



Developing the Nature Park - Dream Big

Grade Level/s:
7

Subject/s:
Health & PE, Art &
Music, Technologies

Type:
Unit Plan

Author:
Ailsa Green

Developing the Nature Park - Dream Big

The overall purpose of this unit of work is based in the subject area of Design and Technology but is being linked with Visual Arts and Health. The aim is for the students to design and build 3D miniature objects they think would be suitable for installing in the Nature Park that is attached to our school.

Design and Technology: The Nature Park at Naracoorte Primary School can be developed to be socially, ethically and sustainably beneficial for all users.

Visual Arts: Exploring the techniques and processes used in 3D miniatures by different artists helps me develop and refine my practical and technical skills when designing and constructing visual arts objects.

Health: Understanding what helps make communities health helps in developing the Nature Park so that it is beneficial for all users.

These objects will be displayed in the school courtyard as an installation for their Art.

Single Lesson Plan

Improving the Nature Park - see Resources

Task:

Activity:

Resources:

Makers Empire Challenge - See Resources

Nature Park Development - See Resources

Building the miniature 3D model - bringing their plan to reality

Persuading the Principal - see Resources

Downloadable files



Makers_Empire_learning_design.pdf

(/download/lesson_plan_attachments/files/000/000/118/original/Makers_Empire_learning_design.pdf?1496605866)



Makers_Empire_Challenge.pdf

(/download/lesson_plan_attachments/files/000/000/119/original/Makers_Empire_Challenge.pdf?1496605871)



Nature_Park_Development.pdf

(/download/lesson_plan_attachments/files/000/000/120/original/Nature_Park_Development.pdf?1496605893)



Grid_paper_for_Nature_Park_Development.pdf

(/download/lesson_plan_attachments/files/000/000/121/original/Grid_paper_for_Nature_Park_Development.pdf?1496605901)



Resources_Budget_Record.pdf

(/download/lesson_plan_attachments/files/000/000/122/original/Resources_Budget_Record.pdf?1496605904)



Improving_the_Nature_Park.pdf

(/download/lesson_plan_attachments/files/000/000/123/original/Improving_the_Nature_Park.pdf?1496605946)



Information_to_support_booklet_-_NPS_Nature_Park_Development.pdf

(/download/lesson_plan_attachments/files/000/000/124/original/Information_to_support_booklet_-_NPS_Nature_Park_Development.pdf?1496605954)



Nature_Park_Development_Evaluation.pdf

(/download/lesson_plan_attachments/files/000/000/125/original/Nature_Park_Development_Evaluation.pdf?1496607689)



Persuading_the_Principal.pdf

(/download/lesson_plan_attachments/files/000/000/126/original/Persuading_the_Principal.pdf?1496609778)

Curriculum

South Australian TfEL:

- 4.4 communicate learning in multiple modes
 - 4.3 apply and assess learning in authentic contexts
 - 4.2 connect learning to students' lives and aspirations
- Domain 3: Develop expert learners
- 3.4 promote dialogue as a means of learning
 - 3.3 explore the construction of knowledge
 - 3.2 foster deep understanding and skilful action
 - 3.1 teach students how to learn
- 2.4 challenge students to achieve high standards with
 - 2.2 build a community of learners

Australian Curriculum:

Understanding Conventions Associated With Particular Kinds Of Software And Using Them Appropriately, For Example Synthesising Information And Ideas In Dot Points And Sequencing Information In Presentations Or Timing Scenes In Animation (ELBE1115)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/355237c4-8b68-41fd-9b8d-9e4600a2a3d3>)

Use a range of software, including word processing programs, to confidently create, edit and publish written and multimodal texts (ACELY1728)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b1ff6f9b-c000-4e32-8ee4-9e4600a2a3d3>)

Writing And Delivering Presentations With Specific Rhetorical Devices To Engage An Audience (ELBE1113)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/99a5f163-8c57-4c3e-bc30-9e4600a2a3d3>)

Using Appropriate Textual Conventions, Create Scripts For Interviews, Presentations, Advertisements And Radio Segments (ELBE1112)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/7782e461-5fa6-4bb5-9c48-9e4600a2a3d3>)

