



STEINER EDUCATION AUSTRALIA

AUSTRALIAN STEINER CURRICULUM FRAMEWORK

DESIGN AND TECHNOLOGIES

(World Crafts to Techné)

Scope & Sequence

Kindergarten/Foundation to Year 10

June 2016

Revisions in this document

June 2016 As submitted to ACARA Recognition process (based on ACARA v 8.1)

ASCF DIGITAL TECHNOLOGIES SCOPE and SEQUENCE	Kindergarten / Foundation to YEAR 10
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Design and technologies K-6	Kindergarten / Foundation to Class 2	Classes 3- 4	Classes 5- 6
<p>Living Technologies</p>	<p>2.1 Living Technologies (including Cooking and Nutrition and working with plants and animals)</p> <p>Children explore the living world and experience how animal fibres provide for clothes and trees provide timber for shelter.</p> <p>They grow and prepared simple foods for healthy eating. They explore how their hands and bodies are wonderful (tools) for doing things.</p>	<p>4.1 Living Technologies (including Cooking and Nutrition and working with plants and animals)</p> <p>Children explore and experience good practice in food hygiene and nutrition by making simple shared meals such as cooking on a school camp.</p> <p>They develop skills in the responsibilities of caring for plants, crops and animals through sustainable gardening and farming lessons in production for class and community needs.</p> <p>Children will learn to use tools and technologies used in traditional and modern societies to support working in gardens and on farms, such as, carding fleece, using shovels, hoes and spades for food production, or learning the complexities of hand milking a goat or cow.</p>	<p>6.1 Living Technologies (including Cooking and Nutrition and working with plants and animals)</p> <p>Children investigate the production of food and fibres with an emphasis on health and planning for their class and community needs. They will develop food hygiene and nutritional skills and prepare food in association with foreign language or history lessons, e.g. Greek food inspired by a Main Lesson.</p> <p>Children value sharing food with other classes or with parents at a community gathering. Children will learn about and perhaps practice aspects of farming or agriculture technologies from Ancient Cultures e.g. Greece or Rome.</p>
<p>Special Materials</p>	<p>2.2 Special Materials (traditional materials used in world crafts and technologies may include paper, card, fibres, leather, fabrics, woods and metals)</p> <p>Children observe, imitate and gain independent skills in what the teacher models, working with special materials (paper, card, fibres, fabrics) tools and</p>	<p>4.2 Special Materials (traditional materials used in world crafts and technologies including: paper, card, fibres, leather, fabrics, woods and metals)</p> <p>Children learn to apply "making" skills through world crafts projects including more complex stitching, knitting and crochet and weaving with a particular focus on cross stitch sewing</p>	<p>6.2 Special Materials (traditional materials used in world crafts and technologies including: paper, card, fibres, leather, fabrics, woods and metals)</p> <p>Children apply a wide range of learned skills working with paper, card and fabrics. Students work with more complex stitching and pattern making including developing two dimensional patterns for three dimensional animals and dolls</p>

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Design and technologies K-6	Kindergarten / Foundation to Class 2	Classes 3- 4	Classes 5- 6
	<p>techniques such as knitting. Children develop skilful fingers through world crafts including: threading, stitching, knitting and crochet, weaving and winding. They develop a flowing rhythm in their craftwork such as stitching or knitting</p> <p>Children engage in sustained projects e.g. making pom-poms and finger knitting in Kindergarten, knitting and flat weaving in Class 1 and knitted dolls, animals, scarves or beanies in Class 2.</p>	<p>Children in Class 4 are challenged now, by exploring, choosing and using more complex suitable tools, techniques and materials safely, requiring more focus, awareness and refinement of skills.</p>	<p>and more complex knitting patterns for socks and Fair Isle knitting.</p> <p>They start to learn more complex skills for projects for their daily or future needs working with wood.</p> <p>They use carving tools and fretsaws to make projects and props relevant to main lessons and drama productions.</p> <p>Fabric projects may include designing and making costumes for plays, leather work or tapestry work.</p> <p>Children recognise and review project needs and opportunities develop and communicate creative ideas and design processes. They investigate qualities of and select special materials and equipment, choosing suitable tools and processes and apply safe procedures. They know what a successful outcome involves.</p> <p>Children work collaboratively and sustainably with gratitude for the materials of the earth and handcrafts around them.</p>

Design and technologies K-6	Kindergarten / Foundation to Class 2	Classes 3- 4	Classes 5- 6
<p>The Four Elements (technological transformations, forces of nature)</p>	<p>2.3 The Four Elements (Basic Materials and Transformations*) (*Includes other materials, transformations and technologies: liquids, solids, light, sound and fire)</p> <p>Children, during unstructured play and activities, create, design and make crafts and technologies from the broad realms of matter: earth, water, air and fire.</p> <p>Children explore playground project opportunities using creative ideas and processes, planning and working collaboratively</p> <p>During water and sand play children will create rivers through the sand pit or garden, transforming sand into mud or slurry which is deposited into streams, lakes and deltas. They may also make simple beeswax candles in winter.</p>	<p>4.3 The Four Elements (Basic Materials and Transformations) (Other materials, transformation and technologies: liquids, solids, light, sound and fire)</p> <p>Children work individually and together to explore, plan, design, create, and make crafts and technologies experiencing transformations in the broad realms of materials; earth, water, air and fire.</p> <p>They explore the requirements of each task e.g. (building a model house), develop and draw designs, write a sequenced plan, working collaboratively and individually and caring for tools, materials and the environment.</p>	<p>6.3 The Four Elements (Basic Materials and Transformations) (Other materials, transformation and technologies: liquids, solids, light, sound and fire)</p> <p>Children design and make artefacts and experience technological transformations as they meet present and future needs. Through the experience of air pressure, mirrors and fire in class activities children experience and observe transformations.</p> <p>Children explore magnetic and electrostatic force as applied to technology (see Topic 6.8 Science Curriculum - <i>Introduction to Physics: Electrostatics and Magnetism</i>)</p>

