



Gardening Tools

Grade Level/s:
7, 6

Subject/s:
Technologies, Science, English

Type:
Unit Plan

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Gardening Tools

Students research common gardening tools and then design their own. They then create an advertisement to promote their tool and present it to the class.

Single Lesson Plan

Gardening Tool Project

Task:
Please see attached PDF documents of all lessons and proformas

Activity:

Resources:

Downloadable files



GARDEN_TOOLS_PROJECT.pdf

(/download/lesson_plan_attachments/files/000/000/171/original/GARDEN_TOOLS_PROJECT.pdf?1499135209)



GARDENING_TOOLS_RUBRIC.pdf

(/download/lesson_plan_attachments/files/000/000/172/original/GARDENING_TOOLS_RUBRIC.pdf?1499135211)



MAKERS_EMPIRE_3D_PRINTING_UNIT.pdf

(/download/lesson_plan_attachments/files/000/000/173/original/MAKERS_EMPIRE_3D_PRINTING_UNIT.pdf?1499135212)

Curriculum

South Australian TfEL:

4.4 communicate learning in multiple modes

4.3 apply and assess learning in authentic contexts

4.1 build on learners' understandings

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:

Experimenting With Materials, Tools And Equipment To Refine Design Ideas, For Example Considering The Selection Of Materials And Joining Techniques To Suit The Purpose Of A Product (ELBT267)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/6b897f57-6cba-4870-93e0-78ef6a957b77>)

Representing And Communicating Design Ideas Using Modelling And Drawing Standards Including The Use Of Digital Technologies, For Example Scale; Symbols And Codes In Diagrams; Pictorial Maps And Aerial Views Using Web Mapping Service Applications (ELBT364)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b45f775a-3a31-4e00-80e6-4876549184f2>)

Analysing And Modifying Design Ideas To Enhance And Improve The Sustainability Of The Product, Service, Environment Or System (ELBT365)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/059cdc15-9fbc-4dcd-ad2f-47592878e0ea>)

Developing Alternative Design Ideas And Considering Implications For The Future To Broaden The Appeal And Acceptance Of Design Ideas (ELBT200)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/adb45c63-290a-4731-abb6-99032031ac5b>)

Generating A Range Of Design Ideas For Products, Services Or Environments Using Prior Knowledge, Skills And Research (ELBT408)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ecc70bac-4ded-4719-8922-2fe8ac3055fd>)

Generate, develop, communicate and document design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/8abf34c6-43f0-48c4-a26b-5c673f37cbf0>)

Investigating How To Minimise Material Use And Manage Waste By Critiquing The Environmental And Social Impacts Of Materials, Components, Tools And Equipment (ELBT2)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/0e4889d9-1297-47bc-b70a-ff9d32be08b8>)

Testing A Range Of Materials, Components, Tools And Equipment To Determine The Appropriate Technologies Needed To Make Products, Services Or Environments, For Example A Moving Vehicle (ELBT376)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/f7955d4f-a1ff-4b70-ab36-433928a1c400>)

Identifying The Importance Of Complementary Parts Of Working, Everyday Systems By Deconstructing The Components, Structure And Purpose Of Products, Services Or Environments (ELBT69)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/95651eea-698e-417c-a35e-dee42b90939d>)

Investigating Designed Solutions From Around The World To Make Suitable, Quality Decisions That Meet The Design Brief, Challenge Or Scenario (ELBT97)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/1bf47f61-4046-463c-9528-cf522bdddc8e>)

Exploring The Steps Involved In The Process To Satisfy A Design Brief, Need Or Opportunity (ELBT34)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/3ca02564-9519-46fc-b438-eeec11c74fc9c>)

Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ba61fd1b-b7ed-4d58-8cb0-b7dd0dca64f9>)

Comparing Tools, Equipment And Techniques To Select Those Most Appropriate For A Given Purpose (ELBT426)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/5b723e0f-46be-4bf5-ae08-268536d424cd>)

Investigating And Experimenting With Different Tools, Equipment And Methods Of Preparing Soil And The Effect On Soil Quality And Sustainability, For Example When Designing A Garden For A Community Group (ELBT22)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a750b174-e2a8-446c-8ccb-f7ec2a8ac91c>)

