



# Spill Preventer!

**Grade Level/s:**  
2, 3, 4

**Subject/s:**  
Mathematics, Technologies

**Type:**  
Unit Plan

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## Spill Preventer!

To design and evaluate the effectiveness of their designed device to prevent water bottles on tables from being knocked or spilled.

### Single Lesson Plan

**Task:**  
Pose the problem.

**Activity:**  
Pose the problem to the class: "The Teacher is tired of water being spilt all over books or picking water bottles up off the floor. Why is this a problem? How do you think we could solve this problem?" Brainstorm possible issues arising from this problem. Brainstorm possible solutions to the problem. "What other things have you seen to prevent things from spilling?"

**Resources:**  
IWB, markers or butchers paper and markers. Powerpoint with possible images of items that prevent spillages, or falls such as swing buckles, seat belts, cup holders, take away cup holders, silicone suction plates for children, sand bags on pavilion posts or water based basketball rings, etc.

Introduce the challenge.

Use student suggestions as a lead in to introducing the design challenge of designing a device to prevent class water bottles from being knocked over frequently. Discuss as a class things which they, as the designers, will need to consider in their planning process to create a successful end product. "What factors often cause the water bottles to fall over?" (You might need to give them a 5minute challenge to discover as many causes as possible for the bottle to fall over). "What sizing will it need to be?" "How will it stop the bottle from falling over?" "What method will you use to attach or place it in your work environment?" "How will you make sure you can easily get it out to drink from it?"

Template to record their answers or considerations-such as a mind map or drawings.

Setting design criteria.	As a class, create a set of up to 3 or 4 criteria for a successful design. Explain to students, that real life designers or inventors need to meet the client's criteria/brief or the client will not accept or pay for their design. In this case, they would need to go back and redesign their product When creating this criteria, it might be helpful to pose the questions: "What would stop it from working?" "What could go wrong?"	Drink bottles Working environment/surface for them to test on.
Design the product.	Students to draw/record their design.Students should include labels for each part of the their design, joining methods for joined parts, and the material that they plan to use for each part. On completion, students to do a pair'n'share about their design, it's features and how it will work. Allow enough time for students to take on feedback from their peers to modify or add to their design.	Printout of design criteria or brief for students to refer to. Butcher's paper/project books for working in. Markers/crayons/pencils, etc.
Making a prototype.	Using different craft/building/recycled materials, students to create a prototype of their design. Students may need reminders to refer to their sketched design. Teachers could choose to have students write or type up the procedure for making their prototype upon completion of this task. Students could use 'explain everything/'show me' on I pads to create visual procedures incorporating text and imagery (this would mean students or the teacher would need to take photos during their design process)	boxes, card, plastic/paper/foam cups, pipe cleaners, pop sticks, lids, ice-cream containers, glue, tape, staplers, blu tac, string/wool/fishing line, split pins, paper clips, etc.
Evaluating their design.	Review back to the design criteria. Students to evaluate and reflect upon their designs using this criteria. The following questions could be used: "Did your design work? Was it successful?" "Did it meet the criteria?" "List two things you really liked about your design". "If you could make it again, what would you change?" "Did you use suitable materials or should you review these for next time?"	Evaluation template- such as two stars, and a wish. Student prototypes.
Take their design process to 3D Printing.	Using Maker's Empire students create their sketched design including any modifications they identified during the prototyping and evaluation process.	Ipads, laptops, Desktops with Maker's Empire installed Student log-ins, etc.
Persuading other's of their design's effectiveness.	n your Literacy/English lesson, model using a persuasive argument to persuade someone of your opinion. Students to write or dot point arguments for why their design is the best design (they may even wish to include what modifications they would make to their design prototype), before each child presents their argument to the class. Students to vote on the best design and provide reasoning for their choice.	Spot stickers for voting or another method to track votes such as pop sticks next to the prototype etc. Or, use the voting function within the ME app.

