth's rotation and tilt day, month, year moon and lunar calendar (ATSI use), Analemmatic sundial
- Seasonal change comparing 4 seasons to Kulin seasons (Wurundjeri), compare with Anangu and Yolgnu
- Climate data BOM graphs of rainfall and temperature
- Using resources in season

Earth's Resources (7-8 Geography & Science)

- Earth's resources water, soil, air
- Human impact on resources water, soil
- Water cycle water saving tips
- Effect of extreme weather on landscapes fire, drought, floods
- Timescale for regeneration of resources
- Human impact on resources water, soil examples
- Using resources in season
- What can we do to preserve our resources?

Place, space and interconnection (9-10 Geography)

- How do we use the area? What is the value of the area?
- Aboriginal and Torres Strait Island flags and language maps
- Traditional Aboriginal creation stories from Victoria (comparison to other parts of Australia) Connection to the
- Whitehorse over time (aerial photos from 1945, paintings from Artist's Camp, sketches) how use has changed over time different scales (Whitehorse, Suburb, School) Stats about use of the area
- Aboriginal use of area (BL was a creek) lived near waterways and beaches, moved during winter and summer
- Perception of open space and Bushland
- Human impact sustainability

Environmental Change and Management (9-10 Geography)

- Identifying human impact
- Land degradation erosion, sedimentation, urban development Vegetation loss (aerial photos of Whitehorse)
- Soil/land/water quality Pollution
- Biodiversity Introduced plants and animals
- Comparison of Bushland to Riparian habitats
- Protection of plants and animals at Blackburn Lake and Yarran Dheran
- Effect of urban environment on Bushland areas
- Sustainability Management Strategies
- Urban planning
- Traditional management techniques Indigenous Ranger program Burning
- Climate change

Food Production - Juby's Garden (9-10 Geography)

- Natural vs agriculture vs urban systems effect of production on natural systems (different uses of area)
- Factors affection plant and animal growth
- Biome Definition
- Land and resource management used by Aboriginal and Torres Strait Islander peoples Food security, farming, eel traps, seasonal use of food and resources including Juby's Garden
- Population growth and effect on environment
- Sustainable food production (and maintaining natural habitats)

Juby's Garden

- Aboriginal use of area (BL was a creek) lived near waterways and beaches, moved during winter and summer
- Aboriginal use plants from Victoria What and how used

Global Systems (9-10 Geography)

- Water, carbon, nitrogen, phosphorus, oxygen cycle
- Effect of human impact on atmosphere, biosphere, hydrosphere and lithosphere
- Natural and changed systems
- Climate change