

Unit Overview – Operation Playground

Teacher notes: [Symbaloo](#) contains the digital resources for teachers and students to access for visual displays and investigation of the topic.

The unit is broken into six 1 hour lessons

Lessons	Teaching description
Lesson 1 1 hour	<p>Introduce the purpose of the unit to investigate the how people in design and technologies occupations address competing considerations, including sustainability in the design and construction of playgrounds suitable for a school.</p> <p>Discuss where the learning is heading – introduce the task – students will help in the design and planning of a new school playground.</p> <p>Activate prior knowledge and engage students.</p> <ul style="list-style-type: none"> • What do you know about playgrounds? • Which is your favourite playground and why? • What have you noticed about playground equipment when playing on it? • Does it have special design features – safety, colour, materials etc. • Display visuals of playgrounds – discuss design features and inclusions of equipment. (Symbaloo) • Allow time to investigate the current school playground providing hands on real world connections to learning. Generate discussions asking students to identify key features, safety inclusions, materials and different elements. Ask students to consider what they like and don't like providing reasons for their answers
Lesson 2 1 hour	<p>Provide students with a copy of the task sheet and discuss the requirements. Explain that they will work through the task with the support of the teacher and the scaffolding provided.</p> <p>Explore and discuss the occupations involved in playground design.</p> <ul style="list-style-type: none"> • Identify any local designers • Who takes care of the local playground in parks etc. <p>Teacher uses the interactive whiteboard to demonstrate and research using Symbaloo to find answers and generate discussion.</p> <p>Explore and discuss the term sustainability as a class</p> <p>Students can use the Symbaloo resources to explore and answer questions which can then be shared and discussed as a class.</p> <ul style="list-style-type: none"> • How does it affect the design process? • What are sustainable building materials? • Can existing playground materials be recycled or re-used?
Lesson 3 1 hour	<p>Discuss and Identify the safety issues when designing a playground.</p> <ul style="list-style-type: none"> • Height • Softfall • Materials • Sunshade

	<p>Students break into pairs and using the iPads investigate and identify the safety requirements recording the information in their books.</p> <p>Using the recorded information so far students complete the <i>Investigate</i> component of the task sheet</p>
<p>Lesson 4 1 hour</p>	<p>Discuss council and school approval requirements for construction of a new playground – teacher displays information found using the interactive whiteboard to facilitate class discussion.</p> <p>Brainstorm as a class the steps involved in the process of designing and planning a playground</p> <p>discuss the order of the steps involved</p> <p>Students individually plan steps into an order and record on their task sheets.</p>
<p>Lesson 5 1 hour</p>	<p>Identify the age and abilities of the audience (students) who will use the playground and how this will impact design solutions.</p> <p>Discuss and identify what needs to be included in the playground design? Eg. Climbing equipment, slide, swings and soft fall.</p> <p>Break students into groups to brainstorm ideas then present to the class.</p> <p>Investigate and brainstorm as a class other considerations in designing and constructing a playground. Eg cost, position, construction time.</p>
<p>Lesson 6 1 hour</p>	<p>Students apply knowledge and research skills to complete the playground design brief.</p> <p>Students identify the appropriately selected materials and components including the safety requirements in constructing a suitable school playground. Students design and draw a suitable playground and label the features. Students can use computers to produce their designs or draw by hand.</p>
<p>Student Diversity</p> <p>Making adjustments to meet individual student needs</p>	<ul style="list-style-type: none"> ○ Incorporate the use of multi-modal resources – visual, written and spoken cues to support discussion, questions, class, group and individual work ○ Allow time for all learners to absorb content and process meaning and then ask/answer questions ○ Recognising and being aware that some students will grasp the concept straight away while others may need more guidance – offering a higher level of guidance to those students ○ Encourage participation of all students recognizing ability level and confidence ○ 1:1 Teacher aide assistance (I) ○ Provide extra support, guidance and scaffolding ○ Provide extra time ○ Groups should be structured to facilitate and support the inclusion and learning for every student. ○ Extra scaffolding can be provided with the task to support learners such as <ul style="list-style-type: none"> ▪ Printed pictures of elements of the playground eg. slides and swings for students to cut and paste to create their playground design. ▪ Providing a list of the design and safety features that students then place in the appropriate place to label their diagrams

	<ul style="list-style-type: none">○ Students creating digital representations should be familiar with the program they are using to draw their design.
Resources	<ul style="list-style-type: none">● iPads, computers, interactive whiteboard● note books – for recording information and research● KWHL chart● Symbaloo – digital resources for teachers and students to research and investigate; occupations, sustainability, design, safety and planning.