## Downloadable files



spill\_preventer\_persuasive\_argument.pdf

(/download/lesson\_plan\_attachments/files/000/000/099/original/spill\_preventer\_persuasive\_argument.pdf?1494393228)



spill\_preventer\_evaluation\_form.pdf

(/download/lesson\_plan\_attachments/files/000/000/100/original/spill\_preventer\_evaluation\_form.pdf?1494393230)



Spill\_Preventer.pdf (/download/lesson\_plan\_attachments/files/000/000/101/original/Spill\_Preventer.pdf?1494393680)



TFEL\_design.pdf (/download/lesson\_plan\_attachments/files/000/000/165/original/TFEL\_design.pdf?1499078195)

## Curriculum

### South Australian TfEL:

- 4.3 apply and assess learning in authentic contexts
- 4.2 connect learning to students' lives and aspirations
- 4.1 build on learners' understandings
- 3.4 promote dialogue as a means of learning
- 3.1 teach students how to learn
- 2.2 build a community of learners

## Australian Curriculum:

Visualise, generate, develop and communicate design ideas through describing, drawing and modelling (ACTDEP006)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/24ae30d0-93ed-4bd9-b41f-49e668030a70>)

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 (ELBT89)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/71e66613-c94e-48a8-b6b0-d51444f8725d>)

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 (ELBT403)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/67bb8696-3d3d-484d-881a-3387728c85b1>)

Recording A Judgment About Design Ideas With Teacher Guidance, For Example Expressing Own Likes And Dislikes About A Design Idea (ELBT173)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/0ac8c388-a7c8-4758-8f00-ab267b1671a4>)

Identifying One Common Testing Method, And Recording Results, For Example Taste Testing Comparisons Of A Food Product And Recording Results In A Digital Form (ELBT142)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/6db5b3c8-7ca7-40b8-957a-b887226f43be>)

Describing How Design Ideas Meet The Needs Of Those Who Will Use The Solution (ELBT428)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/4a23db9e-2adf-4733-985f-266ac8f0e53f>)

Explore needs or opportunities for designing, and the technologies needed to realise designed solutions (ACTDEP005)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b112eddc-cc2f-4454-8a8b-8688a20409bf>)

Identifying, Gathering And Playing With Materials, Components, Tools And Equipment To Generate Personal Design Ideas, For Example Designing A Greeting Card For A Friend (ELBT57)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c90b1992-fa87-4644-ad93-e265cd2b96c4>)

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 (ELBT331)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/38cdc708-5de3-4102-bb9b-5a3b4d3e08e7>)

Discussing Possible Designed Solutions Based On Experience And Some Research, For Example Asking Adults For Advice (ELBT248)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/2f54486b-f1b5-4236-9331-7f33b34786f8>)

Considering The Importance Of Sustainability In Designed Solutions, For Example Comparing The Durability Of Materials For A Selected Solution (ELBT213)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b0aa29eb-e7e9-4c49-a975-901ab95141f1>)

Exploring Which Tools, Equipment And Techniques To Use With Selected Materials (ELBT474)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/840979fa-f77f-4943-bde5-075ad00dc493>)

Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/15cde36c-8543-4d3b-ae1b-bb6409cf34d8>)

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 (ELBT112)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c24222ba-a3ff-48ac-bcdb-c9790cd9e55b>)

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 (ELBT42)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/70a39022-a1fb-439a-8032-ebdf5dd51439>)

Assembling Components Of Systems And Checking They Function As Planned, For Example When Making A Musical Instrument (ELBT33)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/8cad861a-36f0-431e-8978-eeec1c7a72897>)

Use personal preferences to evaluate the success of design ideas, processes and solutions including their care for environment (ACTDEP008)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/998b4284-d800-448b-a578-b1077260fa8a>)

Developing Criteria For Success With Teacher Guidance Including Consideration Of Impact On Environment (ELBT82)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ac7e286c-f0f4-40a3-a19a-d9a15397118a>)

Recording A Judgment About Design Ideas With Teacher Guidance, For Example Expressing Own Likes And Dislikes About A Design Idea (ELBT51)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/5bb27d4a-fd06-4ce4-804b-e7d01231aad8>)

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 (ELBT147)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e7f98446-7be1-4f91-9e1c-b63e225e2644>)

Suggesting Areas For Design Improvement (ELBT232)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e00506a7-0fe3-467b-92a9-864205fcdacc>)

Sequence steps for making designed solutions and working collaboratively (ACTDEP009)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/458a2e31-7a5a-471c-95d2-ac53757c9fb5>)

