The Australian
Curriculum

Learning areas	Technologies
Subjects	Design and Technologies,Digital Technologies
Year levels	Year 2

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Foundation to Year 2 Content Descriptions

Design and Technologies Knowledge and Understanding

Identify how people design and produce familiar products, services and environments and consider sustainability to meet personal and local community needs (ACTDEK001 - Scootle ⬀)

Elaborations

exploring how local products, services and environments are designed by people for a purpose and meet social needs, for example the range of shelters provided for the public in a local community; graphical displays to market school and community events
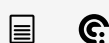
asking questions about natural and managed environments and impacts on them when selecting materials, tools and equipment when designing and making products, for example harvesting products from the school garden and using recycled clothing

making design decisions based on personal and family needs, for example downloading and comparing recipes to suit available cooking facilities such as cooking in the bush compared to cooking in a kitchen

exploring and critiquing products, services and environments for their impact on sustainability, for example the environmental risks and benefits of a system for organically or hydroponically growing a vegetable crop from seed or seedling to harvest

Explore how technologies use forces to create movement in products (ACTDEK002 - Scootle ⬀)

Elaborations

exploring how the principles of push and pull are used in the design of toys, for example in a spinning toy such as an Aboriginal mammandur

identifying, and playing and experimenting with, components such as wheels, balls, slides, springs and available local materials, tools and equipment to solve problems requiring movement

selecting materials to demonstrate how material properties are appropriate for particular designed solutions, for example materials that enable sliding or floating

exploring a system such as a marionette or Indonesian wayang kulit shadow puppet to see that by combining materials with forces movement can be created

combining materials and using forces in design, for example designing the door on a cage or a simple conveyor belt to move materials short distances
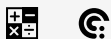
exploring how to manipulate materials using a range of tools, equipment and techniques to create movement, for example when constructing a toy boat that floats and moves
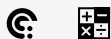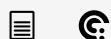
Explore how plants and animals are grown for food, clothing and shelter and how food is selected and prepared for healthy eating (ACTDEK003 - Scootle ↗)
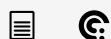
Elaborations

exploring which plants and animals can provide food or materials for clothing and shelter and what basic needs those plants and animals have

identifying products that can be designed and produced from plants and animals, for example food products, paper and wood products, fabrics and yarns, and fertilisers

considering the suitability of a range of tools when cultivating gardens, mulching and building garden structures and preparing and cooking food from recipes
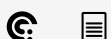
identifying and categorising a wide range of foods, including Aboriginal bush foods, into food groups and describing tools and equipment needed to prepare these for healthy eating

exploring how people from different cultures including those of Asia design and produce different

cuisines based on the plants and animals in their region and available tools and equipment

exploring the tools, equipment and techniques used to prepare food safely and hygienically for healthy eating

Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004 - Scootle ↗)
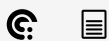
Elaborations

exploring designed solutions to meet individual, family and community needs with a focus on materials, for example fabrics used for sports clothing, soft fall for play spaces

developing new meanings for objects and action during play, for example exploring how household packaging can be used to represent other objects

exploring systems used in the classroom or community for creatively dealing with problems and needs, for example storage systems for equipment, traffic system flow for drop and go zones, the use of hoists and ramps to facilitate access
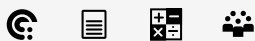
exploring facilities in local environments for accessibility and environmental impact, for example location of bike tracks and sporting fields using digital maps to view local area

exploring materials, components, tools and equipment through play to discover potential uses when making products or modelling services and environments, for example when designing and making clothes, toys and shelters

experimenting with techniques to combine or alter materials to satisfy a function

Design and Technologies Processes and Production Skills

Explore needs or opportunities for designing, and the technologies needed to realise designed solutions (ACTDEP005 - Scootle ↗)

Elaborations

identifying, gathering and playing with materials, components, tools and equipment to generate personal design ideas, for example designing a greeting card for a friend

exploring opportunities around the school for designing solutions, for example how school play areas could be improved; how the school removes classroom waste and identifying opportunities to reduce, recycle and re-use materials; reviewing the school canteen menu to identify healthy food options and suggesting changes to promote future good health
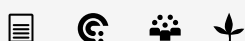
discussing possible designed solutions based on experience and some research, for example asking adults for advice

considering the importance of sustainability in designed solutions, for example comparing the durability of materials for a selected solution
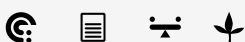
exploring which tools, equipment and techniques to use with selected materials