Reflecting On The Importance Of Aesthetics, Function And Sustainability In Product Design, For Example A Textile Product That Gives Protection And Is Appealing; A Motor That Moves A Vehicle And Uses A Sustainable Power Source (ELBT36)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/3d6cb994-406e-4c20-af14-eda92c1c14d5>)

Reflecting On The Features Of Designed Solutions That Ensure Safety And Wellbeing Of Users, For Example Smoke Alarms (ELBT355)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/6f4dfc29-1cea-4a6b-a474-4c5c535c5727>)

Evaluating The Sustainability Implications Of Materials, Systems, Components, Tools And Equipment, For Example Materials Can Be Recycled Or Re Used To Reduce Waste; Systems May Benefit Some, But Disadvantage Others (ELBT340)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/8f557b3e-0dc8-4a7b-a3d3-53bc3e12dd86>)

Selecting And Combining Software Functions As Needed To Create Texts (ELBE1062)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/0b58f05c-2397-4ce3-8fee-9e4600a2a3cf>)

Use a range of software, including word processing programs, learning new functions as required to create texts (ACELY1717)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/d3352d00-e7c7-45ce-b077-9e4600a2a3cf>)

Interacting with others

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/d3ba18a8-9893-4d1a-915e-9e4600a2a3cf>)

Using Technologies To Collaboratively Prepare A Humorous, Dynamic Group View On A Debatable Topic, Such As 'Kids Should Be Allowed To Read And View What They Like,' To Be Presented To Teachers And Parents (ELBE1044)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/2a9a9344-b895-4436-a909-9e4600a2a3cf>)

Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements for defined audiences and purposes, making appropriate choices for modality and emphasis (ACELY1710)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/d9463649-ebf7-4575-85af-9e4600a2a3cf>)

Experimenting With Voice Effects For Different Audiences And Purposes, Such As Tone, Volume, Pitch And Pace, Recognising The Effects These Have On Audience Understanding And Engagement (ELBE1043)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e9853276-37f4-449a-93fc-9e4600a2a3d3>)

Choosing Vocabulary And Spoken Text And Sentence Structures For Particular Purposes And Audiences, Adapting Language Choices To Meet The Perceived Audience Needs, Such As Recounting An Excursion To A Younger Class Or Welcoming A Visitor To A School Function (ELBE1042)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/68a97615-0821-4a9b-9d65-9e4600a2a3d3>)

Using Effective Strategies For Dialogue And Discussion In Range Of Familiar And New Contexts, Including Speaking Clearly And Coherently And At Appropriate Length, Acknowledging And Extending The Contributions Of Others, Asking Pertinent Questions And Answering Others' Questions (ELBE1041)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/55ce8f66-9e6e-44a5-8d0e-9e4600a2a3d3>)

Participating In Pair, Group, Class, School And Community Speaking And Listening Situations, Including Informal Conversations, Discussions, Debates And Presentations (ELBE1040)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b3bd59fc-2a64-483e-8d1f-9e4600a2a3d3>)

Use interaction skills, varying conventions of spoken interactions such as voice volume, tone, pitch and pace, according to group size, formality of interaction and needs and expertise of the audience (ACELY1816)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c6044648-eabc-4890-9219-9e4600a2a3d3>)

Recognising That Closed Questions Ask For Precise Responses While Open Questions Prompt A Speaker To Provide More Information (ELBE1039)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e590c622-bbac-4c74-bf93-9e4600a2a3d3>)

Exploring Personal Reasons For Acceptance Or Rejection Of Opinions Offered And Linking The Reasons To The Way Our Cultural Experiences Can Affect Our Responses (ELBE1038)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/30b09e62-fbb6-4359-8a47-9e4600a2a3d3>)

Using Strategies, For Example Pausing, Questioning, Rephrasing, Repeating, Summarising, Reviewing And Asking Clarifying Questions (ELBE1037)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/d6ef3e63-0181-428d-83de-9e4600a2a3d3>)

Participate in and contribute to discussions, clarifying and interrogating ideas, developing and supporting arguments, sharing and evaluating information, experiences and opinions (ACELY1709)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/3c9bf8d8-73e7-4601-badb-9e4600a2a3cf>)

Writing Letters In Print And By Email, Composing With Increasing Fluency, Accuracy And Legibility And Demonstrating Understanding Of What The Audience May Want To Hear (ELBE998)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/382d488a-37bd-40e8-a1c5-9e4600a2a3c5>)