Checking That Planned Features Have Been Included In Design Plans And Drawings By Referring To Identified Criteria For Success Including Care For The Environment (ELBT94)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/483a5b5c-eeec-4ef9-8e81-d01858c197a8>)

Using Lists Or Storyboarding When Planning And Making, For Example When Planning An Electronic Planting Calendar (ELBT19)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/70c5ee6f-254f-4555-80a5-f859c3b40388>)

Recording The Procedure For Making A Product, For Example A Recipe Or Instructions For Making A Container (ELBT45)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/01f38fd7-f5f6-4a2e-ba76-ea6b7023ef2c>)

Identifying Roles For Each Member Of A Group When Working Collaboratively (ELBT58)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e54c997a-112c-4e4b-843f-e199cc9e77ab>)

Design and Technologies Processes and Production Skills  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/f2c37335-9609-4637-8264-fc4acb2e088>)

Design and Technologies Processes and Production Skills  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/282e3634-36b1-4112-b1e7-c6084605a684>)

Exploring The Different Uses Of Materials In A Range Of Products, Including Those From Aboriginal And Torres Strait Islander Communities And Countries Of Asia (ELBT219)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/d1c6d98a-86fd-4c2a-af14-8cf546bbd902>)

Critiquing And Selecting Appropriate Joining Techniques For Materials To Produce Working Models (ELBT423)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/33bd8db2-3945-4ec7-9bb4-271c3dc96088>)

Exploring And Testing A Range Of Materials Under Different Conditions For Suitability Including Sustainability Considerations And Identifying Appropriate Tools, Equipment And Techniques (ELBT4)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e3141a7b-7fea-4715-9c17-fd77b33b0cb4>)

Examining The Structure And Production Of Everyday Products, Services And Environments To Enhance Their Own Design Ideas (ELBT303)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/feb70a86-13d8-4346-9197-6438f682e695>)

Exploring The Properties Of Materials To Determine Suitability, For Example The Absorbency Of Different Fabrics Or The Strength Of Different Resistant Materials (ELBT243)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a06e9aa4-1016-4623-9d3d-819deaaa1ccc>)

Exploring Ways Of Joining, Connecting And Assembling Components That Ensure Success (ELBT361)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/d093df89-3b8a-40ad-8c2b-491eadec61d0>)

Generating A Range Of Design Ideas For Intended Products, Services, Environments (ELBT174)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/86614c60-bc02-4736-a7d0-aacdf81b1fc>)

Identifying The Properties Of Materials Needed For The Designed Solution (ELBT10)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ee3ed807-456a-4447-a89f-fb8e6f115cf3>)

Visualising And Exploring Innovative Design Ideas By Producing Thumbnail Drawings, Models And Labelled Drawings To Explain Features And Modifications (ELBT211)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a12a5d0e-ad92-4ac3-b48e-911b49a6b530>)

Planning, Sharing And Documenting Creative Ideas And Processes Using Digital Tools Such As A Class Blog Or Collaborative Document (ELBT388)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/2ed06a48-642c-4ddc-954c-3d34b4e34462>)

Using Appropriate Technologies Terms To Confidently Describe And Share With Others Procedures And Techniques For Making, For Example Cutting And Joining Materials (ELBT65)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/629a4441-c6dc-4cca-bece-df5b582e92cb>)

Exploring Ways Of Joining, Connecting And Assembling Components That Ensure Success, And The Impact Digital Technologies Have Had On These Processes (ELBT250)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/97966d63-f2b3-4d6f-a841-7ee14c4ac447>)

Using Tools And Equipment Accurately When Measuring, Marking And Cutting; And Explaining The Importance Of Accuracy When Designing And Making, For Example Creating A Template, Measuring Ingredients In A Recipe, Sowing Seeds (ELBT67)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/600213a6-f621-4357-94a8-deecd38305dd>)

Selecting And Using Materials, Components, Tools, Equipment And Processes With Consideration Of The Environmental Impact At Each Stage Of The Production Process (ELBT269)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/6e7e6298-ccaa-4911-87cf-767b57cab33c>)

Demonstrating Safe, Responsible And Cooperative Work Practices When Making Designed Solutions (ELBT128)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/bb209d3a-ab23-4361-9e82-c210b96ac158>)

Negotiating Criteria For Success With Class Or Group Members (ELBT411)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e99ee4dc-7243-4d03-b0e3-2be6f2aab3a5>)