Generate, develop and record design ideas through describing, drawing and modelling (ACTDEP006 - Scootle ↗)

Elaborations

comparing and contrasting features of existing products to provide new ideas, for example exploring toys with several movable parts with the view to designing and making a simple puppet with one movable part

communicating design ideas by modelling, and producing and labelling two-dimensional drawings using a range of technologies to show different views (top view and side view), for example a new environment such as a cubby house or animal shelter
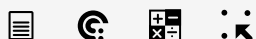
recording a judgement about design ideas with teacher guidance, for example expressing own likes and dislikes about a design idea

identifying one common testing method, and recording results, for example taste-testing comparisons of a food product and recording results in a digital form

describing how design ideas meet the needs of those who will use the solution
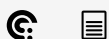
Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007 - Scootle ↗)

Elaborations

using and playing with everyday materials in new ways or re-using discarded materials, for example using discarded materials to design, make and model a constructed environment

learning and safely practising a range of technical skills using tools and equipment, for example joining techniques when making products, watering and mulching gardens, preparing food, using software to design an environment
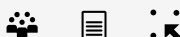
assembling components of systems and checking they function as planned, for example when making a musical instrument
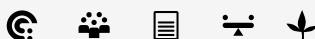
Use personal preferences to evaluate the success of design ideas, processes and solutions including their care for environment (ACTDEP008 - Scootle ↗)
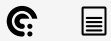
Elaborations

developing criteria for success with teacher guidance including consideration of impact on environment

recording a judgment about design ideas with teacher guidance, for example expressing own likes
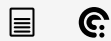
and dislikes about a design idea

reflecting on the processes and challenges of designing and producing a solution and sharing these reflections using digital technologies, for example when growing a food product, designing a structure to take a load or making a nutritious snack

suggesting areas for design improvement

Sequence steps for making designed solutions and working collaboratively (ACTDEP009 - Scootle 🔗)

Elaborations

checking that planned features have been included in design plans and drawings by referring to identified criteria for success including care for the environment

using lists or storyboarding when planning and making, for example when planning an electronic planting calendar

recording the procedure for making a product, for example a recipe or instructions for making a container

identifying roles for each member of a group when working collaboratively

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Foundation to Year 2 Content Descriptions

Digital Technologies Knowledge and Understanding

Recognise and explore digital systems (hardware and software components) for a purpose
(ACTDIK001 - Scootle ↗)

Elaborations

playing with and using different digital systems for transferring and capturing data, for example using
a tablet to take a photograph of a grandparent and recording an interview with them about life in the
past

exploring and using digital systems for downloading and storing information, for example knowing
how to download images from a website and inserting them into a document; saving and retrieving
data

exploring and identifying hardware and software components of digital systems when creating ideas
and information, for example experimenting with different ways of providing instructions to games
software using a mouse, touch pad, touch screen, keyboard, stylus, or switch scanning device, and
using different software to manipulate text, numbers, sound and images
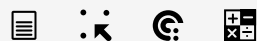
recognising and using hardware and software components of digital systems and experimenting with
their functions, for example playing with interactive toys and robotic devices to determine which ones
can work with other devices

recognising that a digital system follows instructions or commands, for example instructing robotic
toys to perform a function such as a dance movement

constructing a model of a real or imaginary digital systems device for use in role-play scenarios and
explaining the features of the device to an adult
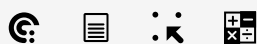
Recognise and explore patterns in data and represent data as pictures, symbols and diagrams

(ACTDIK002 - Scootle [↗])

