Catalogue of digital curriculum resources

JULY 2009

Contents

Introduction

This catalogue contains details about the Early years digital curriculum resources available from The Le@rning Federation (TLF) to all schools in Australia and New Zealand.

The digital content includes:

- hundreds of interactive learning and assessment objects
- a large and diverse range of digitised items such as images, film clips, maps, songs, posters and documents.

The purpose of the Early years project is to produce and licence high-quality, innovative online curriculum content for children in the first three years of compulsory schooling.

The project aims to engage children in a variety of learning processes that draw on play and exploration, problem solving and communication and, where appropriate, complement existing online learning content developed by The Le@rning Federation.

This catalogue includes content from TLF's English, mathematics and numeracy, science, sustainability and environmental education, Australian history, civics and citizenship and finance, business and enterprise collections.

Learning objects

Learning objects are generally published in series and some learning objects within a series are aggregated into single learning objects. Aggregated learning objects are identified with the  symbol.

An asterisk (*) on the series title indicates that not all the learning objects in that series have been released. The remaining learning objects will be released progressively.

Some learning objects contain non–TLF content. See the Acknowledgements and Conditions of use in the learning objects for details.

Accessing and viewing the content

Government and non–government education authorities in each Australian state and territory and in New Zealand have responsibility for facilitating access to the pool of digital content. Full details about how to access the content, including the necessary technical and software requirements for viewing it, can be found on TLF's website.

www.thelearningfederation.edu.au

English and literacy

Storyboard series* (Year P)

Students use the illustrations on a book's cover to predict the storyline. They listen to a picture story as it is read aloud and follow the text onscreen as each word is underlined. Students recall the events of the story and sequence jumbled events within a storyboard framework.

Features include:

- an animated story with underlined words to support one-to-one matching of spoken words to written text
- opportunities for students to put a sequence of jumbled events in order
- an option to print a sequencing task related to the story
- design features that support the use of the objects on interactive whiteboards by young users, for example the positioning of selectable elements in the lower part of the screen.

Students:

- make a prediction about a storyline by exploring the title and illustration on a book's cover
- interpret a visual text
- identify the sequence of events in a story by putting them in the correct order on a storyboard.

	**Storyboard: Flutter-by friends!** L9497 – Year P Students explore the story of *Flutter-by friends!* They listen to the story and follow along as each word is underlined. They then place the jumbled events of the story in the right order.
	**Storyboard: Birthday buzz** L9498 – Year P Students explore the title and picture on the cover of *Birthday buzz*. They then make a prediction about the storyline. They listen to the story and find out if their prediction matches the actual storyline.
This learning object is in development.	**Storyboard: Where's Rocky?** L9499 – Year P
This learning object is in development.	**Storyboard: Rocky to the rescue** L9500 – Year P

This series contains non-TLF Content. See Acknowledgements in the learning objects.

Letter detective series (Year P)

Students explore concepts of environmental print by locating letters on signs. The representation of letters in a variety of fonts is explored through animation. Students explore and sort upper- and lower-case letters and listen to letter names within an alphabet chart.

Features include:

- opportunities to explore upper- and lower-case letters of the alphabet
- letters presented in different fonts to increase print awareness
- a drawing zone for students to create their own representations of letters
- an option to print a worksheet that includes signs in a zoo or shopping centre, a set of upper- and lower-case letters in a variety of fonts, as well as an activity for students
- design features that support the use of the objects on interactive whiteboards by young users, for example the positioning of selectable elements in the lower part of the screen.

Students:

- identify upper- and lower-case letters in environmental print
- identify letters in a variety of fonts
- sort items as upper- and lower-case letters.

Letter detective: shops: five activities
L9481 – Year P

Students explore letters on the signs in a shopping centre. They view an animation and see how the same letter can look different in another font. They find the upper- and lower-case letters ‘a’, ‘f’, ‘h’, ‘p’, ‘b’ and ‘r’ on the signs. They then sort upper- and lower-case letters into two groups.

Letter detective: shops: two activities
L9482 – Year P

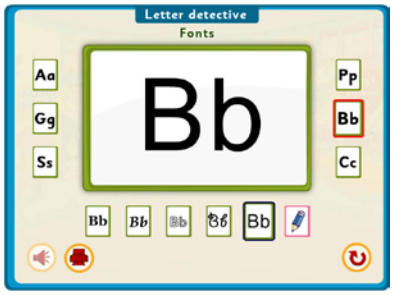
Students explore letters on the signs in a shopping centre. They find the upper- and lower-case letters ‘s’, ‘t’, ‘o’, ‘e’, ‘c’ and ‘i’ on the signs.

Letter detective: zoo: five activities
L9483 – Year P

Students explore letters on the signs at the zoo. They view an animation and see how the same letter can look different in another font, for example, the letter ‘k’ can be written in two ways. They find the upper- and lower-case letters ‘t’, ‘n’, ‘l’, ‘o’ and ‘a’ on the signs. They then sort upper- and lower-case letters into two groups.

Letter detective: zoo: two activities
L9484 – Year P

Students explore letters on the signs at the zoo. They find the upper- and lower-case letters ‘b’, ‘e’, ‘l’, ‘r’, and ‘s’ on the signs.



Letter detective: fonts
L9485 – Year P

Students explore how the upper- and lower-case letters ‘a’, ‘b’, ‘c’, ‘g’, ‘p’, and ‘s’ can look different in other fonts. They watch an animation and see how the shape of the same letter changes when shown in another font.

Letter detective: letter case
L9502 – Year P

Students explore how the same letter looks different when presented as an upper- and as a lower-case letter. They listen to the names of letters of the alphabet on a letter chart, then sort upper- and lower-case letters into the correct shopping trolley.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Story map series (Year P)

Students identify elements of a book's cover, listen to a visual story and match spoken to written words. Students locate nominated elements within the text and capture their recollections of the text on an interactive story map that includes drawing input zones.

Features include:

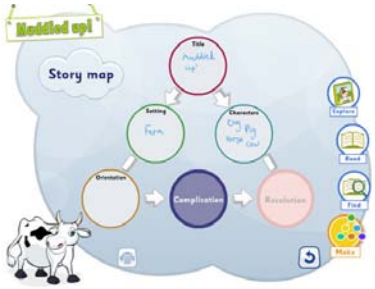
- a story with underlined words to support one-to-one matching of spoken words to written text
- opportunities for students to explore concepts of print and locate inappropriate elements within the text, for example an upside-down illustration
- an introduction to the concept of a story map (a type of graphic organiser)
- an option to print the completed story map
- designed for use on interactive whiteboards by early years users, for example, selectable elements have been positioned to allow users to easily reach them.

Students:

- identify parts on the cover of a book: the illustration, title, author's name and illustrator's name
- interpret a visual text
- locate text elements and features within the story
- recall events of the story and create a visual story map: title, setting, characters, orientation, complication and resolution.

Story map: Rooster to the rescue
L9494 – Year P

Students listen to the story *Rooster to the rescue* and follow as each word is underlined. They identify text features such as the first word on a page. They remember parts of the story such as the number of characters and add these elements to an interactive story map.



Story map: Muddled up!
L9493 – Year P

Students listen to the story *Muddled up!* and follow as each word is underlined. They identify specific text features and remember information about the story, such as the resolution, and add these elements to an interactive story map.

Story map: Rocky at school
L9495 – Year P

Students listen to the story *Rocky at school* and follow as each word is underlined. They identify specific text features and remember parts of the story, such as the setting, and add these elements to an interactive story map.

Story map: tool
L9496 – Year P

Students use an interactive tool to create a story map for a narrative. They recall the following elements of a story: title, setting, characters, orientation, complication and resolution.

This series contains non-TLF Content. See Acknowledgements in the learning objects.

Sentence builder series (Year P)

Students explore the characteristics of letters, words and sentences. Students create simple, meaningful sentences from categories of words that are illustrated using a sentence builder machine.

Features include:

- opportunities to investigate the characteristics of letters, words and sentences
- opportunities to create sentences from a bank of words that are illustrated
- a drawing zone for students to create a picture to match a sentence
- a printable worksheet that captures the student's work and also includes the set of words and icons used in the sentence builder
- design features that support the use of the objects on interactive whiteboards by young users, for example the positioning of selectable elements in the lower part of the screen.

Students:

- identify and classify items as letters, words or sentences
- construct simple, meaningful sentences by selecting words from categories that include when, who, what, where and setting.

Sentence builder: prehistoric 1
L9491 – Year P

Students help a caveman to sort letters, words and sentences. They use a sentence builder machine to create their own present-tense sentences. They choose words from four groups: who, what, where and setting.

Sentence builder: prehistoric 2
L9489 – Year P

Students help a caveman to sort letters, words and sentences. They use a sentence builder machine to create their own past-tense sentences. They choose words from five groups: when, who, what, where and setting.

Sentence builder: ocean 1
L9492 – Year P

Students help a mermaid to sort letters, words and sentences. They use a sentence builder machine to create their own present-tense sentences. They choose words from three groups: who, what and where.

Sentence builder: ocean 2
L9490 – Year P

Students help a mermaid to sort letters, words and sentences. They use a sentence builder machine to create their own past-tense sentences. They choose words from four groups: when, who, what and where.

Sentence builder: ocean: tool
L10255 – Year P

Students help a mermaid to use a sentence builder machine and create their own past-tense sentences. They choose words from four groups: when, who, what and where.

Sentence builder: prehistoric: tool
L10254 – Year P

Students help a caveman to use a sentence builder machine and create their own past-tense sentences. They choose words from five groups: when, who, what where and setting.

This series contains non-TLF Content. See Acknowledgements in the learning objects.

Procedural texts series (Year P)

Students explore the key features of procedural texts. For each procedure, they use prepositions to locate materials in a classroom and correctly sequence the steps of the procedure within a storyboard framework.

Features include:

- opportunities to use prepositions to locate items within a setting
- opportunities for students to put a sequence of procedural steps in order
- an option to print the template and procedural text
- design features that support the use of the objects on interactive whiteboards by young users, for example the positioning of selectable elements in the lower part of the screen.

Students:

- identify the aim, materials and steps in a procedural text
- identify the correct order for the steps in a procedural text
- use positional prepositions such as ‘behind’ to identify the location of items.

Procedural texts: let’s make a mask
L9476 – Year P

Students discover the three organisational features of a procedure (aim, materials and steps) by making a lion mask. They find the materials they need hidden in a classroom. They capture each step on a virtual camera and then put the steps in the correct order.

Procedural texts: let’s plant a tree
L9479 – Year P

Students explore the three organisational features of a procedure by looking at the steps to plant a tree. They investigate the steps to plant the tree by taking photos of each step with a virtual camera. They then put the steps in the correct order.

Procedural texts: let’s make a kite
L9477 – Year P–1

Students discover the three organisational features of a procedure by making a kite. They follow instructions to locate the materials, which are hidden in a classroom. They reflect on the procedure and then arrange the jumbled steps in the right order.

Procedural texts: let’s make a banana split
L9480 – Year P

Students explore a procedure for making a banana split. They investigate the steps to make the banana split by taking photos with a virtual camera. They reflect on the procedure and then arrange the jumbled steps in the right order.

Procedural texts: let's make a sock puppet
L9478 – Year P

Students follow a procedure for making a sock puppet. They locate the materials, which are hidden in a classroom. They then reflect on the procedure by arranging the jumbled steps in the right order.

Dragon's jumble series (Years P–1)

Students help a dragon remember what happened in his dream or in his garden by putting a sequence of pictures in order, and then matching sentences to the sequence. Students use temporal connectives to complete the story.

Features include:

- illustrations of the use of temporal connectives
- demonstrations of how some temporal connectives are interchangeable
- tools to enable students to sequence pictures in order then match sentences to the sequence
- audio representations of all text to support student comprehension
- three print options for students' completed recounts: pictures only, text only, or both pictures and text.

Students:

- view pictures from a recount about one of the dragon's dreams or a visit to his garden, and then place the pictures in the correct order
- match sentences to what is happening in pictures
- use temporal connectives such as 'first', 'then' and 'in the end' to show the order of events
- observe that some temporal connectives are interchangeable.

Dragon's jumble: dream: three parts
L7864 – Years P–1

Students place three pictures from each of the dragon's dreams in the correct order. The dreams include eating pumpkins, swimming in a lake and sliding down a rainbow.

Dragon's jumble: garden: three parts
L7865 – Years P–1

Students place three pictures from stories about the visits the dragon makes to his garden in the correct order. The recounts include planting seedlings, gathering peaches and watering flowers.

Dragon's jumble: dream: four parts
L7862 – Years 1

This learning object is similar to 'dream: three parts' but includes an extra picture in each of the dragon's dreams.

Dragon's jumble: garden: four parts
L7863 – Years 1

This learning object is similar to 'garden: three parts' but includes an extra picture in each recount.

My design series (Years P–2)

Students combine a range of graphic and audio elements to create a show and tell presentation of a talking cat, a crazy car or a talking dinosaur.

Features include:

- a range of character design elements such as size, mood, colour and voice
- an animation of the students' completed design
- an option to print.

Students:

- design a cat, dinosaur or car by selecting from a range of elements
- name their creation and add text to describe it
- evaluate their design by using icons and adding their opinion
- can change their design as many times as they wish.

My design: talking cat: choose text
L8184 – Year P

Students design a talking cat to present at show and tell. They choose a voice and background picture for their cat, decide on a name and select a note about their cat.

My design: talking cat: create own text
L8183 – Years 1–2

Students create a talking cat and add their own text about the cat. Students then evaluate their cat's features.

My design: talking dinosaur: choose text
L8185 – Year P

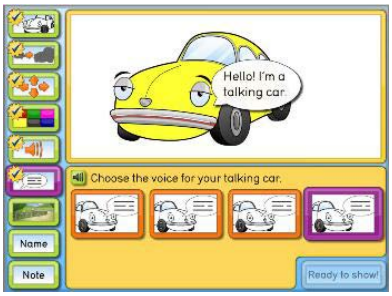
Students design a talking dinosaur to present at show and tell. They choose a voice and background picture for their dinosaur, decide on a name and select a note about their dinosaur.

My design: talking dinosaur: create own text
L8186 – Years 1–2

Students create a talking dinosaur and add their own text about the dinosaur. Students evaluate their dinosaur's features.

My design: talking car: choose text
L8187 – Year P

Students design a talking car to present at show and tell. They choose a voice and background picture for their car, decide on a name and select a note about their car.



My design: talking car: create own text
L8188 – Years 1–2

Students create a talking car and add their own text about the car. Students evaluate their car's features.

This series contains non-TLF content. See Acknowledgements in the learning objects.

-
-

Pirate treasure hunt series (Years P–2)

Students join forces with Pirate Jack to solve problems and find the hidden treasure.

Features include:

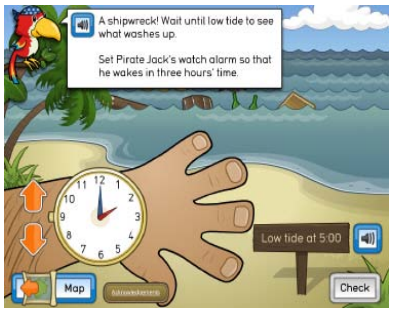
- opportunities for students to solve problems using their literacy and numeracy skills within the framework of a pirate treasure map
- a variety of problem types including spelling, shapes, visual clues, word knowledge, addition of numbers and time
- different challenge options appropriate to age levels.

Students:

- analyse problems using a range of strategies, including interpreting clues, intuition, and trial and error
- solve problems using literacy and numeracy skills.

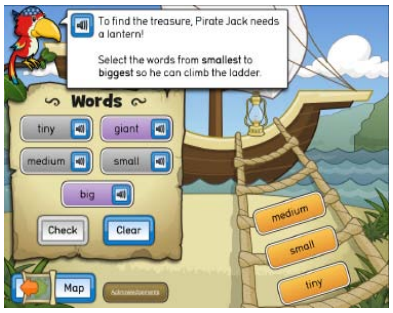
Pirate treasure hunt: eight challenges
L8304 – Year 2

Students use a pirate treasure map to work their way through the eight obstacles in the right order to solve the clues and find the booty!



Pirate treasure hunt: five challenges 1
L8305 – Year 1

Students join forces with Pirate Jack to solve five problems and find the hidden treasure. They need to solve each problem before tackling the next obstacle. For example, they'll need to find a box of matches before lighting the wick on a cannon.