Evaluating, Revising And Selecting Design Ideas, Based On Criteria For Success And Including Consideration Of Ethics, Social Values And Sustainability (ELBT342)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/f454fc5f-bc28-4ea6-8a61-5250e590a0f5>)

Evaluating The Functional And Aesthetic Qualities Of A Designed Solution (ELBT35)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/12bd3fde-0ce6-4874-9566-eea4d2ecd1d1>)

Reflecting On The Sustainability Implications Of Selected Designed Solutions (ELBT168)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/953a750f-5101-4d3b-847d-ae69154f076c>)

Comparing The Amount Of Waste That Would Be Produced From Different Design And Development Options And The Potential For Recycling Waste (ELBT406)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/53cb10ab-bfd3-4f14-8219-32cdbc4fb22>)

Reflecting On Designed Solutions To Critique And Assess Suitability, Sustainability And Enterprise Opportunities And Determine How Well They Meet Success Criteria (ELBT414)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ce3e4c15-18c5-4f23-97ab-2acee42e6f17>)

Determining Planning Processes As A Class, For Example Recording A Procedure Or Creating Time Plans (ELBT122)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/4ff3b8d5-3e6b-455a-a8e2-c457f27a8028>)

Managing Time And Resource Allocation Throughout Production, For Example Materials, Tools, Equipment And People (ELBT370)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/30a4da41-0610-4478-be0f-458db6ee4691>)

Identifying The Steps In A Mass Production Process (ELBT457)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/72dbcf7-291d-4e25-b3ab-141aff81dc7>)

Sequencing Steps To Collaboratively Produce A Designed Solution (ELBT350)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/bd7d0dc9-2531-4c4e-b4fa-4f3daddf01e3>)

Critique needs or opportunities for designing and explore and test a variety of materials, components, tools and equipment and the techniques needed to produce designed solutions (ACTDEP014)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/bcb7e64b-f27a-4052-bdbf-2a0b7d2cd948>)

Generate, develop, and communicate design ideas and decisions using appropriate technical terms and graphical representation techniques (ACTDEP015)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/bf39b902-e9bd-4de1-86b3-fdc9ce32928c>)

Select and use materials, components, tools and equipment using safe work practices to make designed solutions (ACTDEP016)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e1178ae3-500a-47ed-ab5d-baa50990736b>)

Evaluate design ideas, processes and solutions based on criteria for success developed with guidance and including care for the environment (ACTDEP017)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b1370b5c-6ae3-42d5-a974-b2f33aca49b1>)

Plan a sequence of production steps when making designed solutions individually and collaboratively (ACTDEP018)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ac91e615-93d6-499c-9f2a-b4da110c21f3>)

Work with others to plan the creation and communication of ideas and information safely, applying agreed ethical and social protocols (ACTDIP013)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e5530bea-292f-4e52-9259-c80b3702d6ff>)

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 And Recognising That All Digital Interactions Are Difficult To Erase (Digital Footprints) (ELBT28)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/4e1eb6b6-9993-43f9-a130-f2dabba9ce3>)

Using A Range Of Online Tools To Share Information And Being Aware That Information May Be Received At Different Times, For Example Adding Entries To A Class Blog, Participating In A Web Conference Or Online Chat With An Author, Or Participating In A Forum On A Specific Topic (ELBT222)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/cbb87fbc-b7fc-49cb-b3fb-8bed13df4871>)

Organising And Creating Different Types Of Information For Sharing And Collaborating Online, For Example Planning The Sequence And Appearance Of An Animation, And Sharing It Online With Students From Another School (ELBT431)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/95e92e36-fd0a-4eae-be41-24a6f254fc67>)

Managing A Project That Involves Students Working Together To Publish Online, For Example Identifying How Group Members Can Help Each Other To Avoid Delays In Finishing The Project (ELBT181)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/99b523c0-4207-4cb5-9ebc-a2e341d4c3ef>)

Discussing Digital Citizenship Rules And Behaviours For Participating In An Online Environment, For Example Not Using All Capital Letters When Expressing A Strong Viewpoint About A Contentious Matter And Ensuring That The Audience Is Aware Of Your Identity (ELBT421)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/787de2ee-08e4-4249-8ddb-276c2b8893c5>)