Elaborations

sorting objects and events based on easily identified characteristics and using digital systems to represent patterns in data, for example sorting birthdates and presenting the patterns using seasonal symbols
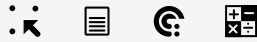
making generalisations about data sets, for example comparing different ways of travelling to and from school using classroom data, discussing results and finding patterns in modes of travel

experimenting with different ways of representing patterns, for example using materials, sounds, movements or drawing
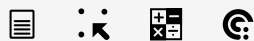
exploring with patterns of objects or symbols to represent data, for example the symbol 12 may represent different data to 21, or that an email address has a name followed by an @ symbol followed by another type of name
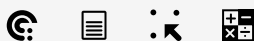
creating different patterns using the same elements, for example using patterns of coloured counters to communicate and give meaning such as a response of 'yes' or 'no'

learning about how data are represented by changing pixel density (resolution) in a photograph with support and noting the change in file size to successfully email to a friend

Digital Technologies Processes and Production Skills

Collect, explore and sort data, and use digital systems to present the data creatively (ACTDIP003 - Scootle [↗])

Elaborations

collecting, and sorting data through play, for example collecting data about favourite toys and sorting them into categories such as toys they like or dislike

locating and purposefully using visual or text data, for example searching through a digital photo library to select an image, taking into account cultural considerations such as awareness of appropriate use of images and audio recordings of deceased persons

exploring, imagining and comparing the usefulness of different data displays, for example jointly creating simple column graphs and picture graphs to represent different types of items
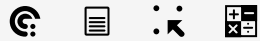
exploring and creating graphs to represent classroom data, for example collecting data on the country of birth of each student and presenting the results as a picture graph

using digital systems to organise data to improve meaning, for example using word processing software to create a list of tasks or visualisation software to create a mind map (diagram) showing relationships between characters in a story
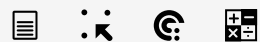
using common software to present data creatively, for example as a slideshow, movie, sounds, image, chart, word art, poster or drawing

Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems (ACTDIP004 - Scootle ↗)

Elaborations

experimenting with very simple, step-by-step procedures to explore programmable devices, for example providing instructions to physical or virtual objects or robotic devices to move in an intended manner, such as following a path around the classroom
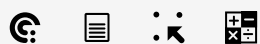
writing and entering a simple set of instructions jointly to sequence events and instructions, for example scanning personal photographs and collating and ordering significant personal events or milestones and describing the steps involved in the process
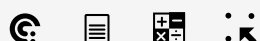
presenting a sequence of instructions or events in a series of slides or screens with text and pictures
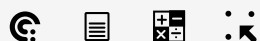
recognising sequences of instructions or events that are commonly experienced such as the sequence of traffic lights or instructions for recording a TV show or how their lunch order is taken and delivered

following a series of instructions to use a piece of hardware or software, for example taking a photograph, editing and storing it to include in a slow motion

Explore how people safely use common information systems to meet information, communication and recreation needs (ACTDIP005 - Scootle ↗)

Elaborations

sharing and describing ways that common information systems can be used to meet communication needs, for example computers can be used as phones and social networking tools allowing communication between families living in different regions

recognising and discussing the need for cyber-safety when using online information systems, for example recognising that shared personal information can be used for undesirable purposes and that using a password is a means of protecting identity
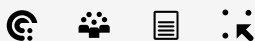
recognising safe ergonomic practices when children are playing with information systems, for example recognising the need to take regular breaks to avoid eye strain and repetitive strain injuries
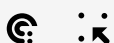
discussing how a range of information systems support personal needs and impact on others, for example text to speech software for people with vision loss

sharing ideas about the ways information systems are being used by families and friends in everyday life, for example comparing current digital play equipment with play equipment of 20 years ago

Create and organise ideas and information using information systems independently and with others, and share these with known people in safe online environments (ACTDIP006 - Scootle ↗)

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Elaborations

using different types of data to create information for sharing online, for example creating a multimedia class profile that includes a photo of each student, a personal audio recording and a written message

planning and creating text, drawings and sound files to share online, for example jointly creating a photo story to illustrate a fable or fairy-tale from the Asia region or a local Aboriginal and Torres Strait Islander community story

making ethical decisions when using images for public viewing and using the work of others, for example asking the question 'What is fair and just?' to compare images of events or activities and decide whether or not to publish

participating in safe online environments, for example sharing ideas and information through intranets, messaging only to people they know, bookmarked websites and moderated online spaces