Pirate treasure hunt: five challenges 2
L8306 – Years P–1

Students join forces with Pirate Jack to solve five problems and find the hidden treasure. They need to solve each problem before tackling the next obstacle. For example, they'll need to find the plan before building the raft.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Letter planet series (Years P–2)

In an intergalactic city, students observe and listen to words that have the same letter or letter combinations, and then search for words that feature those letters or patterns.

Features include:

- modelling of how various sounds form part of a word
- audio representation of written words
- opportunities for student to identify words containing specific sounds
- highlighting of the importance of word order in the construction of sentence meaning
- structured feedback including audio feedback for all words and letter combinations and sounds.

Students:

- help a stranded space traveler fill the fuel tanks by locating words featuring a specific letter or letter combinations
- unjumble sentences that include words with the specific letter or letter combinations to reveal a message.

Letter planet: oo, ee, ai
L7852 – Year 1

Students locate words featuring oo, ee and ai. Students then unjumble sentences featuring words containing oo, ee and ai.

Letter planet: s, c, b
L7853 – Year P

Students identify words beginning with the consonants s, c and b. Students then unjumble sentences featuring words starting with s, c and b.

Letter planet: a, e, o
L7854 – Year 1

Students identify words beginning with the medial vowels a, e and o. Students then unjumble sentences featuring words containing a, e and o.

Letter planet: sh, ch, th
L7855 – Years 1–2

Students locate words featuring the consonant diagraphs sh, ch and th. Students then unjumble sentences featuring words containing sh, ch and th.

Letter planet: igh, ear, str
L7856 – Year 2

Students locate words featuring the three letter clusters igh, ear and str. Students then unjumble sentences featuring words containing igh, ear and str.

Words and pictures series (Years P–2)

Students help Di, an artist who paints pictures of phrases, paint pictures by matching words with the same letter combinations and pairing them with a preposition to make a phrase.

Features include:

- a tool to enable students to select combinations of words
- pictures to raise awareness of how prepositions change the spatial relationship between objects
- audio representation of rhymes created by students
- visual representations of rhymes created by students.

Students:

- identify patterns and words according to criteria such as rhyme and beginning or ending with the same initial letter/s
- construct phrases by adding a preposition to their selected words
- understand how prepositions change the spatial relationships between objects.

Words and pictures: rhyme time
L7857 – Year 1

Students construct rhyming phrases by selecting words that rhyme and adding a preposition.

Words and pictures: first letter
L7858 – Years P–1

Students select words that begin with the same letter and add a preposition to create a phrase.

Words and pictures: last letter
L7859 – Year 1

Students select words that end with the same letter and add a preposition to create a phrase.

Words and pictures: beginning letters
L7860 – Years 1–2

Students select words that begin with the same two consonants and add a preposition to create a phrase.

.

Words and pictures: final letters
L7861 – Years 1–2

Students construct phrases by selecting words that end in the same two letters and adding a preposition to create a phrase.

.

Make it happen series (Years 1–2)

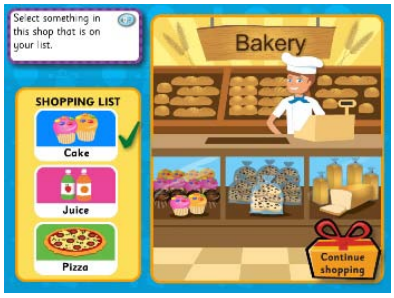
Students identify the purpose and components of different styles of written communication.

Features include:

- models of the purpose and features of various texts such as advertisements or invitations
- illustrations of the purpose and features of written and verbal communication
- feedback when students make decisions in response to information in the text and audio
- a caption-matching exercise for students to apply comprehension skills
- audio to support reading and comprehension.

Students:

- identify the purpose and components of a notice
- gather information by reading and listening to spoken and written messages
- interpret visual information
- discriminate between words to select appropriate captions.

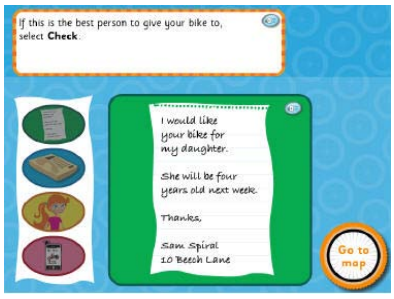


Make it happen: plan a party
L8289 – Years 1–2

Students prepare an invitation to a birthday party and include a statement, photo and important details such as address, phone number and reply date. They then choose items of food to buy for the party and use a map to select shops where they can buy the food.

Make it happen: find Honey
L8286 – Years 1–2

Students create a notice to let people know their dog is lost and include a statement, photo and important details such as contact address and phone number. They then select places to put up the notice and decide where to look for Honey.



Make it happen: give away a bike
L8288 – Years 1–2

Students create a notice to find someone to give their bike to. They select places to put up the notice and consider the replies to the notice when deciding who to give the bike to.

Make it happen: find a dog-walker
L8287 – Years 1–2

Students create a notice to find someone to walk Honey in the mornings. The notice must include a statement, photo and important details such as contact address and phone number. Students select places to put up the notice and consider the replies to the notice when deciding who is to walk Honey.

Make it happen: plan a clean-up
L8290 – Years 1–2

Students prepare an invitation to a clean-up and picnic. The invitation must include a statement, photo and important details such as address, phone number and date. Students choose items to buy for the clean-up and picnic, and use a map to select shops where they can buy the things they need.

Make it happen: plan a school play
L8291 – Years 1–2

Students create a poster for a school play. The poster must include a picture and important details such as ticket prices, location and phone number. Students complete a photo album of the school play by selecting captions to match photos.

My day series (Years 1–2)

Students help children in a variety of activities by selecting the most appropriate text for each task.

Features include:

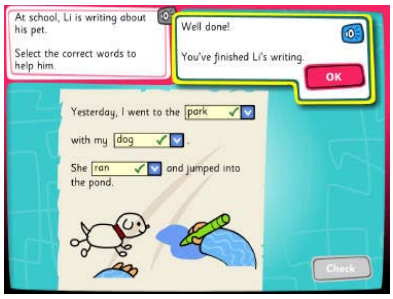
- opportunities to focus on word discrimination to differentiate texts
- feedback when students make decisions in response to information in the text
- audio to support reading and comprehension.

Students:

- identify the real-life purpose of a text by matching the most appropriate text to an activity
- assess whether a text is suitable for a particular purpose by evaluating a range of similar texts in the context of everyday activities.

My day: Li: level 1
L8292 – Year 1

Students help Li by selecting the best texts for different parts of his day. They choose the correct text in a range of activities such as helping Li make up his mind about which bus to take to school and what to choose for a healthy lunch from the menu.



My day: Li: level 2
L8293 – Years 1–2

Students help Li by selecting the best texts for different parts of his day. They choose the correct text in a range of activities such as helping Li make up his mind about what to pack in his school bag and which recipe would be a healthy choice for dinner.

My day: Li: level 3
L8294 – Year 2

Students help Li by selecting the best texts for different parts of his day. They choose the correct text in a range of activities such as helping Li make up his mind about which food is healthy for breakfast and what to pack in his school bag.

My day: Jeneka: level 1
L8295 – Year 1

Students help Jeneka by selecting the best texts for different parts of her day. They choose the correct text in a range of activities such as helping Jeneka choose a healthy breakfast and complete a writing task.

My day: Jeneka: level 2
L8296 – Years 1–2

Students help Jeneka by selecting the best texts for different parts of her day. They choose the correct text in a range of activities such as helping Jeneka make up her mind about what to pack in her school bag and what to choose for a healthy lunch from the menu.

My day: Jeneka: level 3
L8297 – Year 2

Students help Jeneka by selecting the best texts for different parts of her day. They choose the correct text in a range of activities such as helping Jeneka get to school and completing a project about Vincent Lingiari.

Just like me series (Year 2)

Students compare their favourite things with children who like different things.

Features include:

- opportunities for students to explore the concepts of 'similarities' and 'differences'
- randomisation of categories to encourage repeated use
- audio representations of all text to support student comprehension
- an option to print the students' completed notes.

Students:

- evaluate the similarities and differences between themselves and the characters
- investigate a range of categories to identify the character they have most in common with
- compare the items they share with the characters, and identify those that are different.

Just like me: Rose, Kaneisha and Sammy
L8298 – Year 2

Students choose their favourite things from four groups: musical instruments, things to do, lunches and places. They discover Rose's, Kaneisha's and Sammy's favourite things and compare with their own choices.

Just like me: Rose, Dawit and Zeina
L8299 – Year 2

Students choose their favourite things from four groups: musical instruments, lunches, places and things to do. They discover Rose's, Dawit's and Zeina's favourite things and compare with their own choices.

Just like me: Kaneisha, Dawit and Mana
L8300 – Year 2

Students choose their favourite things from four groups: lunches, places, musical instruments, and pets. They discover Kaneisha's, Dawit's and Mana's favourite things and compare with their own choices.

Just like me: Sammy, Zeina and Dawit
L8301 – Year 2

Students choose their favourite things from four groups. They discover Sammy's, Dawit's and Zeina's favourite lunches, places, pets and things to do and compare with their own choices.

Just like me: Mana, Kaneisha and Sammy
L8302 – Year 2

Students choose their favourite things from four groups: things to do, places, pets and lunches. They discover Mana's, Kaneisha's and Sammy's favourite things and compare with their own choices.

Just like me: Mana, Rose and Zeina
L8303 – Year 2

Students choose their favourite things from four groups: musical instruments, pets, lunches and places. They discover Mana's, Rose's and Zeina's favourite things and compare with their own choices.

•

Content from other sources

My family (English) (Years P–4)

Students meet a local family and learn about relationships in a family tree.

Features include:

- vocabulary and basic sentence structure to describe family relationships.

Students:

- explore the composition of a range of families.

My family
L1454 – Years 0–4

Students learn about a range of families.

Mathematics and numeracy

Number

Counting beetles series (Years P–2)

Students solve addition and subtraction problems using a range of counting strategies. They can also create their own addition and subtraction word problems by using numbers in the range from 2 to 10.

Features include:

- opportunities to develop addition and subtraction strategies (from count-by-one strategies to counting-on and counting-back)
- number line modelling that allows students to explore the directionality of addition and subtraction operations
- the connection of word problems, number line models and equations
- audio to support understanding of the tasks.

Students:

- solve addition and subtraction problems using a range of counting strategies
- model addition and subtraction facts by using a number line
- construct and solve addition and subtraction number sentences.

Counting beetles: level 1
L8281 – Year P

Students count the number of beetles in the garden – taking note of any that might be hiding under the leaves.

Counting beetles: level 2
L8282 – Years P–1

Students count the number of beetles in the garden – taking note of any that might be hiding under the leaves.

Counting beetles: level 3
L8283 – Year 1

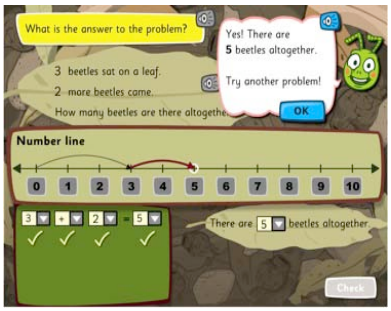
Students count the number of beetles in the garden including those hiding under leaves and under rocks (representing a given number of beetles).

Counting beetles
L8280 – Years P–1

This is an aggregated object combining levels 1, 2 and 3.

Counting beetles: making word problems
L8284 – Years 1–2

Students make a word problem using beetles. They decide whether to add or subtract and select the number of beetles to include in the problem. Students make a number sentence to match the number line.



Counting beetles: solving word problems
L8285 – Years 1–2

Students look at a word problem that uses beetles. They use the number line to show how to solve the problem and make a number sentence to match the number line.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Number trains series (Years P–5)

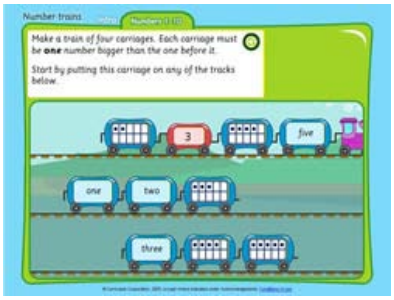
Students arrange train carriages according to numbers on their sides to form patterns. For example, count in fives to arrange four carriages into the sequence 12, 17, 22, 27.

Features include:

- means to develop and consolidate counting forwards and backwards skills that are fundamental to addition and subtraction skills
- challenges for students to develop strategies as they predict, test and confirm, or change the sequencing of numbers
- a 'hundred chart' to provide support for 'skip counting' while students develop appropriate thinking and test ideas
- randomised number generation that encourages repeated use
- a printable report of the student's performance in the two assessment resources.

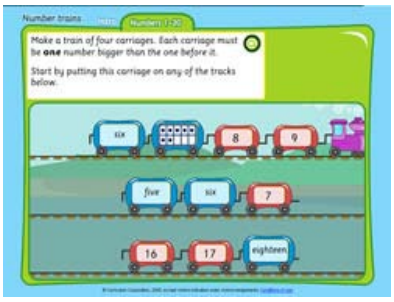
Students:

- identify the numbers that come before and after starting numbers
- construct number patterns where additive strategies or multiplicative strategies are most likely to be used
- connect number words and numerals to the quantities they represent using dice dots, ten-frames and base 10 blocks
- recognise one-digit to three-digit number 'names' and values in a variety of representations.



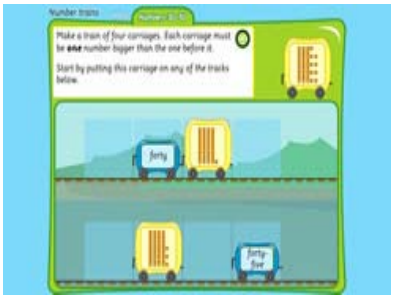
Number trains: numbers 1 to 10
L2318 – Years P–1

Students work with whole numbers up to 10. Numbers are represented as words, numerals and dots.



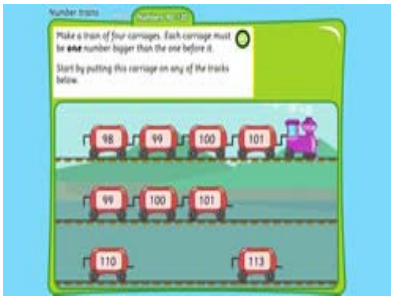
Number trains: numbers 1 to 20
L2319 – Years P–1

Students work with whole numbers up to 20. Numbers are represented as words, numerals and dots.



Number trains: numbers 30 to 50
L2320 – Years 1–2

Students work with whole numbers from 30 to 50. Numbers are represented as words and numerals and MAB Blocks.

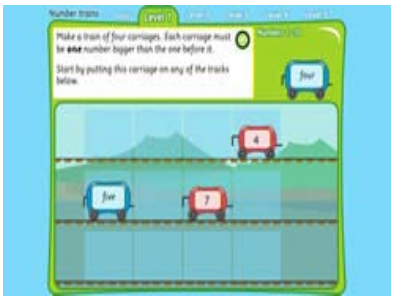


Number trains: numbers 90 to 120
L2321 – Years 1–2

Students work with whole numbers from 90 to 120. Numbers are represented as numerals only.

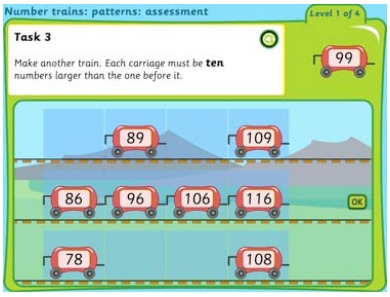
Number trains: skip counting
L2322 – Years 1–3

Students use skip counting by twos, fives and tens. Numbers are represented as numerals only.
A 'hundred chart' provides support for 'skip counting' while students develop appropriate thinking and test ideas.



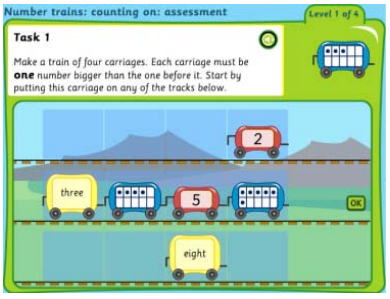
Number trains
L2317 – Years P–3

This is an aggregated learning object combining the five other learning objects in a sequence.