Making Ethical Decisions When Faced With Reporting Inappropriate Online Behaviour Or Acknowledging Digital Products Created By Others, For Example Making A Decision Based On How Individuals Would Like To Be Treated By Others (ELBT321)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/32c96808-ab0c-42c0-b06a-5dba7a5cc506>)

Work with others to create and organise ideas and information using information systems, and share these with known people in safe online environments (ACTDIP006)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/667ff8d5-ec97-40d0-b1ee-1c5d0e74b340>)

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 (ELBT452)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/05a86166-338c-4bf4-b657-16b256bfbeae>)

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 (ELBT63)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/41075528-10f0-4f1b-9d26-dfb6bd7ac7d0>)

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 (ELBT7)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/46081015-c5dc-4699-819a-fcdd46266471>)

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 (ELBT456)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/24e4cc65-f361-4e21-9f2f-147128129a16>)

Shape  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/5842bb2c-7938-42eb-8b78-9e4600a25342>)

Identifying Key Features Of Squares, Rectangles, Triangles, Kites, Rhombuses And Circles, Such As Straight Lines Or Curved Lines, And Counting The Edges And Corners (ELBM082)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/344dcfa5-ee9b-4e93-805d-9e4600a25384>)

Identifying Geometric Features Such As The Number Of Faces, Corners Or Edges (ELBM085)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b38775f0-7a4d-4443-8c70-9e4600a25384>)

Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/cedd2660-5fe2-481f-b64a-9e4600a25384>)

Describe the features of three-dimensional objects (ACMMG043)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/7d9740ef-1600-4a6a-8dfd-9e4600a25384>)

Using units of measurement  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/1c731b1a-919a-4e1f-9944-9e4600a2537f>)

Comparing Lengths Using Finger Length, Hand Span Or A Piece Of String (ELBM075)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/7d82c0ee-378b-4448-a314-9e4600a2537f>)

Comparing Areas Using The Palm Of The Hand Or A Stone (ELBM076)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/9248573f-6d29-4c42-97a9-9e4600a2537f>)

Comparing Capacities Using A Range Of Containers (ELBM077)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/536f27d5-8f87-4311-abdc-9e4600a2537f>)

Using Balance Scales To Determine Whether The Mass Of Different Objects Is More, Less Or About The Same, Or To Find Out How Many Marbles Are Needed To Balance A Tub Of Margarine Or A Carton Of Milk (ELBM078)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/01bc3218-589b-437a-b4ac-9e4600a2537f>)

Describing The Characteristics Of Quarter Past Times On An Analogue Clock, And Identifying That The Small Hand Is Pointing Just Past The Number And The Big Hand Is Pointing To The Three (ELBM079)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/5b804a77-1335-42c0-bccf-9e4600a2537f>)

Investigating The Seasons Used By Aboriginal People, Comparing Them To Those Used In Western Society And Recognising The Connection To Weather Patterns. (ELBM501)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/f7a9615b-e460-4d68-b41a-9fb900e5379f>)

Using Calendars To Locate Specific Information, Such As Finding A Given Date On A Calendar And Saying What Day It Is, And Identifying Personally Or Culturally Specific Days (ELBM081)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/b5ec8ce8-18da-482d-9953-9e4600a25384>)

Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/9c8bf340-effa-4bae-adff-9e4600a2537f>)

Compare masses of objects using balance scales (ACMMG038)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/4f12234f-879c-4139-8d68-9e4600a2537f>)

Tell time to the quarter-hour, using the language of 'past' and 'to' (ACMMG039)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/fd0a356c-c37d-4d6b-b8cc-9e4600a2537f>)

Name and order months and seasons (ACMMG040)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/f5eb00ff-48b0-439e-b553-9e4600a25384>)

Use a calendar to identify the date and determine the number of days in each month (ACMMG041)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a1c02171-c43f-4168-b397-9e4600a25384>)

Location and transformation  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/2667a51f-f376-4181-8ae9-9e4600a2534b>)

Understanding That We Use Representations Of Objects And Their Positions, Such As On Maps, To Allow Us To Receive And Give Directions And To Describe Place (ELBM086)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/140fb66e-017c-46ed-bf1e-9e4600a2534b>)

Constructing Arrangements Of Objects From A Set Of Directions (ELBM087)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/12a57c03-6f4c-4f41-825c-9e4600a2534b>)