Use a range of software including word processing programs with fluency to construct, edit and publish written text, and select, edit and place visual, print and audio elements (ACELY1707)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/1f59128d-364b-495e-bb55-9e4600a2a3c5>)

Planning A Report On A Topic, Sequencing Ideas Logically And Providing Supporting Detail, Including Graphics, Sound And Visuals To Enhance Audience Engagement And Understanding (ELBE984)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/5c8ba9f2-e47d-4c55-b479-9e4600a2a3ca>)

Plan, rehearse and deliver presentations for defined audiences and purposes incorporating accurate and sequenced content and multimodal elements (ACELY1700)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/628c0609-1624-424d-9e7e-9e4600a2a3ca>)

Asking Specific Questions To Clarify A Speaker's Meaning, Making Constructive Comments That Keep Conversation Moving, Reviewing Ideas Expressed And Conveying Tentative Conclusions (ELBE978)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/4282fe83-77e3-4305-8701-9e4600a2a3ca>)

Clarify understanding of content as it unfolds in formal and informal situations, connecting ideas to students' own experiences and present and justify a point of view (ACELY1699)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/80b5b194-5e58-425a-a447-9e4600a2a3ca>)

Becoming Familiar With The Typical Stages And Language Features Of Such Text Types As: Narrative, Procedure, Exposition, Explanation, Discussion And Informative Text And How They Can Be Composed And Presented In Written, Digital And Multimedia Forms (ELBE953)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/fda9075c-102b-4cd1-bf66-9e4600a2a3c5>)

Understand how texts vary in purpose, structure and topic as well as the degree of formality (ACELA1504)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c1b6da4c-6b29-41a9-8445-9e4600a2a3c5>)

Years 5 And 6 Achievement Standard
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/2301139b-c9b5-48de-9004-5b96c5e0f495>)

Digital Technologies Processes and Production Skills
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e63c5b09-8ccb-4bf8-92b2-9960d44efa2a>)

Digital Technologies Knowledge and Understanding
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/aeb4c992-cef6-4934-b1ce-d380ea0c2fa4>)

Manage the creation and communication of ideas and information including online collaborative projects, applying agreed ethical, social and technical protocols (ACTDIP022)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/306fcc15-9c3d-4d8d-b82d-2d074080e31e>)

Explain how developed solutions and existing information systems are sustainable and meet local community needs, considering opportunities and consequences for future applications (ACTDIP021)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b11a63a9-238c-4e50-af18-49a474909430>)

Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/9979ba52-1b70-4b2d-9ebc-75cb5e604d42>)

Design, modify and follow simple algorithms represented diagrammatically and in English involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a6c04dad-2d6d-4596-ac2a-841eb3fcbab4>)

Design a user interface for a digital system, generating and considering alternative designs (ACTDIP018)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a52a8d0c-9d0f-431b-89f4-945b8fcd20ce>)

Define problems in terms of data and functional requirements, and identify features similar to previously solved problems (ACTDIP017)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/bc9e29bc-56df-47c0-9b8f-2bfd5a01aaa>)

Acquire, store and validate different types of data and use a range of commonly available software to interpret and visualise data in context to create information (ACTDIP016)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a85e2830-6f98-46a5-a931-91955d189233>)

Using A Range Of Communication Tools To Share Ideas And Information, For Example Participating In Collaborative Online Environments (ELBT198)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/6f054219-1b98-47cd-867b-9a12704d3f92>)

Using Digital Systems To Create Web Based Information Taking Into Consideration Referencing Conventions, For Example Creating A Blog, Website Or Online Learning Space For Sharing Ideas (ELBT401)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/83f16653-2e46-49a8-9870-35b1c032f928>)

Developing A Set Of 'Rules' About Appropriate Conduct, Language And Content When Communicating Online, And Using These Rules As A Basis For Resolving Ethical Dilemmas (ELBT218)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/68f18a8b-0b6e-4fe5-9257-8db0377dff9a>)

Considering Ways Of Managing The Use Of Social Media To Maintain Privacy Needs, For Example Activating Privacy Settings To Avoid Divulging Personal Data Such As Photographs, Addresses And Names (ELBT424)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c1e8b5c0-c2f9-4cc2-a3de-26cbd2e55ab3>)