Number trains: patterns: assessment
L8275 – Years 3–5

Students create sequences of whole numbers from 1 to 120.



Number trains: counting on: assessment
L8276– Years 3–5

Students sequence whole numbers by identifying the number before and after a given number.
They recognise whole numbers in a variety of representations, including number words, numerals, dice dots and ten-frames.

Scale matters series (Years P–8)

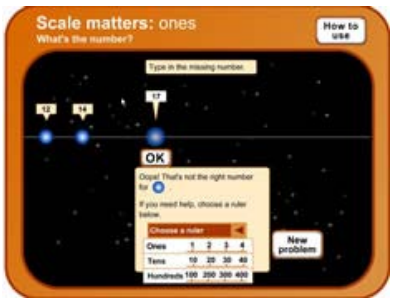
Students explore a variety of experiences in the use of scale on a number line.

Features include:

- scales shown as diagrammatic representations reflecting the placement of unit lengths along a line
- feedback provided to the student about accuracy of placement or identification of the number
- random generation of points and numbers that supports repeated use.
- a printable report with the student's corrected answers and a summary of achievement for each set attempted in the three assessment resources.

Students:

- locate numbers on a continuous scale
- select an appropriate scale for placing a number on a number line
- renam e numbers by assigning place values for single digits or groups of digits
- identify how variations in unit size relate proportionally to the number of units that will fit into a given space.



Scale matters: ones
L2003 – Years P–2

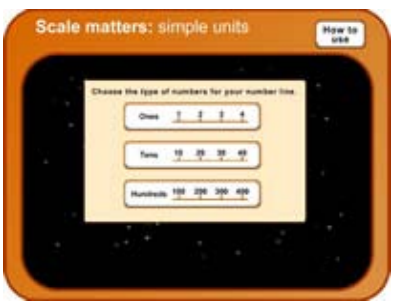
This learning object makes use of a scale of ones.

Scale matters: tens
L2004 – Years 2–4

This learning object makes use of a scale of tens.

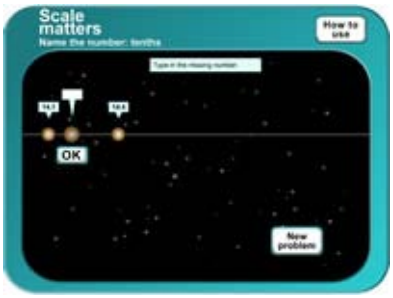
Scale matters: hundreds
L2005 – Years 2–4

This learning object makes use of a scale of hundreds.



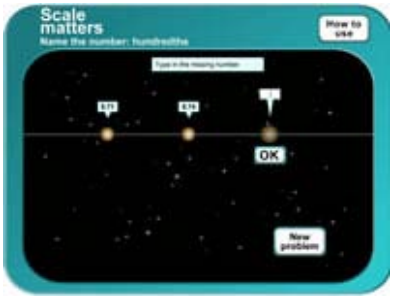
Scale matters: simple units
L2002 – Years P–4

This is an aggregated learning object combining Scale matters: ones, tens and hundreds.



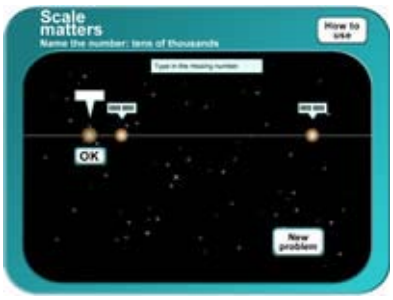
Scale matters: tenths
L1998 – Years 4–6

This learning object makes use of a tenths scale.



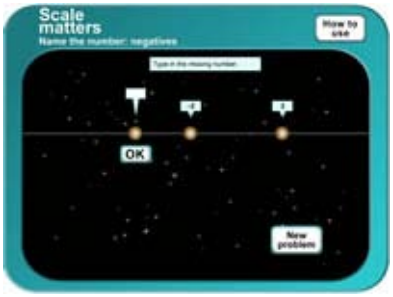
Scale matters: hundredths
L2000 – Years 2–4

This learning object makes use of a hundredths scale.



Scale matters: tens of thousands
L1999 – Years 4–6

This learning object makes use of a tens of thousands scale.

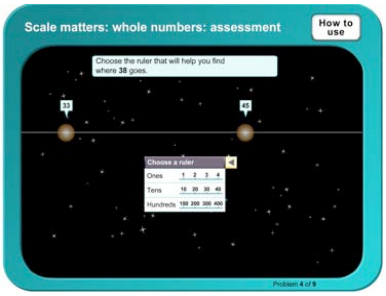


Scale matters: negatives
L2001 – Years 6–8

This learning object makes use of negative numbers.

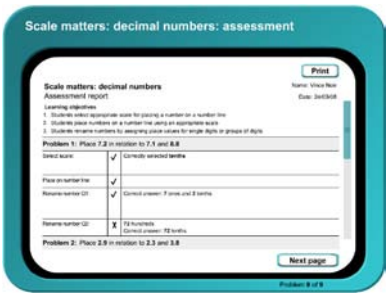
Scale matters: range of numbers
L1997 – Years 4–8

This is an aggregated learning object combining four other learning objects: hundredths, tenths, tens of thousands and negatives.



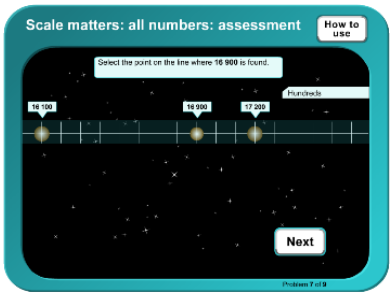
Scale matters: whole numbers: assessment
L8631 – Years 1–4

Students place numbers on a number line. They look at two numbers on a line and choose the best type of ruler to add markers to the number line and find the place for a third number.



Scale matters: decimal numbers: assessment
L8630 – Years 5–7

Students use scales ranging from hundreds and tens down to tenths or hundredths. (Image shows report format used in all three Scale matters assessment resources.)



Scale matters: all numbers: assessment
L8629 – Years 7–8

Students demonstrate their understanding of the use of scales, ranging from tens of thousands or thousands through to ones, tenths or hundredths.

The number partner series (Years 2–4)

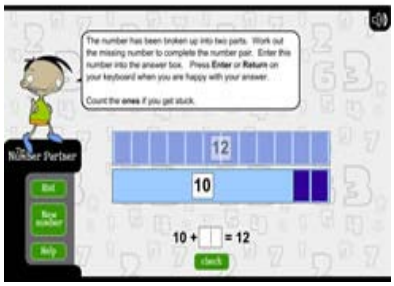
Students develop efficient mental arithmetic strategies by exploring part-whole relationships of numbers and using these to investigate strategies such as ‘make to 10’, ‘doubling’ and ‘counting on from the larger number’.

Features include:

- a printout of the student’s work in solving the equations
- an interactive tutorial.

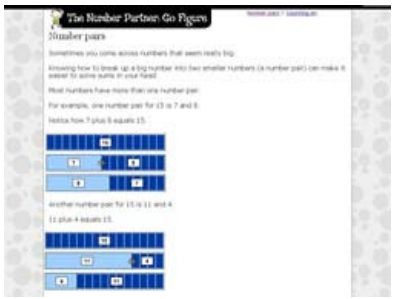
Students:

- investigate the commutative principle
- investigate the strategy of ‘counting on’ for addition and establish that it is preferable to count on from the larger number
- establish that larger numbers can be broken up into many pairs of smaller numbers
- apply their knowledge of partitioning numbers to calculating sums mentally.



The number partner
L103 – Years 2–4

Students are presented with a bar model to assist with addition. They are able to partition or extend numbers to use known addition facts to assist their mental computation. Addition exercises are presented to students or they can choose to create their own. The printout shows how the student solved the equation.



The number partner: go figure
L105 – Years 2–4

This is a tutorial designed for use by the student or as a demonstration tool for the teacher. It covers information on number pairs as well as counting on from a number to work out number pairs.

Pobble arrays series (Years 2–4)

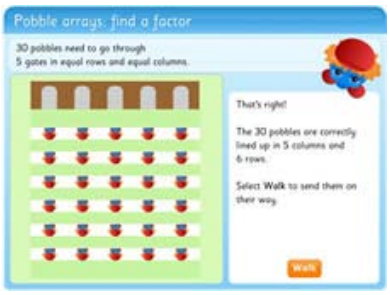
Students are introduced to the shift from additive to multiplicative thinking. The use of the array model of equal rows and equal columns allows the exploration of factors and multiples, and the associated number properties that underlie effective multiplicative strategies.

Features include:

- an introduction to the commutative property of multiplication
- an automated array construction that provides a visual model to support understanding of the multiplicative relationship between factors.

Students:

- recognise and apply the commutative property of multiplication
- make a prediction, test their prediction and then make adjustments, if necessary, based on feedback.



Pobble arrays: find a factor
L2057 – Year 2

Students see a given number of pobbles and a set number of gates (columns) then have to predict how many rows are required. They check their prediction by seeing if it enables the Pobbles to line up correctly and march through the gates.

Pobble arrays: find two factors
L2058 – Years 2–3

Students see a given number of Pobbles and must firstly select the number of gates that will enable equal rows and equal columns then predict how many rows are required. Audio instructions are provided.

Pobble arrays: make multiples
L2056 – Years 3–4

Students are able to vary the number of Pobbles as well as select the number of gates (columns) and the number of rows to line up the Pobbles correctly into equal numbers of rows and columns.
This is the most complex object in the series.

The array series (Years 2–4)

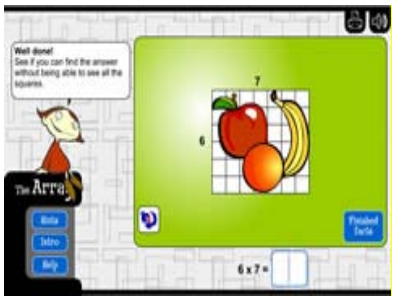
'The array' is a tool that allows students to create arrays to learn their basic multiplication facts.

Features include:

- an introductory tutorial
- exploration of the notion of commutativity, for example, that 3 x 4 = 4 x 3.

Students:

- are encouraged to develop mental strategies for multiplication by 'imagining' the use of 'the array'
- use arrays to work out products mentally
- investigate the commutative principle
- investigate multiplication facts.



The array
L106 – Years 2–4

An equation of up to 10 x 10 presented as an equation and in array format. Students work out the answer with the visual support of the array then supply the answer twice more with progressively less visual support.

The array: go figure
L108 – Years 2–4

This is a tutorial designed for use by the student or as a demonstration tool for the teacher. The tutorial describes the different strategies that can be employed for solving multiplication calculations. It includes a number of multiplications questions for the student. It is amenable to a screen reader.

Divide it up series (Years 2–4)

Students are encouraged to think multiplicatively to solve division problems. The learning objects involve sharing division and grouping (repeated subtraction) division in different contexts.

Features include:

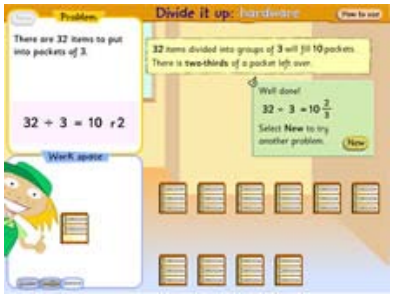
- problems involving sharing and/or grouping division (repeated subtraction)
- a framework for students to make and test predictions.

Students:

- interpret a division word problem and its solution
- interpret remainders (as whole numbers) in relation to the context of a problem.

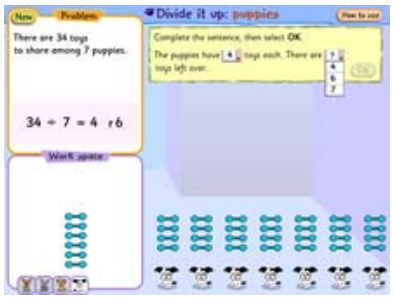
Divide it up: kittens
L2812 – Years 2–3

Students share the toys amongst a specific number of cats. Remainders are dealt with as whole numbers.



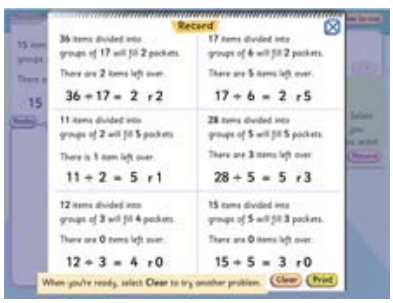
Divide it up: hardware
L2811 – Years 2–3

Students predict the number of groups of hardware items. Remainders as dealt with as fractions of the group.



Divide it up: puppies
L2808 – Years 2–4

Students predict the number of toys or biscuits each dog will get. They then check their prediction and decide what to do with the leftover. Remainders are dealt with as either fractions or whole numbers, depending on whether the item can be sub divided.



Divide it up: grouping tool
L2810 – Years 2–4

This is an open-ended interactive tool for modelling grouping division with whole number remainders only. Students make their own equation to solve.
The printout shows how the student solved the equation.

Divide it up: sharing tool
L2809 – Years 2–4

This is an open-ended interactive tool for modelling sharing division with whole number remainders only. Students make their own equation to solve.
The printout shows how the student solved the equation.

Fraction fiddle series (Years 3–6)

Students use dynamic tools to solve problems involving fractions. Problems include comparison of the relative size of two fractions, the ordering of fractions from smallest to biggest and adding fractions.

Features include:

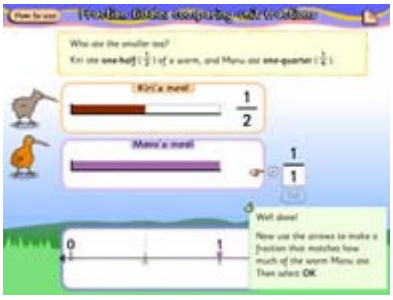
- dynamic tools to generate models
- visual, sound and textual feedback
- guided support for students experiencing difficulty
- randomisation of activities to support repeated use
- a notebook that automatically records the problems solved
- an option to print the completed notebook.

Students:

- explore the effect of changing the numerator and denominator on the type and size of a fraction
- find or explore equivalent fractions
- see the results of their problem solving in different formats including an area model, the fraction's position on a number line and the symbolic fraction.

Fraction fiddle: matching cake fractions
L2801 – Years 2–3

Fran is filling orders for cakes, not everyone wants a whole cake so she needs to match the cake orders to the cakes. Students use a circular region representation tool to find the matching symbolic fraction.

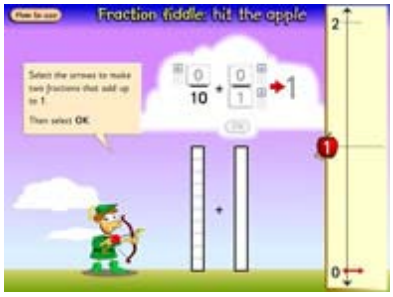


Fraction fiddle: comparing unit fractions
L2802 – Years 3–4

The hungry kiwis each ate a fraction of a worm. Students predict who ate more or who ate less. Using the fraction-making tool, students make the fractions and watch the parts of the worm appear and observe the fractions on the number line to see which one is bigger. The fractions presented are unit fractions such as ½ and ⅓.

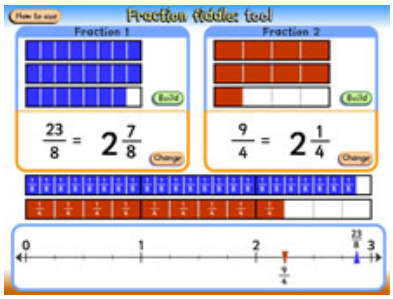
Fraction fiddle: comparing non-unit fractions
L2803 – Years 3–4

The greedy birds each ate a fraction of a worm. Students predict who ate more or who ate less. They then make the fractions and watch the parts of the worm appear and observe the fractions on the number line to see which one is bigger. The fractions presented are non-unit fractions such as ¾ and ⅔.



Fraction fiddle: hit the apple
L2804 – Years 3–5

To help an archer hit an apple target, students use a number line tool to find two fractions that will add together to make one whole.
With a given denominator (1 or both) students manipulate relative size of the two fractions to make total of one whole. Reach a target of 1.