Understanding That Objects Can Be Moved But Changing Position Does Not Alter An Object's Size Or Features (ELBM088)  
link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/fd5bb540-bbbb-4f3a-b951-9e4600a2534b>)

Predicting And Reproducing A Pattern Based Around Half And Quarter Turns Of A Shape And Sketching The Next Element In The Pattern (ELBM089)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/9093cbc0-8b0b-48f9-82a1-9e4600a2534b>)

Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/8a533e93-0b5a-4232-b133-9e4600a2534b>)

Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/bcc0cfbf-220d-43f0-880d-9e4600a2534b>)

Identify and describe half and quarter turns (ACMMG046)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/1ffbc78d-7bfc-4dd7-b6bd-9e4600a2534b>)

Measurement and Geometry

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/315cd694-ab58-47c7-ac5d-9e4600a25342>)

Shape

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/0594bcf8-5dea-4134-80d0-9e4600a25347>)

Exploring The Creation Of Three Dimensional Objects Using Origami, Including Prisms And Pyramids (ELBM123)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/aa60cbdb-4ad2-401d-9bc0-9e4600a25347>)

Make models of three-dimensional objects and describe key features (ACMMG063)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/3cda375f-cf6e-403f-a86a-9e4600a25347>)

Using units of measurement

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/f930d2c8-299d-482c-ad8b-9e4600a25342>)

Recognising The Importance Of Using Common Units Of Measurement (ELBM503)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/472a6b95-c802-41f6-ad8d-9fb900e53975>)

Recognising And Using Centimetres And Metres, Grams And Kilograms, And Millilitres And Litres (ELBM502)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/cb4eae3-bfcf-4a95-8a8e-9fb900e53975>)

Recognising There Are 60 Minutes In An Hour And 60 Seconds In A Minute (ELBM122)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/059b084d-e790-4ea4-810d-9e4600a25342>)

Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a45e022d-7fe1-434d-a604-9e4600a25342>)

Tell time to the minute and investigate the relationship between units of time (ACMMG062)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a5e3279f-3a77-4288-92ac-9e4600a25342>)

Using units of measurement

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/4db59f67-9ebb-4032-88ac-9e4600a2537f>)

Reading And Interpreting The Graduated Scales On A Range Of Measuring Instruments To The Nearest Graduation (ELBM149)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a2f81f4c-e033-40db-9195-9e4600a2537f>)

Comparing Areas Using Grid Paper (ELBM508)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/6b70e44a-3ca3-4f7b-9e14-9fb900e53e3d>)

Comparing Volume Using Centicubes (ELBM506)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/8e3d0000-34d6-47e0-8e19-9fb900e53e3d>)

Recognising That Metric Units Are Not The Only Units Used Throughout The World, For Example Measuring The Area Of Floor Space Using Tatami Mats (Japan), Using Squares For Room And House Area (Australia) (ELBM507)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c620eb40-6f47-413e-962f-9fb900e53e3d>)

Identifying And Using The Correct Operation For Converting Units Of Time (ELBM150)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e1972d27-8bb4-4e3f-9205-9e4600a2537f>)

Calculating The Time Spent At School During A Normal School Day (ELBM151)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/5897d1ef-8279-4499-8df8-9e4600a2537f>)

Calculating The Time Required To Travel Between Two Locations (ELBM152)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/49d2e177-535a-4d6a-b1c8-9e4600a2537f>)

Determining Arrival Time Given Departure Time (ELBM153)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/757b53ba-14bb-4aca-af0f-9e4600a2537f>)

Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/64ce640f-70e4-4388-8cd6-9e4600a2537f>)

Compare objects using familiar metric units of area and volume (ACMMG290)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/64e06782-b811-4e7f-a964-9e4600a2537f>)

Convert between units of time (ACMMG085)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/e7755255-50e8-4bad-b5b6-9e4600a2537f>)

Use am and pm notation and solve simple time problems (ACMMG086)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/7a5fcea3-aaa4-4827-a070-9e4600a2537f>)

Identifying Common Two Dimensional Shapes That Are Part Of A Composite Shape By Re Creating It From These Shapes (ELBM155)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ef5b0dcd-be08-4303-b54d-9e4600a2537f>)