Applying Safe Practices While Participating In Online Environments, For Example Checking The Default Privacy Settings To Ensure Maximum Protection Of Personal Details, Being Aware Of Online Filtering Techniques And Policies Used At School And At Home (ELBT315)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/02e4abc9-0701-4c1f-a018-5fab96fa2ac7>)

Applying Practices That Support The Organisation Of Collaborative Problem Solving, For Example Finding Online Meeting Times That Suit All Members, And Agreeing On Ways Of Protecting Files And Sharing Information Digitally With Members

(ELBT46)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/338cc758-11a3-4e51-92f4-e9caf70385fb>)

Considering Practices To Save Energy And Other Resources When Using Information Systems, For Example Switching Off When Not In Use, Ensuring Electronic Devices Are In Energy Saving Mode (ELBT79)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/fdbe3ae6-f0b6-42ea-a901-dade8ae0bc>)

Exploring The Ethics And Impact Of Management Practices On The Use Of Communication Networks, For Example Internet Censorship From A Local, National And Global Perspective And The Impact On Freedom Of Access And Expression (ELBT425)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/042f4ebd-f6ed-49f5-bd58-269972d6c8c7>)

Comparing Past And Present Information Systems In Terms Of Economic, Environmental And Social Sustainability, Including Those Of Aboriginal And Torres Strait Islander Peoples (ELBT257)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/2e7f6c24-6fb6-4be0-93b2-7c49dbd20564>)

Imagining How The Functioning Of One Type Of Information System Could Be Applied In A New Way To Meet A Community Or National Need, For Example Considering How An Electronic Tracking System Such As A Global Positioning System (Gps) Could Be Used To Find People Who Are Lost (ELBT276)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/42dec394-6b0f-4bf2-a1ce-739bd9ee13b2>)

Explaining Why People Interact So Readily With Touch Systems, For Example Touch Input Requires Less Dexterity To Issue Instructions And Is Designed To Be Accessible To Users Through The Use Of Icons (ELBT68)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a2b026ae-daa5-4da7-8856-dee7aae51910>)

Using Sustainability Criteria To Explain How Well A Developed Solution Meets Its Requirements, For Example Personal Data Are Secured (Social) And The Solution Can Only Be Viewed On Screen To Avoid Printing (Environmental) (ELBT343)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ab875450-b681-4f50-ad17-51e7c5093b8e>)

Experimenting With Different Ways Of Instructing To Make Choices And Repeat Instructions, For Example Using 'If' Statements To Allow For Making Choices And Iterations (Repeat Instructions) Until A Goal Is Achieved (ELBT239)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/2a6a9705-08c1-48b0-9e0d-829690cb38c4>)

Programming A Robot To Operate Independently, For Example To Find Its Way Out Of A Maze (ELBT81)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/2b2453e4-7c71-4d38-825f-da19854f5e3c>)

Creating A Quiz Where Questions Are Repeated Until The Correct Response Is Given, For Example Questions And Feedback On Responses In A Few Slides In A Slideshow (ELBT255)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/8b0bc162-508b-43a9-aaf4-7d22e6a8ce59>)

Designing And Creating A Solution That Is Interactive, Using A Visual Programming Language, For Example Designing A User Interface For People With Disability, Taking Into Account Visibility And Size Of Icons, Or Creating A Quiz That Provides Feedback On Response And Allows The User To Try Again (ELBT44)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/f93be36a-6965-4c99-bbcb-eea36f152b76>)

Planning And Implementing A Solution Using A Visual Programming Language, For Example Designing And Creating A Simple Computer Game Involving Decisions And Repetitions, Suitable For Younger Children, That Requires User Input To Make Selections, Taking Into Account User Responses (ELBT434)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ab2d081f-e3bf-430c-a57e-22930533db89>)

Experimenting With Different Options That Involve Repeat Instructions, For Example A Continually Repeating Slideshow, A Repeated Movement In An Animation, A Repeated Calculation In A Spreadsheet (ELBT462)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/eb748904-ea52-4524-87c1-102b384fbc33>)

Using Different Design Tools To Record Ways In Which Digital Solutions Will Be Developed, For Example Creating Storyboards Or Flowcharts To Record Relationships Or Instructions About Content Or Processes (ELBT115)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/8ee5f63d-7597-458c-a79a-c60daa66a51b>)