Compiling A Portfolio Of Texts In A Range Of Modes Related To A Particular Concept, Purpose Or Audience, For Example A Class Anthology Of Poems Or Stories (ELBE1111)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/0458fcae-db24-4552-9583-9e4600a2a3d3>)

Plan, draft and publish imaginative, informative and persuasive texts, selecting aspects of subject matter and particular language, visual, and audio features to convey information and ideas (ACELY1725)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/5b3d6464-dac6-4d5b-8dc0-9e4600a2a3d3>)

Identifying Local Natural Resources And Built Environments Where Individuals And Groups Can Connect As A Community And Participate In Physical And Social Activities (ELBP398)
link (<http://rdf.australiancurriculum.edu.au/elements/2017/01/926a5587-1fd4-418b-9e3e-00d880402fc1>)

Analysing An Environment To Decide If It Meets Personal Or Community Needs, For Example Consulting With Family Members When Designing An Enhancement To An Indoor Or Outdoor Home Environment (ELBT228)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/64a9da8e-82af-42a3-a88b-88aed644621b>)

Use project management processes when working individually and collaboratively to coordinate production of designed solutions (ACTDEP039)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/bf511b4d-2edc-42cb-b334-198ef958df5c>)

Independently develop criteria for success to assess design ideas, processes and solutions and their sustainability (ACTDEP038)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/8cd20ac6-629b-4924-9ab4-217f842eb108>)

Effectively and safely use a broad range of materials, components, tools, equipment and techniques to make designed solutions (ACTDEP037)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c66da6f7-72ff-4c7e-af71-65f238e772ce>)

Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques (ACTDEP036)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c4bdda3d-e427-46e6-bb42-7d45f2627231>)

Critique needs or opportunities for designing and investigate, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas (ACTDEP035)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a91db062-7138-47bf-a24b-66f0ea527804>)

Investigating The Time Needed For Each Step Of Production (ELBT11)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/afa74b73-f3d6-42bc-a7ed-fb7c8947caf6>)

Identifying Risks And How To Avoid Them When Planning Production (ELBT473)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c98233f2-357b-44cb-8ac0-08606fd33d2a>)

Organising Time, Evaluating Decisions And Managing Resources To Ensure Successful Project Completion And Protection Of The Work Space And Local Environment (ELBT86)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b11dfa31-a163-40df-8e0a-d7cae4b9110d>)

Explaining And Interpreting Drawings, Planning And Production Steps Needed To Produce Products, Services Or Environments For Specific Purposes (ELBT54)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/92c3085a-5aa5-4a9b-8a96-e6e714b282c3>)

Evaluating Designed Solutions And Processes And Transferring New Knowledge And Skills To Future Design Projects (ELBT88)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/28942734-e9f2-4ab5-8fe1-d6f5870e885d>)

Considering How To Improve Technical Expertise (ELBT273)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/430a8003-0650-413a-9a7f-747ac62122ab>)

Developing Criteria For Success To Assess The Success Of Designed Solutions In Terms Of Aesthetics, Functionality And Sustainability (ELBT192)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e22fe543-a4e5-4040-87fc-9d854d3b21cd>)

Developing Innovative Ways Of Manipulating Technologies Using Traditional And Contemporary Materials, Components, Tools, Equipment And Techniques And Considering Alternatives Including Emerging Technologies That Could Be Substituted To Reduce Waste Or Time (ELBT31)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/7b6578b5-2dc1-45f6-82f8-ef5132769a28>)

Identifying And Managing Risks In The Development Of Various Projects, For Example Working Safely, Responsibly, Cooperatively And Ethically On Design Projects, Assessing Uncertainty And Risk In Relation To Long Term Health And Environmental Impacts (ELBT432)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/607d892e-942c-4a3b-8d80-2449a2908725>)

Practising Techniques To Improve Expertise, For Example Handling Animals, Cutting And Joining Materials (ELBT439)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/f977d219-1a5a-4df6-97a8-1e068f5bf9a0>)