Fraction fiddle: tool
L2800 – Years 3–6

Students use an open-ended interactive tool that allows them to create a fraction (up to 3). They then view the symbolic notation dynamically represented both as building blocks and on a number line.
Students can build and compare two fractions.

Fraction fiddle: shoot the hoop
L2805 – Years 4–6

Students use a number line tool to find two fractions that will add together to make one whole to help shoot a ball into the hoop.
With a given numerator (or 1 numerator and 1 denominator given) students manipulate relative size of fractions to make total of one whole. Reach a target of 1. Students can repeat the problem to find different solutions.

Fraction fiddle: reach the target
L2806 – Years 4–6

Students use a number line tool to find two fractions that will add together to make the target number to make the plane hit the target.
With a given denominator (no given numbers) students manipulate relative size of fractions to make given total. Reach a given target less than 2 (not 1).

'Fraction fiddle: comparing unit fractions' & 'Fraction fiddle: comparing non-unit fractions' (L2802 & L2803) contains non–TLF content. See Acknowledgements in the learning objects.

Content from other sources

Number manipulatives (Years P–9)

These learning objects are manipulatives that allow students to explore and practise a range of numerical concepts and operations.

Features include:

- visual representations of a range of numerical concepts
- a template format with a description and instructions.

Students:

- investigate the process and effect of mathematical operations.

Numberline arithmetic
L3536 – Years P–4

Watch as simple number calculations are solved using a numberline. Choose from any of the four basic operations: addition, subtraction, multiplication and division.

Numberline bars
L3537 – Years 2–8

Place different number bars on the numberline and use them to see how number operations are made. Choose any of the four basic operations: addition, subtraction, multiplication and division.

Fraction manipulatives series (Years P–6)

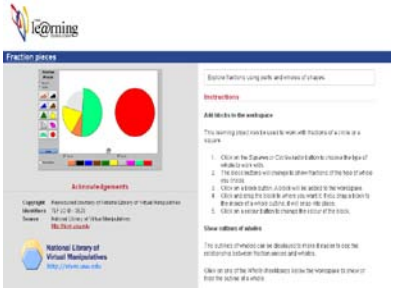
These learning objects are manipulatives that allow students to explore and practise a range of concepts and operations relating to fractions.

Features include:

- visual representations of a range of fractions
- a template format with a description and instructions.

Students:

- discover the meaning of equivalent fractions.



Fraction pieces
L3520 – Years P–3

Students place fractions of a circle or square on a whole and investigate equivalence.

Fractions: visualising
L3526 – Years P–3

Students manipulate a rectangle or circle to represent given fractions.

Fractions: naming
L3523 – Years 1–3

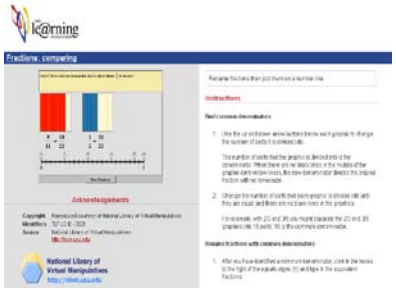
Students name a fraction that is represented visually.

Fractions: parts of a whole
L3524 – Years 1–3

Students divide a shape into parts to create a fraction then read the name of the fraction. They then create a visual representation of a given fraction.

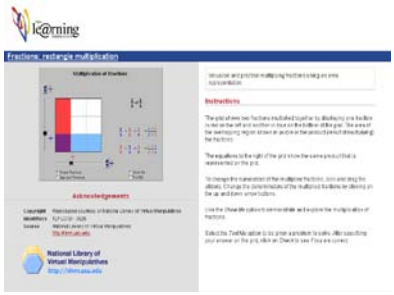
Fractions: equivalent
L3651 – Years 2–6

Students manipulate a visual representation of a fraction to find and name an equivalent fraction.



Fractions: comparing
L3521 – Years 3–8

Students find common denominators for two given fractions then plot the new (equivalent) fractions on a number line.



Fractions: rectangle multiplication
L3525 – Years 3–8

Students explore an interactive model to find the product of two fractions including proper and improper fractions.

Algebra

Monster choir series (Years P–3)

Students explore patterning using visual and auditory elements to create patterns, extend patterns, create equivalent patterns and complete patterns.

Features include:

- visual and sound cues
- symbolic representations to show the monsters selected.

Students:

- create or complete a visual sound pattern represented by different monsters.

Monster choir: making patterns
L1056 – Years P–1

Students complete a shape pattern. By selecting different monsters to represent each of the different shapes, the student creates an equivalent sequence. They then extend this pattern to hear the whole pattern played and performed by the monster choir.

Monster choir: missing monsters
L1057 – Years P–2

Students create visual and sound patterns. First they select two, three or four monsters to sing the first part of their pattern. This sequence is shown using a symbolic representation. Students repeat this sequence to create the whole pattern. The monster choir plays and performs the pattern.

Monster choir: look and listen
L494 – Years 2–3

Students create a pattern. The student determines the first part of the pattern, which is shown as a sequence of two or three different shapes. By listening to, and selecting different monsters, the student creates an equivalent sequence. They then use auditory memory skills to replicate the sequence to extend the pattern. Feedback is given after they have made an attempt.

Musical number patterns series (Years 1–6)

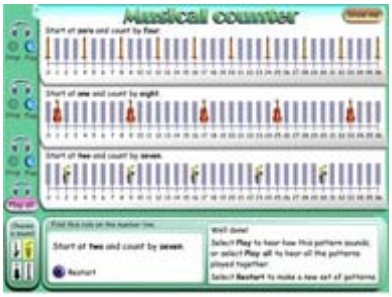
Students develop an understanding that patterns consist of repeating elements or groups of elements are predictable and can be represented in different forms.

Features include:

- A rule structure to base patterns on – 'select a starting number and a 'count by' number
- starting numbers of 0–3 and 'count by' numbers of up to 10.

Students:

- use a counting rule to record a number pattern on a number line
- listen to the sound pattern created by the sequence of numbers on the line.

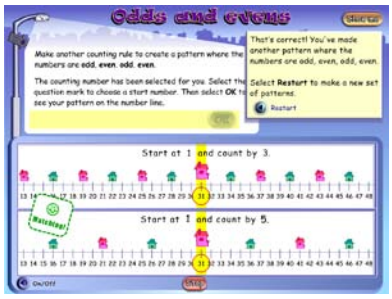


Musical number patterns: musical counter
L1063 – Years 1–2

Students are given a rule in words to display on a musical number line to show the pattern. Up to three number lines and rules can be made and played separately or together. The number line goes up to 36.

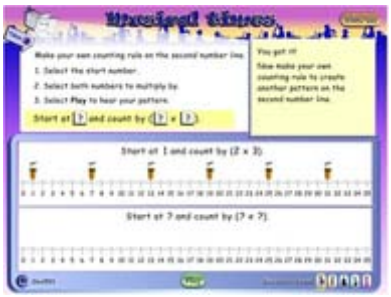
Musical number patterns: music maker
L589 – Years 2–3

Students create a rule by selecting a starting number (from 0, 1 or 2) and a 'count by' number (up to 10). Up to three number lines and rules can be made and played separately or together. Number line goes up to 36.



Musical number patterns: odds and evens
L1064 – Years 3–4

Students are posed a problem based around odd or even numbers. Students complete a rule by selecting either a start number or a 'count by' number. The results are displayed on two musical number lines.



Musical number patterns: musical times
L1065 – Years 3–4

Students are presented with a pattern on a number line and required to create a rule for the pattern. The rule format is start at 'n' and count by 2 x 'n'. Students create a second rule using a similar format.

Musical number patterns: the challenge
L1067 – Years 5–6

Students are presented with a word problem and are required to create a rule to solve it. Students then solve the same problem using a different rule.

Balance the cups series (Years 2–4)

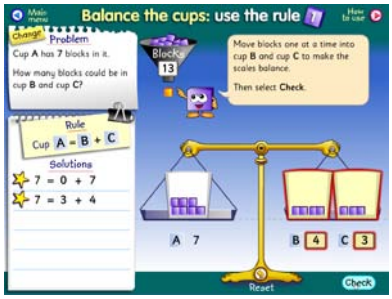
In this series of learning objects, students experience basic algebraic thinking using a set of scales as a metaphor for equations.

Features include:

- experience in basic algebraic thinking by applying rules and constructing equations using strategies such as substituting values
- promotion of the understanding that an equation is an expression of equality
- an equal-arm balance (scales) to provide a dynamic model of equality that allows the student to explore number relations
- a print option that provides a record of the solution and a new problem to solve.

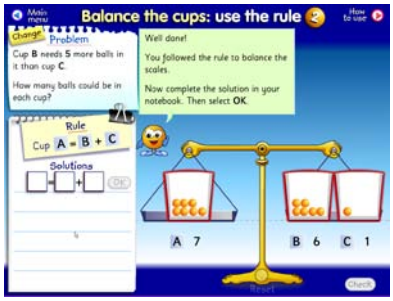
Students:

- construct number sentences to record the equivalent relations by inserting missing values.



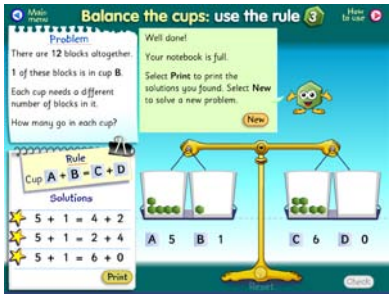
Balance the cups: use the rule 1
L5975 Years 2–3

This is the first object series which introduces the students to the idea of a missing value in an A = B + C type equation by requiring them to move blocks into just one cup to make a balance and complete the problem.



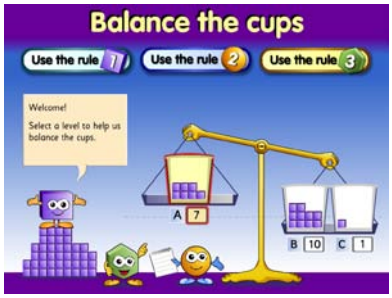
Balance the cups: use the rule 2
L5976 Years 3–4

This object builds on the first object, with three missing values and a known relationship between the values in an A = B + C type equation. For example the student needs to put a four more blocks in one cup than in another cup and make the scales balance.



Balance the cups: use the rule 3
L5977 Years 3–4

This object contains three missing values in an A+ B = C + D type equation. For example the student needs to balance the scales by putting a different number of blocks into each of the four cups, with 2 blocks in Cup C.



Balance the cups
L5974 Years 2–4

This is an aggregate of the three learning objects in the series, enabling the student to progress through the 3 learning objects.

Content from other sources

Colour patterns (Years P–3)

This learning object is a simple manipulative that allows students to explore and practise pattern formation.

Features include:

- a template format presentation with a description and instructions
- feedback with audio
- dynamic, randomly generated problems to support repeated use.

Students:

- describe the colour pattern in words
- extend the colour pattern created by a sequence of coloured buttons.

Colour patterns
L3516 – Years P–3

Extend a pattern made from coloured buttons. Describe the colour pattern in words.

Space

Finding symmetry series (Years P–2)

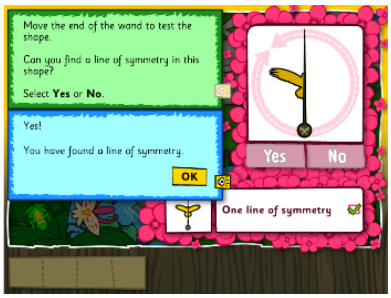
Students determine whether shapes have one, two or three lines of symmetry by using a digital tool that allows shapes to be folded in different ways.

Features include:

- opportunities for students to test axes of symmetry using a shape-folding tool
- a summary of shapes found.

Students:

- explore 2D shapes to develop an understanding of symmetry by folding them into matching halves in one or more different ways
- distinguish between symmetrical and non-symmetrical 2D shapes
- test a shape for reflectional symmetry by folding it into a matching half
- analyse shapes with more than one axis of symmetry.



Finding symmetry: one line: garden
L7800 – Years P–2

Students explore a fantasy garden to find shapes with one line of symmetry.

Finding symmetry: two lines: garden
L7799 – Years 1–2

Students explore a fantasy garden to find shapes with two lines of symmetry.

Finding symmetry: three lines: garden
L7798 – Year 2

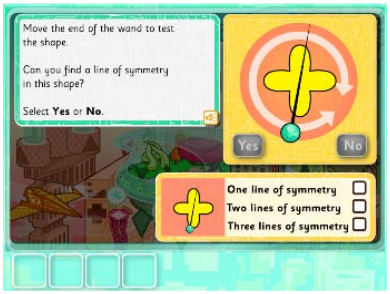
In a fantasy garden setting, students locate shapes that have three or more lines of symmetry.

Finding symmetry: one line: city
L7803 – Years P–2

Students explore a futuristic city to find shapes with one line of symmetry.

Finding symmetry: two lines: city
L7802 – Years 1–2

Students explore a futuristic city to find shapes with two lines of symmetry.



Finding symmetry: three lines: city
L7801 – Year 2

Students explore a futuristic city to find shapes with at least three or more lines of symmetry.

Shape overlays series (Years P–4)

Students manipulate 2D shapes, by sliding and overlapping, to create other 2D shapes.

Features include:

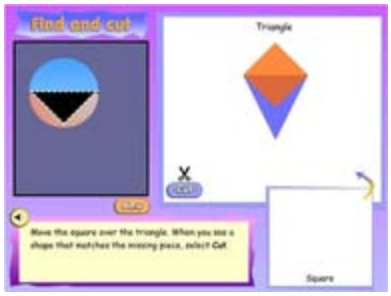
- progressive increase in level of difficulty by including more complex shapes, increasing the number of shapes to choose from and using the option to rotate shapes.

Students:

- cut, rotate and arrange 2D shapes
- complete tasks such as making a specified shape to complete a picture puzzle require the student to consider the properties of the two original shapes and visualise how the two shapes may be overlapped to create the properties needed for the new shape.

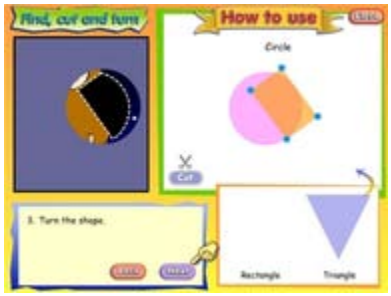
Shape overlays: picture studio
L1071 – Years P–4

Students cut, rotate and arrange shapes to create their own picture. A number of starter ideas are provided and students can print their final work.



Shape overlays: find and cut
L752 – Years P–2

Students are presented with a missing shape in a partially covered picture. To find the missing shape and see the final picture, students slide a 2D shape over a fixed 2D shape. They cut the shape to check that they are correct. When they have matched the missing piece the picture is revealed.



Shape overlays: find, cut and turn
L1072 – Years 1–2

Students are presented with a missing shape in a partially covered picture. To find the missing shape and see the final picture, students select from two 2D shapes (including obtuse triangle, pentagon and trapezium) and slide it over a given fixed 2D shape. They cut and rotate the shape to match the missing piece and reveal the picture.

Shape overlays: picture puzzle
L1073 – Years 3–4

Students make a target shape by positioning a simple shape over another shape. They cut out the new shape formed by the combination of the other two shapes then use the shape overlay to complete a picture.

Tessellate decorate series (Years 1–2)

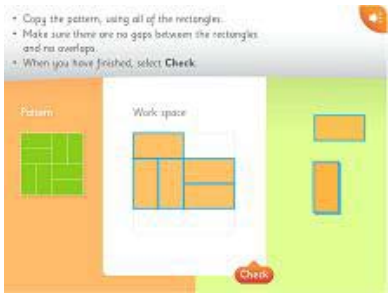
Students use a range of shapes, or combinations of shapes, to make tessellations to decorate rooms in a house.

Features include:

- a virtual sample book of tessellations
- models of different tessellations of the same shape, or combinations of shapes to demonstrate the properties of tessellations
- supportive feedback to the students
- a print option that captures students' experiments in the play space

Students:

- choose a part of a living room, kitchen or bedroom to decorate and select a tessellation to make
- copy the pattern by moving tiles onto a work space without creating overlaps or leaving gaps, and then select a colour scheme
- watch patterns expand automatically to fill a large space, allowing students to see the continuous multi-directional nature of tessellations in their own designs
- create their own designs in the play space.