Designing The Instructions For A Robot Vacuum Cleaner To Clean A Room (ELBT346)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e524f13d-9ad9-4fc0-a782-5085e85f16b2>)

Experimenting With Different Ways Of Representing An Instruction To Make A Repetition, For Example Loops In A Flowchart Diagram Or Using A 'Repeat' Statement (ELBT291)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/1cf51bf3-a48b-4558-9ac2-6c629fa915ba>)

Experimenting With Different Ways Of Representing An Instruction To Make A Choice, For Example Branches In A Tree Diagram Or Using An 'If' Statement (A Common Statement Used To Branch) To Indicate Making A Choice Between Two Different Circumstances Using A Spreadsheet Or A Visual Program (ELBT13)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/1797a999-d835-4e2d-9413-fac532f038ef>)

Following, Modifying And Describing The Design Of A Game Involving Simple Algorithms Represented Diagrammatically Or In English, For Example Creating A Flowchart With Software That Uses Symbols To Show Decisions, Processes And Inputs And Outputs (ELBT366)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/0b58ea9f-c8bb-4fb6-8678-464bb1d2a6ef>)

Following A Diagram Of A Simple Method Of Sorting Numbers Or Words (ELBT240)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/3d7ee432-6dec-41a1-ba67-826a02c9fdc3>)

Generating Alternative Designs For A User Interface, For Example Sketching Different Concepts For A Splash Screen Of A Game Or Interactive Multimedia Experience (ELBT307)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/5c8c0e60-7220-401e-8e2e-634543437528>)

Designing The User Interface Of A Solution Using Different Design Tools, For Example Using A Storyboard To Outline The Stages Of A Game Or A Mock Up To Show The Placement Of Icons (ELBT221)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/14a46191-b01e-4cb5-95db-8c35bdf68fa7>)

Applying The Principles And Elements Of Design To A Set Of Requirements In Order To Produce A User Interface For A System That Addresses An Identified Need, For Example To Emphasise Or Highlight An Area Of The Screen To Draw The Viewer's Attention To An Event Or Action (ELBT169)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/59ffa6fb-b18f-4cbb-a6fc-adfc069b0603>)

Exploring Different Features Of User Interfaces That Allow People From Different Cultures To Access Information Irrespective Of Language Background, For Example Using Icons And Consistently Placing Icons Or Symbols In Games Interfaces To Reduce The Frustrations Of Game Players (ELBT332)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c38cfe1b-1ad7-4303-a6c3-59a24c016c26>)

Describing In Simple Terms The Nature Of A Problem And What A Solution Needs To Achieve, For Example What Need The Problem Is Associated With, Who The Solution Is Needed For, What Data Are Needed And What Features The Solution Would Need To Include (ELBT188)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/bb871177-614b-4e0b-b1cf-a05d0cf46307>)

Using And Interpreting Data, Establishing The Root Cause Of A Problem, For Example Using An Annotated Diagram To Identify Omissions, Duplications Or Mismatches Of Data (ELBT80)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/0db12b49-af88-4c60-b475-da61f4d34b2a>)

Investigating Characteristics Of User Interfaces That Are Common For Particular Types Of Problems, For Example, Touch Screens – Many People Respond More Intuitively Than When Using A Keyboard Or Stylus; And The Consistent Placement Of Symbols Helps With Performing Actions That Require Speed, For Example In Games (ELBT430)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/4f2a9f0d-6942-4184-ab5a-2597eb354cf7>)

Checking Existing Solutions To Identify Features That Are Transferable To New But Similar Digital Solutions, For Example Identifying If There Are Any Similarities (Such As User Age And Special Requirements) Between An Existing Game And A New Game To Be Created – In Terms Of The Types Of Data And The Needs Of The Users (ELBT271)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/9b0f1b6f-1387-4f8a-b0f6-74c6f12a16ca>)

Using Data Visualisation Software To Help In Interpreting Trends, For Example Uploading Data To A Web Application And Building A Visualisation Of The Dataset (ELBT223)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/dcca6da3-270d-4606-8eae-8ae6ba824fb4>)

Acquiring Data From Online Sources By Narrowing The Focus, For Example Filtering Data Using Provided Options Or Performing Queries Using Advanced Search Functions (ELBT385)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/33ba699f-891e-4cae-8e53-3d91785e9228>)