Developing Technical Production Skills And Safe Working Practices With Independence To Produce Quality Solutions Designed For Sustainability (ELBT277)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/aa3aa439-6c7d-462d-859a-731bcd5f2e22>)

Documenting And Communicating The Generation And Development Of Design Ideas For An Intended Audience, For Example Developing A Digital Portfolio With Images And Text Which Clearly Communicates Each Step Of A Design Process (ELBT296)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/3a40a0b7-ec3a-47df-b4bd-6905260cbb20>)

Producing Annotated Concept Sketches And Drawings, Using: Technical Terms, Scale, Symbols, Pictorial And Aerial Views To Draw Environments; Production Drawings, Orthogonal Drawings; Patterns And Templates To Explain Design Ideas (ELBT373)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/244267a7-6b19-4d78-99d9-43bf3994de40>)

Developing Models, Prototypes Or Samples Using A Range Of Materials, Tools And Equipment To Test The Functionality Of Ideas (ELBT178)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/13803ff3-296b-4d8d-8e87-a82b84625f90>)

Identifying Factors That May Hinder Or Enhance Project Development, For Example Intercultural Understanding (ELBT460)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b25e1045-8674-4097-82b9-11efb6e47c68>)

Considering Which Ideas To Further Explore And Investigating The Benefits And Drawbacks Of Ideas, For Example Using Digital Polling To Capture The Views Of Different Groups In The Community (ELBT129)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/99f61661-4351-4acc-bafa-c1868bb03c90>)

Using A Variety Of Critical And Creative Thinking Strategies Such As Brainstorming, Sketching, 3 D Modelling And Experimenting To Generate Innovative Design Ideas (ELBT339)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c8bb944c-887b-4c02-9429-543dc9d3b4c8>)

Selecting Appropriate Materials To Acknowledge Sustainability Requirements By Using Life Cycle Thinking (ELBT280)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c5ec3b13-7f35-4999-86a1-727f3dedb20c>)

Evaluating The Viability Of Using Different Techniques And Materials In Remote, Isolated Areas, Or Less Developed Countries (ELBT194)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ff2940cb-3f2e-4365-a014-9c5dd4ad6c21>)

Examining, Testing And Evaluating A Variety Of Suitable Materials, Components, Tools And Equipment For Each Design Project, For Example The Differences Between Natural Hardwood And Plantation Softwood Timbers, Which Determine Their Suitability For Particular Uses Related To Durability, For Example Interior Or Exterior Use (ELBT224)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/93a9c41d-414b-4d6b-9ed0-8a5f5dfff425>)

Investigating Emerging Technologies And Their Potential Impact On Design Decisions, For Example Flame Retardant Fabrics Or Smart Materials Such As Self Healing Materials, Digital Technologies And Agriculture (ELBT103)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/bf839e7e-8e42-4e70-950d-cbc47b977d7a>)

Experimenting With Traditional And Contemporary Technologies When Developing Designs, And Discovering The Advantages And Disadvantages Of Each Approach (ELBT390)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/afe635f6-f224-4664-b3c0-3a26fc2151f5>)

Considering Community Needs When Identifying Opportunities For Designing, For Example Gardens For A Community Centre, Cost Effective Food Service For A Sport Club (ELBT130)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/6b74570e-7014-41f7-a59b-c18038b4c321>)

Design and Technologies Processes and Production Skills
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a398642d-2d4d-41fd-acab-77884f22c4cf>)

Working Individually And/Or Collaboratively To Apply Ethical, Environmental And Sustainable Choices When Developing And Displaying A Collection Of Visual Artwork (ELBVA111)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/622b3892-b839-4c57-a0cd-37e079a2562b>)

Justifying Their Choices For Display Or Presentation Of Ideas In Artworks Or Designs Appropriate For A Particular Audience, For Example, Mounted And Framed Exhibition, A Website, Or As A Children's Book (ELBVA084)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/8261c63d-ee90-4b5f-9ec3-68c9a260c1e5>)

Common Core/NGSS:

G.1 "Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale."

G.2 "Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle."

G.6 "Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms."

W.1 Write arguments to support claims with clear reasons and relevant evidence.