Tessellate decorate: rectangles
L7781 – Years 1–2

Students select one of four tessellations made from rectangles and copy it to decorate different parts of a living room.

Tessellate decorate: squares
L7782 – Years 1–2

Students select one of four tessellations made from squares and copy it to decorate different parts of a room in a house.

Tessellate decorate: equilateral triangles
L7783 – Years 1–2

Students select one of four tessellations made from equilateral triangles and copy it to decorate a room in a house.

Tessellate decorate: rhombuses
L7785 – Years 1–2

Students select one of four tessellations made from rhombuses and copy it to decorate a room in a house.

Tessellate decorate: trapeziums
L7787 – Years 1–2

Students select one of four tessellations made from trapeziums and copy it to decorate a room in a house.

Tessellate decorate: hexagons and triangles
L7784 – Years 1–2

Students select one of four tessellations made from hexagons and triangles and copy it to decorate a room in a house with patterns made from hexagons and triangles.

Tessellate decorate: three shapes
L7788 – Years 1–2

Students select one of four tessellations made from rhombuses, squares and equilateral triangles, and copy it to decorate a room in a house.

Tessellate decorate: right-angled triangles
L7786 – Years 1–2

Students select one of four tessellations made from right-angled triangles and copy it to decorate a room in a house.

Direct a robot series (Years 2–4)

Students interpret diagram features as 2D representations of a 3D environment to direct a robot around obstacles, collect as many samples as possible (each having a value attached) and return to the mother ship using the least amount of fuel.

Features include:

- a grid to help determine units of distance
- a mission report with a score
- an option to print.

Students:

- develop their understanding of the concepts of 2D representations of 3D environments, relative position and relative direction
- are shown a map of a planet's surface including the locations of the robot, obstacles and samples
- program a pathway using direction and/or number of distance units to move the robot around the surface of a planet
- visualise the pathway assisted by the map of a planet's surface to determine the location and required movement of the robot.

Direct a robot: how far?
L1075 – Years 2–4

Students are presented with a partially finished route. The direction steps have been predetermined but the number of units for the moves is missing. Students select the numbers of units needed to complete the pathway, collect the samples and return to the mother ship.

Direct a robot: which way?
L1074 – Years 2–4

Students are presented with partially finished route, this time with the distance steps predetermined so the students must determine the best direction to collect all the samples and return to the ship.

Direct a robot: collector
L753 – Years 2–4

Students program a pathway by selecting both the direction and number of units the robot will move to collect all the samples and return to the ship.

Face painter series (Years 2–5)

Students explore the properties of, and relationship between, 2D shapes (polygons) and 3D objects (polyhedrons) by visualising the shapes of the faces of objects, including those distorted by perspective and hidden from view.

Features include:

- automatic recording of correctly painted shapes enabling the student to compare their estimate with the result
- a systematic approach to the exploration of the structure of the shapes than would normally be possible through physical handling of the objects.

Students:

- estimate the number of a specific 2D shape that can be found on a given 3D object
- rotate and view the 3D object from all perspectives and identify each instance of the 2D shape by painting it
- visualise relationships between 2D figures and 3D objects.

Face painter: finding faces 1
L1068 – Years 2–3

Students estimate how many of a specific 2D shape can be found on a given *simple* 3D object.

Face painter: finding faces 2
L653 – Years 3–4

Students estimate how many of a specific 2D shape can be found on a given *complex* 3D object.

Face painter: locating faces
L1069 – Years 4–5

Students estimate the number of faces there are on a given complex 3D object (including triangular pyramid, pentagonal prism or L-shaped block). The faces vary in shape.

Face painter: predicting faces
L1070 – Years 4–5

Students are presented with a number of 2D shapes that occur on a given complex 3D shape. They predict the number of each type of the 2D shapes that make up the complex 3D object.

Shape maker series (Years 2–6)

Students explore the relationships between 2D shapes and 3D objects by visualising the movement (translation or rotation) of the 2D shape and predicting the resulting 3D object.

Features include:

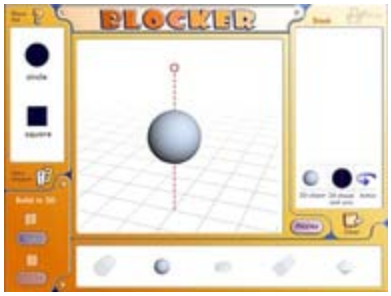
- cross sections of the 3D objects created
- printouts of all objects.

Students:

- visualise the result from spinning or extruding 2D shapes
- select from the shapes available then apply a spin or extrude action to it
- spin the shape and select the axis for spinning.

Shape maker: simple objects
L1060 – Years 2–3

Students select either a square or circle and build a stack of eight objects.

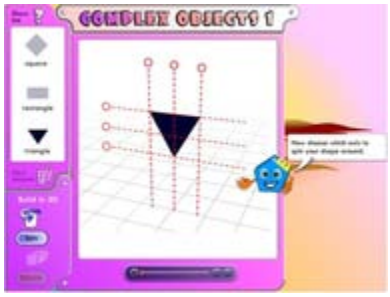


Shape maker: blocker
L1058 – Years 3–4

Students select from a square or circle. They then predict the resulting 3D object. If the choice is correct, the transition from 2D to 3D is shown. Students build a stack of six objects they have created.

Shape maker: stacker
L588 – Years 3–4

Students select from a diamond, circle and rectangle then predict the resulting 3D object. If the choice is correct, the transition from 2D to 3D is shown. Students build a stack of six objects they have created.



Shape maker: complex objects 1
L1061 – Years 4–6

Students select from a diamond, circle and rectangle and build a stack of 8 objects.

Shape maker: complex objects 2
L1062 – Years 4–6

Students select from three more complex 2D objects: crescent, trapezium and rhombus. The student builds a stack of 8 objects which can be printed out.

Shape maker: replicator
L1059 – Years 4–6

Students break down an object made of several 3D objects into its components, and then replicate them. They identify a component, then select the 2D shape to match the chosen 3D component. The interaction ends when the entire object has been replicated.

Content from other sources

Space manipulatives series (Years P–9)

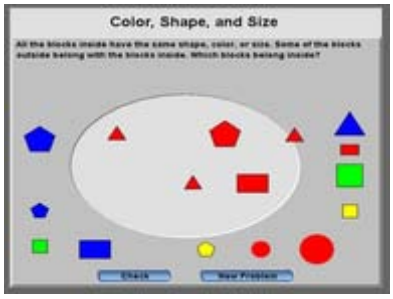
Students use manipulatives to explore and practise a range of concepts and operations relating to space.

Features include:

- a template format presentation with a description and instructions.

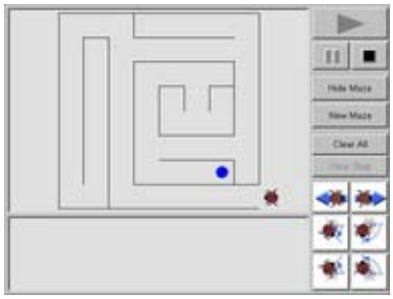
Students:

- explore geometric concepts and apply them through a range of practise activities.



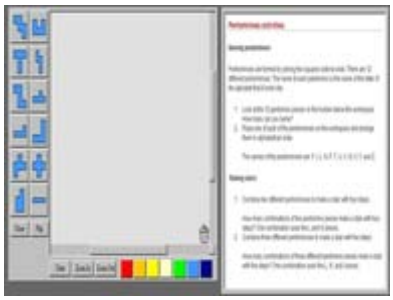
Attribute blocks
L3511 – Years P–3

Identify what the blocks inside the oval have in common, such as the same colour, shape or size. Sort blocks by moving all blocks with that attribute inside the oval.



Ladybird mazes
L3535 – Years P–4

Manoeuvre a ladybird through a maze using forward and backward arrows and rotations of 90 and 45 degrees. Plan and select the moves for the ladybird and then watch the ladybird execute your plan. Map the moves in stages or map the entire journey in one go.



Pentominoes
L3540 – Years P–9

Name a pentomino after the alphabetical letter that it resembles. Arrange pentominoes to make patterns and pictures. For example, make a staircase with five steps using only the letters L, W and I. Experiment using the 12 different shapes of pentominoes.

Tessellations
L3547 – Years P–9

Tile coloured shapes to create tessellations (mosaic patterns). Build tessellations with triangles, squares, hexagons, octagons and dodecahedrons. For example, tessellate the plane with combinations of squares and octagons. Notice that some shapes form regular tessellations and others do not. Clone patterns of tessellations to create larger patterns. Zoom in to check whether two edges are the same length. Zoom out to view and create larger patterns. Change the colour of any tile or group of tiles.

Pattern blocks
L3539 – Years 2–6

Create regular or semi–regular tessellations using pattern blocks. Investigate relationships between the areas of blocks. List and compare the perimeters of each block. Compare perimeters of block combinations.

Measurement

School day series (Years P–2)

Students read on-the-hour times on digital and analogue clocks and sequence familiar events in the correct time order.

Features include:

- clocks and labels showing the time in one hour intervals from 7 o'clock to 10 o'clock
- audio for all text to support reading and comprehension
- feedback and opportunity to self-correct sequences.

Students:

- associate events in a sequence with certain times
- sequence four images of a boy going to school
- sequence analogue or digital clocks and match them with labels that present times in words, e.g. seven o'clock
- are exposed to three different ways of expressing time: analogue clocks, digital clocks and words.

School day: analogue
L7789 – Years P–1

Students sequence four images that illustrate stages in going to school in the morning. Students then match analogue clocks with each image, and match the time, in words, to each clock.

School day: 12-hour digital
L7790 – Years P–1

Students put digital clocks showing on-the-hour times in order. Students match time words to the clocks, and then sequence four images that illustrate stages in going to school in the morning.

School day: 24-hour digital
L7797 – Year 2

Students sequence five images that illustrate stages in the school day. Students match analogue clocks with each image. Students then match the times with 24-hour digital clocks.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Time tools series (Years P–2)

Students explore 12-hour time on both analogue and digital clocks. Students read times on a master analogue or digital clock in the Time challenge task and adjust the time on other clocks to match the Master clock. A matching game provides opportunities to recall and match times on both analogue and digital clocks.

Features include:

- opportunities for students to manipulate times on 12-hour clocks
- information about 12-hour time
- a 'Tell me more' feature with supporting animations
- adjustable time controls to 15-minute, half-hour and hour intervals
- scaffolded feedback in the Time challenge activities.

Students:

- read and interpret times on digital and analogue clocks at half-hour intervals
- explore and manipulate times on 12-hour clocks
- identify matching times on digital and analogue clocks.

Time tools: 12-hour to the half hour
L9644 – Years P–2

Students use the clock controls to change and match the times on analogue and digital clocks. They learn about the features of 12-hour clocks by viewing supporting animations. They change clock times to match the time presented on a Master clock, and receive scaffolded feedback accordingly. Provides audio to support on-screen text.

Time tools: 12-hour to the half hour: time challenge
L9652 – Years P–2

Students match 12-hour clock times to the half hour times presented on a Master clock, and receive scaffolded feedback accordingly.

Time tools: 12-hour to the half hour: time match
L9653 – Years P–2

Students find the matching time cards in the smallest number of possible tries. Times are displayed in analogue and digital form, in 12-hour times to the half hour.

Time tools: 12-hour to the half hour: practice time
L9651 – Years P–2

Students explore time by adjusting the controls to change and match times on analogue and digital clocks to the half hour. They explore the features of 12-hour clocks and the passing of time from am to pm.

Area concept series (Years P–4)

Students explore the concept of area as covering a surface, and to introduce the formula for calculating the area of a rectangle.

Features include:

- an animated multiplication table supports students who experience difficulty with calculating the product.

Students:

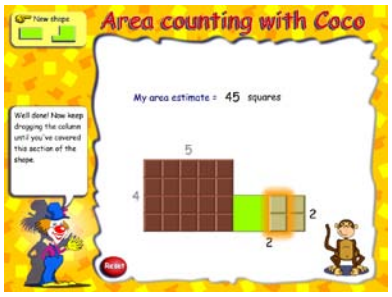
- estimate the area of the shape (square, rectangle or L shaped) using a reference square
- cover the shape with the square, first completing a row or a column and then copying the entire row or column to complete the shape
- calculate the area, using the dimensions of the shape to fill in the formula length X width.

Finding the area of rectangles
L384 – Years P–2

Students work with squares and rectangles and calculate products of numbers up to 9.

Finding the area of compound shapes
L383 – Years 2–4

Students work with L shaped shapes. Students calculate the area of each part of the L shape then add the results.



Area Counting with Coco
L139 – Years P–4

This is an aggregated learning object combining the two other learning objects.

Wake up, Pup series (Years 1–2)

Students help Mia and Jack take Pup for a walk by putting pictures of Pup's morning in the correct sequence and clocks showing on-the-half-hour times in the correct order.

Features include:

- feedback and opportunity to self-correct sequences
- times presented in different ways
- audio to support reading and comprehension.

Students:

- put familiar events represented by pictures in the correct order
- read on-the-half-hour times on clocks, and put them in the correct order
- read words expressing o'clock and half-past times.

Wake up, Pup: analogue
L7791 – Years 1–2

Students are introduced to times presented in three different ways: pictorially, on analogue clocks and expressed in words.

Wake up, Pup: analogue and digital
L7792– Years 1–2

Students are introduced to times presented in four different ways: pictorially, on analogue clocks, on digital clocks and expressed in words.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Rice paper rolls series (Year 2)

Help Tom and Liz make rice paper rolls. Put pictures of how they prepare the rolls in the correct sequence and place the clocks showing on-the-quarter-hour times in order.

Features include:

- feedback and opportunity to self-correct sequences
- audio to support reading and comprehension
- times presented in different ways.

Students:

- associate events in a sequence with certain times
- place the clocks showing on-the-quarter-hour times in order and match them to the pictures
- match the time words to the clocks
- watch Tom and Liz prepare rice paper rolls as time passes.

Rice paper rolls: analogue
L7793 – Year 2

Students read on-the-quarter-hour times on analogue clocks, and put them in the correct order.

Rice paper rolls: analogue and digital
L7794– Year 2

Students read on-the-quarter-hour times on analogue and digital clocks, and put them in the correct order.

After school series (Year 2)

Students help Neo get home from school by sequencing analogue clocks and a series of images. Students match word labels and digital clocks to the analogue clocks showing on-the-quarter-hour times.

Features include:

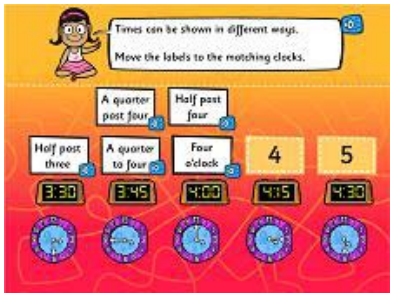
- audio for all text is included to support reading and comprehension
- three different ways of expressing time: analogue clocks, digital clocks and words.

Students:

- sequence five images and five analogue clocks then match word labels and/or digital clocks to the analogue clocks
- associate events in a sequence with certain times
- watch an animation of the event.

After school: analogue
L7795 – Year 2

Students sequence five analogue clocks and match labels to the clocks. Students then match illustrations of a boy's progress from leaving school to arriving home with the clocks and labels.



After school: analogue and digital
L7796 – Year 2

Students sequence five analogue clocks. Students match digital clocks with each clock face and then match labels to the clocks. Students match illustrations of a boy's trip home from school with the correct clocks.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Cubirocks (Years 2–4)

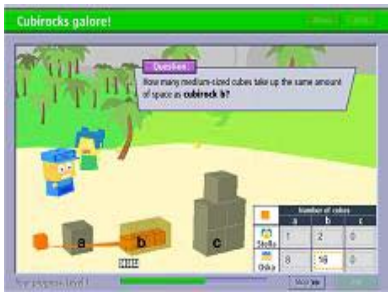
Using robot creatures with three different-sized measuring cubes, students estimate the volume of different cubic shaped 'cubirocks'.

Features include:

- eight medium cubes and 27 small cubes fill one large cube so students can use these ratios to estimate the volume of solids
- different measuring cubes for each character: small, medium-sized or large.

Students:

- help cuboid characters to estimate the volume of solids made from a number of large cubes.