Using Software To Automate Calculations To Help With Interpreting Data, For Example Using Functions To Make Arithmetic Calculations Using Multiple Cells And Summing Cell Ranges (ELBT38)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/105965bd-9621-4e09-9d3a-ed2fd6927459>)

Recognising The Difference Between Numerical, Text And Date Formats In Spreadsheets (ELBT451)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/350ea069-284b-44f2-9d5a-17a6e709a59f>)

Selecting And Using Peripheral Devices Suitable To The Data, For Example Using A Data Probe To Collect Data About Changing Soil Temperatures For Plants, Interpreting The Data And Sharing The Results As A Digital Graph (ELBT299)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/0733e77d-c5c9-4cf4-9c08-6545fa6276f0>)

Using Digital Systems To Validate Data, For Example Setting Data Types In A Spreadsheet To Make Sure A Date Is Input Correctly (ELBT229)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/531108eb-bece-4f8f-97a7-87a28eadc924>)

Investigate how digital systems use whole numbers as a basis for representing all types of data (ACTDIK015)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/534001fd-58e7-49ff-af5e-8b2d9114b356>)

Investigate the main components of common digital systems, their basic functions and interactions, and how such digital systems may connect together to form networks to transmit data (ACTDIK014)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/7798b4c3-b1ef-42de-a267-597fa63706cc>)

Representing The State Of An Object In A Game As Active Or Inactive Using The Respective Binary Values Of 1 Or 0 (ELBT6)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/f0367e6a-b8b0-48b4-a712-fd01fb28db0d>)

Exploring How Division By Two Can Be Used As A Technique To Determine The Binary Representation Of Any Whole Number By Collecting Remainder Terms (ELBT163)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/96c863f2-c904-46f9-9f5a-b0adbaebb647>)

Representing Whole Numbers In Binary, For Example Counting In Binary From Zero To 15, Or Writing A Friend's Age In Binary (ELBT186)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/de3560e8-316f-4c8e-8c32-a1080aec1883>)

Recognising That The Numbers 0, 1, 2 And 3 Could Be Represented By The Patterns Of Two Binary Digits Of 00, 01, 10 And 11 (ELBT283)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b4f3b48e-4774-4568-9650-6fb026eb8a65>)

Explaining That Binary Represents Numbers Using 1s And 0s And These Represent The On And Off Electrical States Respectively In Hardware And Robotics (ELBT368)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/64fb9988-c64f-4ef4-9b88-45fc69648673>)

Recognising That Digital Systems Represent All Types Of Data Using Number Codes That Ultimately Are Patterns Of 1s And 0s (Called Binary Digits, Which Is Why They Are Called Digital Systems) (ELBT40)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/65901a06-8a57-45cd-8211-ec0105d124aa>)

Investigating How Emerging Digital Systems Work, For Example Using An Augmented Reality App (Or Blended Reality) And Considering How Images Of Real World Objects Can Be Blended With Computer Generated Information To Produce A Virtual Reality (ELBT55)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/9e8d1b02-6be4-48be-83fe-e6417de828c4>)

Investigating How The Internal And External Components Of Digital Systems Are Coordinated To Handle Data, For Example How A Keyboard, Central Processing Unit And Screen Work Together To Accept, Manipulate And Present Data And Information (ELBT8)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/5c71c1f9-3b89-4ca5-94da-fcc41e1e5eb9>)

Explaining How Data May Be Transmitted Between Two Digital Systems In Different Ways, For Example That Wires Or Cables Are Used In Wired Networks To Transfer Data From One Digital System To Another, And Radio Waves Are Used To Transmit Data In Wireless Or Mobile Networks (ELBT482)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/820a58a5-c494-452c-94b0-943adbacdbcb8>)

Describing Digital Systems As Having Internal And External Components That Perform Different Functions, For Example External Components For Inputting Data Including Keyboard, Microphone, Stylus; Internal Processing Components Include The Central Processing Unit; External Output Components Including Speakers, Projector, Screen; And Data And Information Storage Components Include Cloud And External Devices (ELBT284)
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/68ff16b9-ae35-4166-8201-6f25409f8e21>)

Years 5 and 6
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/213ee6d9-640e-41e0-8aef-683199c1438a>)