Creating A Two Dimensional Shapes From Verbal Or Written Instructions (ELBM156)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/48a10b18-47e0-477c-8eeb-9e4600a2537f>)

Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/0341dd32-cf8d-4fa5-a847-9e4600a2537f>)

Create short imaginative, informative and persuasive texts using growing knowledge of text structures and language features for familiar and some less familiar audiences, selecting print and multimodal elements appropriate to the audience and purpose (ACELY1671)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/3b60e1d8-8e5b-49dc-985a-9e4600a2a3fd>)

Learning How To Plan Spoken And Written Communications So That Listeners And Readers Might Follow The Sequence Of Ideas Or Events (ELBE812)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c303c6d6-b1dc-4dfa-9814-9e4600a2a3fd>)

Sequencing Content According To Text Structure (ELBE813)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ceb89104-32e8-4a2a-99f9-9e4600a2a3fd>)

Using Appropriate Simple And Compound Sentence To Express And Combine Ideas (ELBE814)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/68edcfcb-291c-4cbd-8713-9e4600a2a3fd>)

Using Vocabulary, Including Technical Vocabulary, Appropriate To Text Type And Purpose (ELBE815)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/da7ab644-6662-48fa-a57b-9e4600a2a3fd>)

Use software including word processing programs with growing speed and efficiency to construct and edit texts featuring visual, print and audio elements (ACELY1685)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/a458192d-431d-45fa-8f3c-9e4600a2a3bc>)

Using Features Of Relevant Technologies To Plan, Sequence, Compose And Edit Multimodal Texts (ELBE886)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/4b901a72-0c73-4375-b208-9e4600a2a3bc>)

Plan, draft and publish imaginative, informative and persuasive texts demonstrating increasing control over text structures and language features and selecting print, and multimodal elements appropriate to the audience and purpose (ACELY1682)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/9a8be41e-8c12-43de-9682-9e4600a2a3bc>)

Using Print And Digital Resources To Gather Information About A Topic (ELBE880)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/17024081-30e1-4fd7-ad26-9e4600a2a3bc>)

Selecting Appropriate Text Structure For A Writing Purpose And Sequencing Content For Clarity And Audience Impact (ELBE881)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/c5587c77-f02d-419d-915c-9e4600a2a3bc>)

Using Appropriate Simple, Compound And Complex Sentences To Express And Combine Ideas (ELBE882)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/1bcb5469-4fc0-4cc4-8985-9e4600a2a3bc>)

Using Vocabulary, Including Technical Vocabulary, Relevant To The Text Type And Purpose, And Appropriate Sentence Structures To Express And Combine Ideas (ELBE883)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/29fd123c-f771-4f57-9155-9e4600a2a3bc>)

Plan, draft and publish imaginative, informative and persuasive texts containing key information and supporting details for a widening range of audiences, demonstrating increasing control over text structures and language features (ACELY1694)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/d96591a1-17ac-4aca-b4cc-9e4600a2a3bc>)

Using Research From Print And Digital Resources To Gather Ideas, Integrating Information From A Range Of Sources; Selecting Text Structure And Planning How To Group Ideas Into Paragraphs To Sequence Content, And Choosing Vocabulary To Suit Topic And Communication Purpose (ELBE016)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/42b2e02d-0b2f-4e96-9afb-9fb900e56dac>)

Using Appropriate Simple, Compound And Complex Sentences To Express And Combine Ideas (ELBE015)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/fe2d4ae0-ce16-447f-9a9a-9fb900e56dac>)

Using Grammatical Features Including Different Types Of Verb Groups/Phrases, Noun Groups/Phrases, Adverb Groups/Phrases And Prepositional Phrases For Effective Descriptions As Related To Purpose And Context (For Example, Development Of A Character's Actions Or A Description In A Report) (ELBE014)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/ea60c8ee-3b6d-4845-8f5d-9fb900e56dac>)

Use a range of software including word processing programs to construct, edit and publish written text, and select, edit and place visual, print and audio elements (ACELY1697)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/dddee138-6e5a-4c9a-a199-9e4600a2a3bc>)

Identifying And Selecting Appropriate Software Programs For Constructing Text (ELBE947)

link (<http://rdf.australiancurriculum.edu.au/elements/2014/09/de11f02f-5b5b-4849-a572-9e4600a2a3bc>)