Cubirocks galore
L161 – Year 2–4

Students help two characters using medium sized or large blocks, so ratios are 1:1 and 1:8. Volumes range from one unit up to 48 units (2x2x2x6).
Students complete a data table which can be used to explore relationships between unit size and volume.

Cubirocks are measured
L162 – Year 2–4

Students help three characters, so ratios are 1:1, 1:8 and 1:27. Volumes range from one unit up to 162 units (3x3x3x6).
Students complete a data table which can be used to explore relationships between unit size and volume.

Cubirocks go!
L160 – Year 2–4

Students help three characters, so ratios are 1:1, 1:8 and 1:27. Volumes range from one unit up to 162 units (3x3x3x6).

Content from other sources

Time manipulatives series (Years P–6)

Students use manipulatives to explore and practise a range of concepts and operations relating to the measurement of time.

Features include:

- both digital and analogue clocks to represent time
- a template format with a description and instructions.

Students:

- perform number operations involving analogue and digital time.

Time: analogue and digital clocks
L3548 – Years P–6

Look at the same time displayed on a digital and a face (analogue) clock. Move the hour, minute or second hand on the face clock and observe the change in the digital clock. Increase or decrease the hours, minutes or seconds on the digital clock and watch the corresponding hands on the face clock move. Show or hide seconds on each clock.

Time: match clocks
L3549 – Years P–6

Increase or decrease the hours and minutes on a digital clock to match the time displayed on a face (analogue) clock. Or move the hands on a face (analogue) clock to match the time displayed on a digital clock.

Time: what time will it be?
L3550 – Years P–6

Calculate what time it will be later. Increase the hours or minutes on a digital or analogue clock to show the later time. For example, increase the minutes by 15 to show what time it will be 15 minutes after 2.35 am.

Chance

Spinners series (Years P–6)

Students construct spinners to investigate and test the relationship between the structure of a random generator and the likelihood of individual outcomes or results from a series of outcomes.

Features include:

- a dynamic display of experimental results in graphs and tables
- a tool enabling the user to construct area-based random generators to run trials to generate both short-run (10 spins) and long-run (10 000) data
- a spinner tool to maximise student choice, control and creativity as they explore the results from making various spinners.

Students:

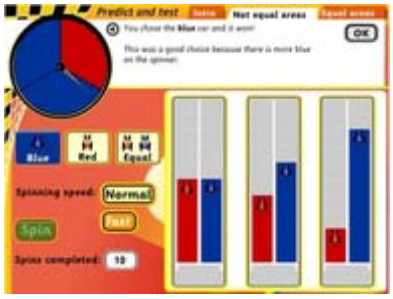
- construct or select spinners to investigate the likelihood of outcomes occurring.
- compare theoretical outcomes and actual results
- explore the relationship between a sample space (spinner) and the likelihood of particular outcomes by constructing spinners according to given criteria
- create mathematically equivalent spinners given specific criteria for their construction.
- explore the difference between the information provided by short-run, medium-run and long-run data
- use proportional thinking to predict and compare the outcomes of random generators.

Spinners: basic builder
L2376 – Years 3–4

The student uses the spinner-making tool to build their own spinners, choosing up to 6 sides and 4 colours. As they spin their spinner, they are able to see the actual results compared with theoretical results on an accompanying graph.

Spinners: advanced builder
L2377 – Years 3–6

This is similar to ‘Spinners: basic builder’ however the students can choose up to 12 sides and 5 colours. Seven challenges require students to build spinners to specifications.

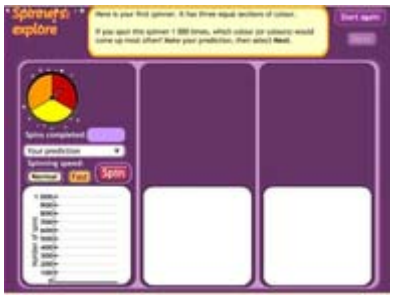


Spinners: predict and test
L2378 – Years P–1

The spinner represents movement of two different coloured cars along a race track of 10 spaces. The student assesses the likelihood of each car winning the race when using a spinner of equal or biased nature to determine which car moves further.

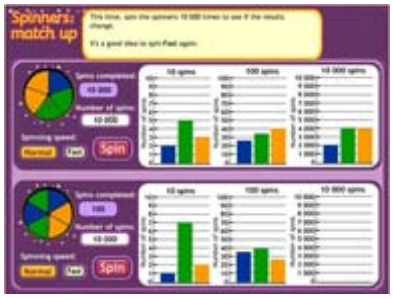
Spinners: spin and label
L2379 – Years 1–2

The student chooses one of three spinners in response to a series of likelihood statement, then 'tests' the spinner with 20 spins.
After the testing the spinners, students select likelihood statements to match to each spinner.



Spinners: explore
L2380 – Years 2–3

Students predict the outcome of a spinner with three equal sized colours. A graph shows the results of 1000 spins. Students alter the sizes of sectors for two more spinners and predict the outcomes of 1000 spins.



Spinners: match up
L2381 – Years 4–5

Students select two spinners they think would be likely to produce similar results from a set of spins.
They test 10, 100 and 10,000 spins and view the resulting graphs. Students indicate whether they think the data confirms or contradicts their prediction of 'sameness'.

Spinners: assessment
L8277 – Years 3–6

Students complete 16 tasks to assess their understanding of the language of chance (equally likely, more/less likely, impossible, certain, relative percentage) and their ability to apply it to construct spinners according to given criteria.

Science

Earth and beyond

Soil series (Years P–2)

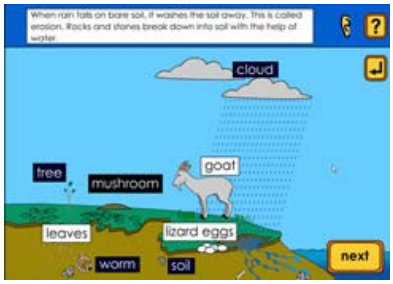
Students explore the properties of natural soil environments and the interactions between the living and non-living components that contribute to healthy soil.

Features include:

- the option to look up further information and answer questions.

Students:

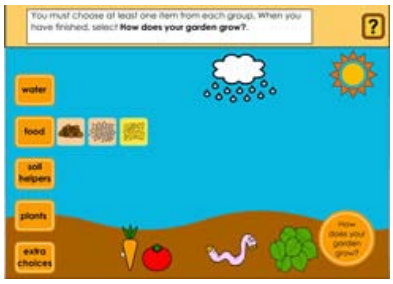
- explore how soil is formed from rock particles and organic matter and how plants and animals interact with the soil
- identify environmental needs of cultivated plants for survival and growth
- explore how environmental conditions affect plant growth in gardens.



Explore soil [includes spoken instructions]
L2 – Years P–2

Explore soil
L187 – Years P–2

Students explore how soil is formed from rock particles and organic matter and how plants and animals interact with the soil.



Create a soil environment [includes spoken instructions]
L3 – Years P–2

Create a soil environment
L188 – Years P–2

Students grow flowers or vegetables in a garden bed and compare results in different environmental conditions when adding things such as water, organic matter, digging tools and earthworms.

Soil types [includes spoken instructions]
L4 – Years P–2

Soil types
L189 – Years P–2

Students examine the properties of three different soil types: sand, loam and clay and explore the effects of compaction and water content on the soil.

Soil [includes spoken instructions]
L68 – Years P–2

Soil
L205 – Years P–2

'Soil' is an aggregated learning object combining the three other learning objects.

Water series (Years P–2)

Students explore the quality of water in different aquatic habitats and to associate aquatic animals with their habitats according to water types.

Features include:

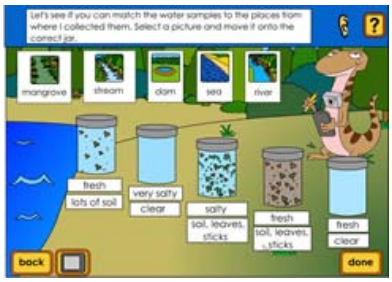
- the option to look up further information and answer questions.

Students:

- explore and compare water properties from a range of locations in or near a river
- associate aquatic animals with their habitats according to water types
- identify origins of water samples by comparing salinity and turbidity.

River journey [includes spoken instructions]
L5 – Years P–2

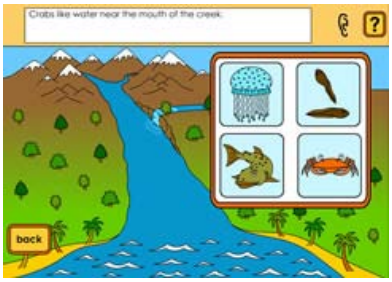
River journey
L190 – Years P–2
Students move Frog down a river in a boat, stopping at four locations: a creek, a waterfall, a river mouth and a bay. Using equipment in the boat, Frog can check the water at each location for temperature, salinity, clarity and current speed. At the end of the journey, students meet four different animals and predict the habitats in which they live.



Water types [includes spoken instructions]
L6 – Years P–2

Water types
L191 – Years P–2

Students help Gecko test water samples for salinity levels and sediment content from five different aquatic habitats: a river, the sea, a mangrove estuary, a stream and a dam. Students compare the salinity and clarity of the water samples, matching them with their original habitats.



Waterways [includes spoken instructions]
L69 – Years P–2

Waterways
L206 – Years P–2

This is an aggregated learning object combining the two other learning objects.

Weather series (Years P–2)

Students explore variations in weather and how the variations affect human behaviour.

Features include:

- the option to look up further information and answer questions.

Students:

- explore weather conditions in a range of natural environments
- explore and identify clothing items suited to a range of weather conditions
- describe weather conditions and their physical effects on people.

Explore the weather [includes spoken instructions]
L9 – Years P–2

Explore the weather
L193 – Years P–2

Students help Frog explore elements related to particular types of weather.

Experience the weather [includes spoken instructions]
L10 – Years P–2

Experience the weather
L194 – Years P–2

Students explore the links between the climates of four locations: Antarctica, the Sahara desert, the New Zealand mountains, and the Amazon rainforest. Using a palette of choices, students select weather conditions typical of each location.

Weather wear [includes spoken instructions]
L11 – Years P–2

Weather wear
L195 – Years P–2

Set on a sailing boat, students hear and/or read weather forecasts. They then prepare Gecko and the boat for the weather ahead. Students can also determine the weather conditions and explore the results.

Weather [includes spoken instructions]
L71 – Years P–2

Weather
L207 – Years P–2

This is an aggregated learning object combining the three other learning objects.

'Experience the weather' and 'Weather' contain non-TLF content. See Acknowledgements in the learning objects.

Day and night (Years P–2)

Students observe the changing sky as day becomes night and then night turns into day again.

Features include:

- the option to print students' completed pictures.

Students:

- help Frog identify objects in the sky: the Moon, a star, a planet, the Sun, a cloud and a star group
- create their own sky scene using the elements supplied.

Day sky, night sky [includes spoken instructions]
L20 – Years P–2

Day sky, night sky
L204 – Years P–2

Students identify objects in the sky such as clouds, planets and stars. They look closely at movements in the sky during the day and at night

Under the Earth series (Years P–2)

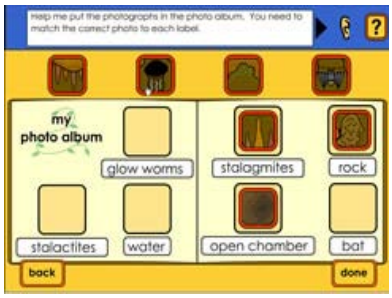
Students explore the structures, composition and life forms that exist in subterranean landscapes.

Features include:

- the option to look up further information and answer questions.

Students:

- identify animals that live in caves
- identify rock formations in limestone caves
- explore how water shapes rocks in limestone caves
- explore the origins of minerals and fossils and identify industrial uses of minerals
- identify the main structures within a volcano explore the appearance, rock types and temperatures of volcanoes.



Caving [includes spoken instructions]
L12 – Years P–2

Caving
L196 – Years P–2

Students explore a limestone cave. Identify glow worms, bats and rock features such as stalactites. They take photos then match pictures with captions.

Volcanoes [includes spoken instructions]
L13 – Years P–2

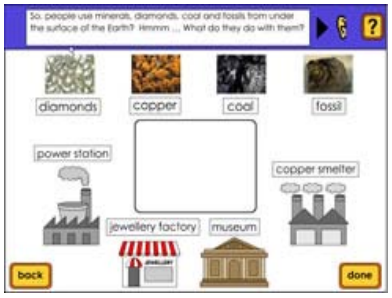
Volcanoes
L197 – Years P–2

Students look at photos of active volcanoes. They direct a robot as it is lowered inside a volcano then measure temperature changes and look at rock structures. They collect rock samples from the crater, vent, column and magma chamber and match the samples with their original locations.

Mineshaft [includes spoken instructions]
L14 – Years P–2

Mineshaft
L198 – Years P–2

Students examine the links between the resources mined or found underground, and their uses above the ground.



Under the Earth [includes spoken instructions]
L72 – Years P–2

Under the Earth
L208 – Years P–2

This is an aggregated learning object combining the three other learning objects.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Water use series (Years P–2)

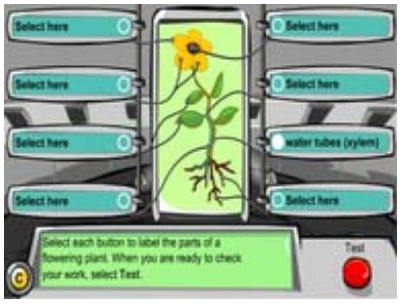
Students explore features of water in a built human environment.

Features include:

- the option to look up further information and answer questions.

Students:

- identify components of an urban water supply and wastewater system
- compare water quality at a range of points within an urban water supply and wastewater system
- arrange components of urban and rural water cycles
- explore water quality, treatment and transport within water supply systems
- identify freshwater environments where native frogs live and breed
- explore the life cycle of frogs and toads.

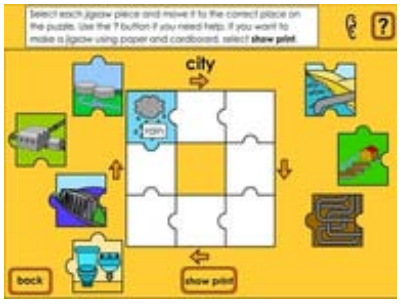


Where do frogs lay their eggs? [includes spoken instructions]
L17 – Years P–2

Where do frogs lay their eggs?
L201 – Years P–2
Students examine different bodies of water, both permanent and temporary that commonly exist in the built environment and consider their suitability as a place for a frog to lay its eggs. Students investigate the sites and record their findings in a printable 'Frog report'.

Explore water pipes [includes spoken instructions]
L18 – Years P–2

Explore water pipes
L202 – Years P–2
Students help Frog to trace a city's water supply and disposal. They collect and test water samples from six locations: a dam, a water treatment plant, a pumping station, a house, a sewerage treatment plant and a creek outfall. They then compare the water clarity and purity, matching the samples with their original locations.



Where does tap water come from? [includes spoken instructions]
L19 – Years P–2

Where does tap water come from?
L203 – Years P–2

Students complete a click-and-drag jigsaw puzzle, which enables them to understand the water cycle from the perspective of a household user in the country or in a city.

Water use [includes spoken instructions]
L74 – Years P–2

Water use
L210 – Years P–2

This is an aggregated learning object combining the three other learning objects.

'Explore water pipes' and 'Water use' contain non-TLF content. See Acknowledgements in the learning objects.

Land use series (Years P–2)

Students explore human impact on the environment.

Features include:

- the option to look up further information and answer questions.

Students:

- relate planting trees and recycling paper to environmental benefits
- explore the production, use and recycling of newspapers
- link urban development to effects on wildlife populations
- explore interactions between wildlife populations and national parks, creeks, wetlands, bridges, towns and farms.

News story [includes spoken instructions]
L15 – Years P–2

News story
L199 – Years P–2
Students follow the production cycle of a newspaper from a forest plantation to a paper mill, to a printing press, to a newsagent, to its readers and finally to waste paper and recycling. They discover how recycling can reduce demand on natural resources.

New developments [includes spoken instructions]
L16 – Years P–2

New developments
L200 – Years P–2

Students explore the impact of built environments such as houses, roads and shopping centres on the natural environment. They help Gecko survey populations of mammals and birds, and explore the balance between development and wildlife conservation. Simulated environments include national parks, creeks, wetlands, bridges, towns and farms.