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Design and technologies Years 7-10	Years 7-8	Years 9-10
<p>Living Technologies</p>	<p>8.1 Living Technologies Students investigate and discuss food and fibre production and preparation for healthy living and healthy eating.</p> <p>They continue to deepen their food and nutrition skills discussing cooking and serving requirements of foods. They may be introduced to technology in the school's commercial kitchen or run a café or canteen.</p> <p>Students review and research horticulture and agriculture technologies, through historical, practical and cultural studies. They investigate sustainable farming technologies in indigenous societies and the middle ages</p>	<p>10.1 Living Technologies (including Cooking and Nutrition and working with plants and animals) Students investigate and analyse the ethics and sustainability of food and fibre production including preparation, preservation, presentation and marketing of products.</p> <p>Students are supported, to create food for a cabaret or other school event. Students engage as a class in community work within Australia or overseas in support of creating positive futures.</p> <p>Students experience and consider sustainable outcomes of Biodynamic and Organic gardening/farming programs</p> <p>Students investigate the importance of bees and the global future of bee health. They investigate appropriate methods of honey and wax extract.</p> <p>Students investigate, make judgments and experience how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create design solutions. They select and prepare food ingredients using appropriate food production equipment, and creatively design and produce elaborate meals.</p>

Design and technologies Years 7-10	Years 7-8	Years 9-10
<p>Special Materials</p>	<p>8.2 Special Materials (traditional materials used in world crafts and technologies including: paper, card, fibres, leather, fabrics, woods and metals)</p> <p>Through studies of Indigenous Cultures, Feudal life in the Middle Ages, Renaissance times and Human Physiology, students investigate and analyse diverse local, regional and global technologies and how ethical and sustainable choices in systems and processes can be made.</p> <p>Students design and make projects with special materials (paper, card, fibres, fabrics, wood and metal). Students apply a wide range of more complex skills including jewellery, forge work and small items of furniture.</p> <p>Students design patterns and make their own clothes. Students determine project needs and opportunities. They investigate materials, equipment and processes to develop creative ideas. They use technical language to share their ideas with others and justify effective and safe designs.</p> <p>Students reflect, discuss and develop criteria for successful and sustainable design processes</p>	<p>10.2 Special Materials (traditional materials used in world crafts and technologies including: paper, card, fibres, leather, fabrics, woods and metals)</p> <p>Students design and make projects with a particular emphasis on items they use every day for example bookbinding, shoemaking in order for them to penetrate the process behind the things they use every day.</p> <p>Students apply a wide range of learned skills and develop new skills including formal blacksmithing skills such as lighting the forge, drawing down and forming a rat tail twist. They use technologies such as the sewing machine to make clothes.</p> <p>Students recognise, project needs and opportunities and investigate materials, equipment and processes to develop creative ideas. They use technical language to share their ideas with others and justify effective and safe designs. Students develop criteria for successful and sustainable design processes.</p> <p>Students appreciate social, ethical and sustainability considerations, that impact on their designed solutions. They include global consideration in their production processes such as in the sourcing of materials in carpentry and fabric work. Students understand ‘change’ as it effects the future of work and technology.</p> <p>Students work with increasing sophistication, innovation applying enterprise skills and use digital technology in planning and project management (time, cost, risk.)</p>

Design and technologies Years 7-10	Years 7-8	Years 9-10
<p>The Four Elements (technological transformations, forces of nature)</p>	<p>8.3 The Four Elements (Basic Materials and Transformations) (Other materials, transformation and technologies: liquids, solids, light, sound and fire)</p> <p>Students, design and make artefacts and experience technological transformations in more complex tasks.</p> <p>They work with stained glass to design and make glass structures such as Platonic solids.</p> <p>They shape a lens from clear ice to start a fire using sunlight, discuss their observations and record their experience.</p> <p>Students investigate electrical and mechanical systems and forces</p>	<p>10.3 The Four Elements (Basic Materials and Transformations) (Other materials, transformation and technologies: liquids, solids, light, sound and fire)</p> <p>Students, work individually and in teams to explore technological transformations. For example: extracting metal from ore as an industrial technology or science lesson or revisiting their earlier limestone cycle lesson this time on an industrial scale to create whitewash to paint school building. Students prepare a Biodynamic 500 preparation and application to the school gardens and grounds.</p> <p>Students Investigate and make judgments and experience how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions, such as working with heat to produce concrete from limestone or working with heat and mechanical force in the forging of iron.</p>