Land use [includes spoken instructions]
L73 – Years P–2

Land use
L209 – Years P–2

This is an aggregated learning object combining the two other learning objects.

Light and shadows series (Years P–2)

Students explore the way shadows are created and the impact that different shapes can have on their shadows.

Features include:

- an introduction that carefully explains the reasons why and how shadows are created

Students:

- examine the way different shapes can generate different shadows
- notice that objects always casts shadows that face away from the Sun
- examine how the shape and position of a shadow is related to the time of day and position of the Sun.

Light and shadows: casting shadows
L1126 – Years P–2

Students explore the shadows cast by different objects such as a bike, an umbrella and a child. They position the Sun to cast shadows at different angles and sizes.

Light and shadows: matching shadows
L1127 – Years P–2

Students match the shadows cast by different objects such as a bike, an umbrella and a child. They complete pictures by positioning an object, a shadow or the Sun.

Light and shadows
L756 – Years P–2

This is an aggregated learning object combining the two other learning objects.

Life and living

Garden detective series (Years P–2)

Students explore and classify many small living creatures found in Australian and New Zealand gardens.

Features include:

- a print option, which allows students to keep a record of their collections with the accompanying information about each animal
- an object for English as a Second Language learners. It features modified language, a glossary of words used and audio support for instructional and feedback text.

Students:

- examine an Australian or New Zealand garden with a magnifying glass looking for different creatures.

Garden detective: explore a New Zealand garden
L1182 – Years P–2

Students examine the garden with the magnifying glass looking for different creatures. Once found, a description of the creature with some of its distinguishing characteristics is displayed. Students can then choose whether to include the creature in their collection or to move on to look for others.

Garden detective: group New Zealand animals
L1183 – Years P–2

Students use the magnifying glass to find New Zealand creatures in the garden. Students are challenged to find groups of animals with like characteristics. For example, three creatures with wings.

Garden detective: New Zealand garden
L1181 – Years P–2

This is an aggregated learning object combining the two other New Zealand garden learning objects in a sequence.

Garden detective: explore an Australian garden
L1118 – Years P–2

Students examine the Australian garden with the magnifying glass looking for different creatures. Once found, a description of the creature with some of its distinguishing characteristics is displayed. Students can then choose whether to include the creature in their collection or to move on to look for others.

Garden detective: group Australian animals
L1119 – Years P–2

Students use the magnifying glass to find Australian creatures in the garden. In this learning object students are challenged to find groups of animals with like characteristics, for example, three creatures with wings.

Garden detective: Australian garden
L699 – Years P–2

This is an aggregated learning object combining the two other Australian garden learning objects in a sequence.

Garden detective: Australian garden [ESL]
L6782 – Years P–2

This is an aggregated learning object combining the two other Australian garden learning objects in a sequence. Also includes a word and sound game that highlights the names of creatures used.

Food chains series (Years P–2)

Students explore how plants and animals get the energy to live. Students are able to create simple food chains that show the flow of energy from the sun to plants and on to animals.

Features include:

- diagrams showing selected food chains within various environments
- geometric shapes as visual cues to help students classify living things as plants, herbivores, omnivores or carnivores
- audio support and three levels of difficulty
- feedback and scaffolding of the learning tasks (not text dependent).

Students:

- classify living things as producers (plants), primary consumers and secondary consumers (herbivores, carnivores or omnivores)
- construct simple food chains
- identify the Sun as an energy source at the start of all food chains
- identify plants as direct converters of energy from the Sun into a form that can be consumed by other living things
- explore the flow of energy from the Sun to plants and on to other living things.

Food chains: what is a food chain?
L1147 – Years P–2

This is a simple animation that introduces students to the concept of a food chain. It can stand alone as a resource, but is also packaged as an introduction to the other objects in this series.

Food chains: the town
L894 – Years P–2

Students create simple food chains starting with the energy from the Sun, and then incorporate plants and animals typically found in a city park. Each of the food chains the students create is recorded as a clear, simple graphic representation.

Food chains: the desert
L1143 – Years P–2

Students create simple food chains starting with the energy from the Sun, and then incorporate plants and animals typically found in a desert. Each of the food chains the students create is recorded as a clear, simple graphic representation.

Food chains: the wetlands
L1144 – Years P–2

Students create simple food chains starting with the energy from the Sun, and then incorporate plants and animals typically found in a wetlands environment. Each of the food chains the students create is recorded as a clear, simple graphic representation.

Food chains: the farm
L1145 – Years P–2

Students create simple food chains starting with the energy from the Sun, and then incorporate plants and animals typically found on a farm. Each of the food chains the students create is recorded as a clear, simple graphic representation.

Food chains: the forest
L1146 – Years P–2

Students create their own simple food chain with the energy from the sun, and then incorporate plants and animals typically found in a forest. Each of the food chains the student creates is recorded as a clear, simple graphic representation.

Animal search series (Years 1–2)

Students analyse the physical features of a group of animals and to use that information to classify the animals as fish, amphibian, reptile or mammal.

Features include:

- an introduction to the features that are common to classes of vertebrates
- questions that help students to distinguish a class of vertebrates from other animals
- features to enable students to group animals according to their physical features
- audio support to assist pre-readers
- clear visual feedback.

Students:

- identify a set of physical features common to a class of vertebrates
- choose questions that help to distinguish a class of vertebrates from other animals
- analyse the physical features of a group of animals and use that information to distinguish which is a given type of vertebrate: fish, amphibian, reptile or mammal.

Animal search: is it a mammal?
L766 – Years 1–2

Students classify mammals based on a feature such as the ability to make milk to feed its young.

Animal search: is it a reptile?
L1135 – Years 1–2

Students determine which animals are reptiles, looking at features such as whether the animal has tough, dry skin and is covered in scales.

Animal search: is it an amphibian?
L1136 – Years 1–2

Students determine animals are amphibians. Includes animals such as an eel. Students look for features such as whether the animal lays eggs when it is an adult.

Animal search: is it a fish?
L1137 – Years 1–2

Students determine which animals are fish. Includes animals such as a jellyfish. Students look for features such as whether the animal breathes with gills.

Animal search
L1134 – Years 1–2

This is an aggregated learning object combining the four other learning objects.

Animal search series (ESL) (Years 1–2)

Students compare the physical characteristics of a range of animals and identify which is a mammal, fish, reptile or amphibian.

Features include:

- audio support for all instructional and feedback text
- an audio-supported glossary of words used in the learning object
- two 'match the pair' card games that reinforce the names of creatures.

Students:

- analyse the physical features of a group of animals and use that information to distinguish which is a mammal, fish, reptile or amphibian
- choose questions that help to distinguish types of animals
- sort animals into groups based on their physical features.

Animal search: is it a mammal? (ESL)
L8551 – Years 1–2

Students sort animals into groups based on their physical features to identify a mammal.

Animal search: is it a fish? (ESL)
L8554 – Years 1–2

Students classify animals based on their physical features to identify a fish.

Animal search: is it a reptile? (ESL)
L8552 – Years 1–2

Students sort animals into groups based on their physical features to identify which is a reptile.

Animal search: is it an amphibian? (ESL)
L8553 – Years 1–2

Students sort animals into groups based on their physical features to identify which is an amphibian.

Energy and change

Let's make it go series (Years P–1)

Students examine what it is that 'powers' everyday objects in everyday environments.

Features include:

- introduction to the concepts of energy sources and energy consumers
- a reward for student success in the form of making the animated machine 'go'
- random generation of machines and devices supports repeated use.

Students:

- link forms of energy to common machines or energy uses
- explore different forms of energy available in residential and park environments.

Let's make it go: at the park
L847 – Years P–1

Uses the park environment and objects easily associated with this environment, such as barbecues, boats and sprinklers.

Let's make it go: backyard
L953 – Years P–1

Uses a home backyard and objects easily associated with this environment, such as a drill, chimes, mower and family car.

Let's make it go: in the kitchen
L954 – Years P–1

Uses the kitchen and objects easily associated with this environment, such as a dish washer, oven, refrigerator and radio.

Let's make it go
L955 – Years P–1

This is an aggregated learning object combining the three other learning objects.

Mixing colours series (Years P–2)

Students experiment with mixing primary colours to create new colours to paint predefined pictures.

Features include:

- three levels of difficulty in each learning object
- an option to print completed pictures showing the proportions of primary colours used to make each colour.

Students:

- are able to add different volumes of paints to create colours that they can then use.

Mixing colours: paint
L1116 – Years P–2

Students use the mixing machine to mix primary colours to form different colours. Students can then select from a range of pictures and paint it using the colours they have created.

Mixing colours: match
L1117 – Years P–2

Students select a picture and use the mixing machine to create colours to match those in the selected picture. They then paint a replica of their selection.

Mixing colours
L686 – Years P–2

This is an aggregated learning object combining the two other learning objects.

Pushing and pulling series (Years P–3)

Students experiment with force and mass by using non-standard labour units (in the form of monkeys) to help move recently arrived animals to the zoo.

Features include:

- animals of various size and mass, requiring students to apply different amounts of force to succeed.

Students:

- investigate the meaning of ‘push’ and ‘pull’ forces
- move animals across a bridge either by pushing or pulling with ‘monkey power’
- apply a force to move an object that is at rest and identify the minimum force needed to move objects having a range of weights.

Pushing and pulling: push or pull?
L1120 – Years P–1

Students discover the difference between ‘push’ and ‘pull’ as they are asked to move four small animals, of similar mass across the bridge using ‘monkey power’.

Pushing and pulling: how much force?
L1121 – Years P–2

The animals to be moved are of different sizes and therefore different masses. To move them will require different amounts of force. Students need to move the animals using the correct number of monkeys – too few and the cart can’t be moved, too many monkeys leads to a crash!

Pushing and pulling: zoo move
L1122 – Years P–3

Students are limited to a finite pool of monkeys to move the animals. Using too many monkeys will crash the cart and there won’t be enough left to get all the animals across.

Pushing and pulling: assessment
L7879 – Years 1–2

Students investigate and then predict the amount of force required to move a range of animals of various mass.

Pushing and pulling
L700 – Years P–3

This is an aggregated learning object combining the three other learning objects.

Make it go: assessment series (Years P–6)

Students show their understanding of energy and what makes things work.

Features include:

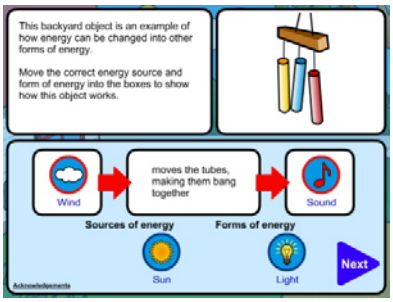
- structured tasks to assess student's understanding of energy and what makes things work
- a printable report of the student's performance.

Students:

- match an object to its use
- link forms of energy to common machines or energy uses
- identify properties of energy.

Make it go: energy source: assessment
L9842 – Years P–2

Students match a machine to its use and identify what makes it go. They answer true/false questions to show what they know about types of energy.



Make it go: energy change: assessment
L9843 – Years 3–6

Students complete a flow chart to show energy changes by identifying the energy source and the energy output of machines.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Working scientifically

Kitchen stacker series (Years 1–3)

Students help Felix Fusspot, Tina Tidy and Polly Put-Away organise grocery items in kitchen cupboards.

Features include:

- dynamic category labels that correspond to shared properties
- an introduction of common properties as the basis for classification systems
- ability to generate collections of items with properties that can be grouped in different ways
- an option to print customised categories and list members of each group.

Students:

- classify items according to their properties
- analyse the properties of a collection of items and classify them in different ways.

Kitchen stacker: sort the groceries 1
L2347 – Years 1–2

Students drag and drop groceries into kitchen cupboards according to one common property such as size, colour or container type, for example as large, red or boxes. Labels on the cupboards provide written cues. Students then group the items according to two common properties.

Kitchen stacker: sort the groceries 2
L2348 – Years 1–2

Students drag and drop groceries into kitchen cupboards according to a common property such as size, colour or container type. This time there are no labels on the cupboards. They sort by matching to an initial visual cue. Students are then extended to group the objects according to two common properties.

Kitchen stacker: sort and label
L2349 – Years 2–3

Students sort items with two common properties into five cupboards. The learning object dynamically displays category labels that correspond to shared properties to assist the students.

Kitchen stacker: label the cupboards
L2350 – Years 1–2

Students sort items with three common properties into six cupboards. The learning object dynamically displays category labels that correspond to shared properties to assist the students.

Kitchen stacker: create your own
L2351 – Years 2–3

Students drag and drop groceries into six kitchen cupboards sorting them according to a common property of their own choosing. Students then label their cupboards and can print their work, which show the items in the labelled cupboards.
A printout of the student's labelled work is available.

Kitchen stacker 1
L2345 – Years 1–2

This is an aggregated learning object combining 'Kitchen stacker: sort the groceries 1', 'Kitchen stacker: sort the groceries 2' and 'Kitchen stacker: sort and label'. It has audio support.

Kitchen stacker 2
L2346 – Years 2–3

This is an aggregated learning object combining 'Kitchen stacker: sort the groceries 1', 'Kitchen stacker: sort the groceries 2', 'Kitchen stacker: label the cupboards' and 'Kitchen stacker: create your own'.
A printout of the student's labelled work is available from 'Kitchen stacker: create your own'.

Languages other than English

Chinese

Lost bike series (Chinese) (Years P–2)

Students build bikes based on the characteristics of size, colour and bike accessories. They then go to find the bikes in a village.

Features include:

- repetition and visual, textual and spoken feedback to support students' language learning
- images showing the prolific use of bicycles as modes of transport and recreation
- comparisons and contrasts between Chinese and Australian cultures.

Students:

- use descriptive words and phrases, terms of comparison, adjectives and word order, and familiar language around thanks and greetings.

Lost bike: build your own bike (Chinese)
L1212 – Years P–2

Match pictures of bikes with words describing size, colour and accessories. Choose words to complete a description of a bike you would like to build. Use pictures and feedback to find where bikes are hidden in a town.

Lost bike: build to order (Chinese)
L1213 – Years P–2

Match pictures of bikes with words describing size, colour and accessories. Build a bike to match a description given by a Chinese friend. Use pictures and feedback to find where bikes are hidden in a town.

Image reproduced courtesy of Bryan Hart.

Lost bike (Chinese)
L1211 – Years P–2

This is a combination of the three 'Lost bike' learning objects.

This series contains non-TLF content. See Acknowledgements in the learning object

Dressing up series (Chinese) (Years P–2)

Students are introduced to a range of basic clothing items for three distinct occasions: going to school, going to kung fu training and attending a traditional wedding. This series is designed for beginning learners of Chinese.

Featured include:

- vocabulary, listening and reading skills in Chinese as well as important cultural information relating to clothing
- a range of clothing items suitable for school, kung fu training or attending a traditional Chinese wedding
- a choice between school-aged characters Lan Lan (girl) or Dong Dong (boy)
- simple instructions and feedback in Chinese.

Students:

- identify items of clothing and explore vocabulary related to dressing for school, kung fu training or attending a traditional Chinese wedding
- follow instructions given in Chinese to dress a boy or a girl.

Dressing up: school (Chinese)
L1011 – Years P–2

Students identify items of clothing suitable for going to school.

Dressing up: kung fu training (Chinese)
L1012 – Years P–2

Students identify clothing items suitable for wearing to kung fu training.

Dressing up: traditional wedding (Chinese)
L1013 – Years P–2

Students identify clothing items suitable for wearing to a traditional wedding.

Dressing up (Chinese)
L1014 – Years P–2

This is a combination of the three ‘Dressing up’ learning objects.

Number trains series (Chinese) (Years P–3)

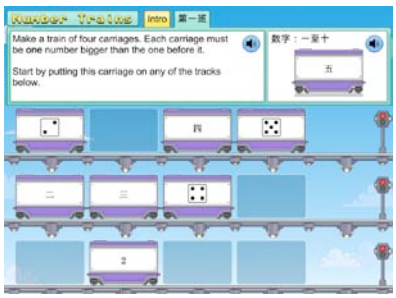
Students use their knowledge of Chinese numbers from 1 to 400 to arrange train carriages according to numbers on their sides.

Features include:

- visual and audio equivalents of numbers in Chinese
- a visual context in which students sequence numbers in Chinese by predicting, testing and confirming
- an interactive context in which students develop and consolidate counting skills that are fundamental to addition and subtraction skills
- randomised number generation that encourages repeated use.

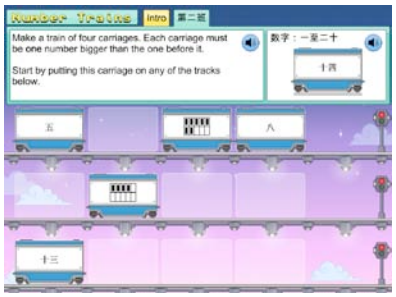
Students:

- practise using and identifying numbers in Chinese
- relate number 'names' and values in a variety of representations to Chinese numbers and number words
- identify the number before and after a given number
- connect Chinese number words and numerals to the quantities they represent using dice dots and ten-frames
- identify place value in two-digit and three-digit numbers.



Number trains: 1–10 (Chinese)
L9888 – Year P

Students use their knowledge of Chinese numbers from 1 to 10 to arrange train carriages according to the numbers on their sides. The numbers are represented in a range of formats such as numerals, dice dots, counting frames and Chinese characters.



Number trains: 1–20 (Chinese)
L9889 – Years 1–2

Students use their knowledge of Chinese numbers from 1 to 20 to arrange train carriages according to the numbers on their sides. They identify the numbers that come before and after each starting number.

Number trains: 10–400 (Chinese)
L9890 – Years 1–3

Students use their knowledge of how to count by tens in Chinese to arrange train carriages according to the numerals and Chinese characters on their sides. For example, identify the numeral or character that comes after 三百 .

Number trains (Chinese)
L8712 – Years P–3

Students use their knowledge of Chinese numbers from 1 to 400 to arrange train carriages according to numbers on their sides. This is an aggregate learning object combining the other objects in the series.

Matching characters (Years P–4)

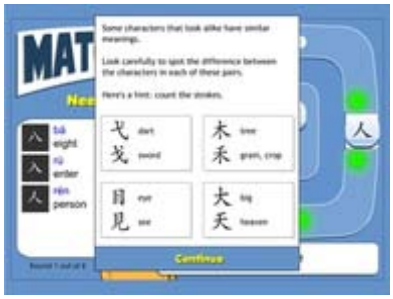
Students identify matching characters from sets of similar characters in a series of activities that use characters of increasing complexity.

Features include:

- characters used in this series are referenced in the Character catalogue
- characters are composed of one or more basic components, each with its own meaning and sound.

Students:

- identify matching characters in sets of similar characters
- build their knowledge of simple characters by checking meanings and spoken examples
- match pairs of characters using recall to identify subtle stroke differences.



Matching characters: match it: A (Chinese)
L472 – Years P–2

Students look at sets of similar characters and pair up the characters that match exactly. Students are encouraged to notice that when characters look alike, they often have related meanings. The activity focuses attention on the subtle differences in strokes that form the different characters.

Matching characters: match it: B (Chinese)
L711 – Years 3–4

Students look at sets of similar characters and pair up the characters that match exactly. Students are encouraged to notice that when characters look alike, they often have related meanings. The activity focuses attention on the subtle differences in strokes that form the different characters.

Matching characters: flip and match: A (Chinese)
L690 – Years P–2

Students flip cards to reveal characters that look alike. They pair up the characters that match exactly. The activity focuses attention on finding the subtle differences in strokes that form the different characters and they are encouraged to notice that when characters look alike, they often have related meanings.

Matching characters: flip and match: B (Chinese)
L714 – Years 3–4

Students flip cards to reveal characters that look alike. They pair up the characters that match exactly. Students are encouraged to notice that when characters look alike, they often have related meanings. Students build their knowledge of simple characters by checking meanings and spoken examples.

Matching characters (Chinese)
L930 – Years P–4

This is a combination of the four ‘Matching characters’ learning objects.

Kite kit series (Chinese) (Years P–6)

Students make kites based on the characteristics of shape, colour, designs and tails. These kites can be 'flown' in various different locations and flying conditions, which can be controlled by the student using language around types of weather.

Features include:

- descriptive words and phrases, terms of comparison, adjectives, and word order and familiar language around thanks and greetings
- repetition plus visual, textual and spoken feedback to support students' language learning
- all characters used in this series appear in the Character catalogue.

Students:

- design as many kites as they like, and then help a friend make a kite
- recognise and apply Chinese words and phrases associated with compass directions, wind speed and height
- learn language about places, including cultural features in China.

Image reproduced courtesy of Australian Picture Libray/Corbis. Photograph by Lee White.

Kite kit: flying (Chinese)
L1218– Years P–6

Students fly kites in a range of places in China. They can adjust wind direction and flying height and are introduced a number of basic vocabulary items. This learning object is the least complex of the three learning objects.

Kite kit: colour, shape and design: level 1 (Chinese)
L1217 – Years P–3

Students use and recognise simple words describing colour, size, shape and cultural images. They choose simple words to complete instructions for making a kite. They then make another kite by following instructions given by a Chinese friend. Opportunities are available to fly the kites in a range of places in China by adjusting compass directions, wind speed and flying height.

Kite kit: colour, shape and design: level 2 (Chinese)
L644 – Years 4–6

Students use and recognise complex words describing colour, size, shape and cultural images. They choose complex words to complete instructions for making a kite. They then make another kite by following instructions given by a Chinese friend. Opportunities are available to fly the kites in a range of places in China by adjusting compass directions, wind speed and flying height.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Dragon's jumble series (Chinese) (Years 1–3)

Students put images and sentences in order to unjumble a dragon's dream.

Features include:

- opportunities for students to put a sequence of pictures in order, and then match Chinese sentences to the sequence
- opportunities for students to use temporal connectives to link events in a recount
- audio support of target language text to assist student comprehension
- three print options for students' completed recounts: pictures only, text only, or both pictures and text.

Students:

- put pictures in the correct sequence to retell a recount in Chinese
- match sentences written in Chinese to pictures
- use temporal connectives to link different phases of a recount
- observe that some Chinese temporal connectives are interchangeable.

Dragon's jumble: dream (Chinese)
L9801 – Years 1–3

Students help a dragon remember what happened in his dream. They place four jumbled pictures from a recount in the correct order and add temporal connectives such as 首先，然后and 最后to show the order of events.

Dragon's jumble: garden (Chinese)
L9807 – Years 1–3

Students place four pictures in the correct order to help a dragon remember what happened in his garden. They choose sentences to match what is shown in each picture and add temporal connectives such as 首先，然后 and 最后 to show the order of events.

My design series (Chinese)* (Years 2–4)

Students design an animated cat or car by following simple instructions in Chinese and choosing labelled elements that describe mood, size, position, colour, expression and voice.

Features include:

- a range of design elements for students to explore
- audio support for all Chinese text, including instructions and labels
- an animation of the student's completed cat or car
- an option to print the student's design.
-

Students:

- combine a range of graphic and audio elements to create a talking cat or car
- recognise and respond to words, phrases and simple sentences in spoken and written Chinese
- evaluate how changes they make to the elements affect the impact of their design.

My design: talking cat (Chinese)
L10285 – Years 2–4

Students design a cat that speaks Chinese. They choose a voice and background picture for their cat, decide on a name and select a note about their cat.

This learning object is in development.

My design: talking car (Chinese)
L10278 – Years 2–4

This series contains non-TLF content. See Acknowledgements in the learning objects.

French

Lost bike series (French) (Years P–2)

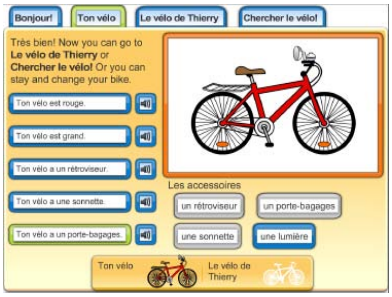
Students design bikes by using French vocabulary and phrases associated with size, colour and bike accessories.

Features include:

- an interactive context in which to explore target vocabulary and phrases by experimenting with the design of bikes
- opportunities to practise word order in the target language
- simple instructions and feedback in French
- cultural information about cycling in France
- authentic photographic images of places in France.

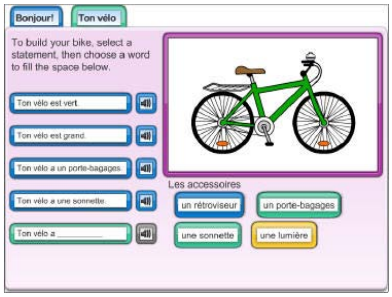
Students:

- use adjectives to describe and compare size and colour
- learn words and phrases associated with bike parts, but useable in other contexts.

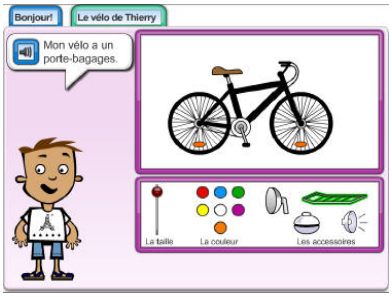


Lost bike (French)
L8725 – Years P–2

Students use words that describe size, colour and accessories to design bikes. They use pictures and feedback to find where some bikes are hidden in a village.



Lost bike: build your own bike (French)
L8727 – Years P–2
Students match pictures of bikes with words describing size, colour and accessories. They choose words to complete a description of a bike they would like to build. Then they use pictures and feedback to find where the bikes are hidden in a town.



Lost bike: build to order (French)
L8726 – Years P–2

Students match pictures of bikes with words describing size, colour and accessories. They build a bike to match a description given by a French friend. Then they use pictures and feedback to find where bikes are hidden in a town.

Dressing up series (French) (Years P–2)

Students are introduced to a range of basic clothing items for three distinct occasions: going to school, going skiing and going to the beach. The series is designed for beginning learners of French.

Featured include:

- scenes showing children in a classroom, at the lake and skiing
- vocabulary related to getting dressed
- a range of clothing items suitable for school, the lake and skiing
- a choice between a female and a male school-aged character
- instructions and feedback in French.

Students:

- identify items of clothing and explore vocabulary related to dressing for school, the lake and skiing
- follow instructions given in French to dress a boy or a girl.

Dressing up: school [French]
L7816 – Years P–2

Students identify items of clothing suitable for going to school.

Dressing up: beach [French]
L7817 – Years P–2

Students identify items of clothing suitable for going to the beach.

Dressing up: skiing [French]
L7818 – Years P–2

Students identify items of clothing suitable for skiing.

Dressing up [French]
L6831 – Years P–2

This is an aggregated learning object combining the other learning objects.

Number trains series (French) (Years P–3)

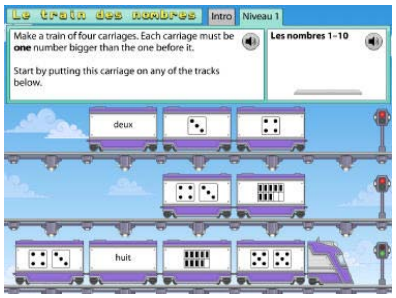
Students use their knowledge of French numbers from 1 to 400 to arrange train carriages according to numbers on their sides.

Features include:

- visual and audio equivalents of numbers in French
- a visual context in which students sequence numbers in French by predicting, testing and confirming
- an interactive context in which students develop and consolidate counting skills that are fundamental to addition and subtraction skills
- randomised number generation that encourages repeated use.

Students:

- practise using and identifying numbers in French
- relate number 'names' and values in a variety of representations to French numbers and number words
- identify the number before and after a given number
- connect French number words and numerals to the quantities they represent using dice dots and ten-frames
- identify place value in two-digit and three-digit numbers.



Number trains: 1–10 (French)
L9871 – Year P

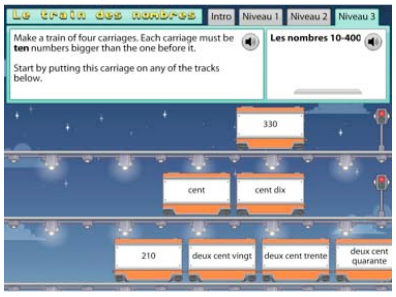
Students use their knowledge of French numbers from 1 to 10 to arrange train carriages according to numbers on their sides. The numbers are represented in a range of formats such as French number words, numerals, dice dots or counting frames.

Number trains: 1–20 (French)
L9872 – Years 1–2

Students use their knowledge of French numbers from 1 to 20 to arrange train carriages according to numbers on their sides. They identify the numbers that come before and after each starting number.

Number trains: 10–400 (French)
L9873 – Years 1–3

Students use their knowledge of how to count by tens in French to arrange train carriages according to numbers on their sides. For example, identify the numeral or number word that comes after trois cents.



Number trains (French)
L8706 – Years P–3

Students use their knowledge of French numbers from 1 to 400 to arrange train carriages according to numbers on their sides. This is an aggregate learning object combining the other objects in the series.

Kite kit series (French) (Years P–6)

Students follow instructions in French to construct and decorate a kite.

Features include:

- simple adjectives for describing size, shape and colour
- instructions and feedback in French
- a kite-flying display mode in which students can fly kites in three different locations, and at different compass directions, wind speeds and altitudes
- photographic images of the Eiffel Tower, a beach scene and Mont Saint-Michel.

Students:

- use requests such as 'Je voudrais …' and interpret language via tone and gestures
- follow simple instructions in French
- recognise and use French words and phrases associated with shape, size, colour, symbols and kite parts.

Kite kit: flying (French)
L8715 – Years P–3

Students fly kites in a range of places in France. They can adjust wind direction, wind speed and flying height and are introduced to a number of basic vocabulary items. This is the least complex of the three learning objects.

Image reproduced courtesy of SGM
SGM/Photolibrary.com.

Kite kit: colour, shape and design: level 1 (French)
L8713 – Years P–3

Students recognise and use simple French words describing colour, size, shape and cultural images to design a kite. They then follow instructions to make a second kite and fly it in three different places in France. They can adjust compass directions, wind speed and flying height.

Kite kit: colour, shape and design: level 2 (French)
L8714 – Years 4–6

This object is similar to level 1, except students use more complex words to design the kite and to complete instructions for making a kite.

This learning object contains non-TLF Content. See Acknowledgements in the learning objects.

Dragon's jumble series (French) (Years 1–3)

Students put images and sentences in order to unjumble a dragon's dream.

Features include:

- opportunities for students to put a sequence of pictures in order, and then match sentences to the sequence
- opportunities for students to use temporal connectives to link the events in a recount
- audio support of target language text to assist student comprehension
- three print options for students' completed recounts: pictures only, text only, or both pictures and text.

Students:

- put pictures in the correct sequence to retell a recount in French
- match sentences written in French to pictures
- use temporal connectives to link different phases of a recount
- observe that some French temporal connectives are interchangeable.

Dragon's jumble: dream (French)
L9796 – Years 1–3

Students add temporal connectives such as 'd'abord', 'puis' and 'enfin' to show the order of events in a recount. They watch an animation of the completed story, and then help the dragon to finish two more recounts.

Dragon's jumble: garden (French)
L9802 – Years 1–3

Students help a dragon remember what happened in his garden. They place the jumbled pictures in the correct order and choose sentences to match the pictures. Students then add temporal connectives such as 'd'abord', 'ensuite' and 'en dernier' to show the order of events.

German

Dressing up series (German) (Years P–2)

Students are introduced to a range of basic clothing items for three distinct occasions: going to school, going skiing and going to a lake. The series is designed for beginning learners of German.

Featured include:

- scenes showing children in a classroom, at the lake and skiing
- vocabulary related to getting dressed
- a range of clothing items suitable for school, the lake and skiing
- a choice between a female and a male school-aged character
- instructions and feedback in German.

Students:

- identify items of clothing and explore vocabulary related to dressing for school, the lake and skiing
- follow instructions given in German to dress a boy or a girl.

Dressing up: school (German)
L8506 – Years P–2

Students identify items of clothing suitable for going to school.

Dressing up: lake (German)
L8507 – Years P–2

Students identify items of clothing suitable for going to a lake.

Dressing up: skiing (German)
L8508 – Years P–2

Students identify items of clothing suitable for skiing.

Dressing up (German)
L6832 – Years P–2

This is an aggregated learning object combining the three learning objects in the series.

Lost bike series (German) (Years P–2)

Students design bikes by using German vocabulary and phrases associated with size, colour and bike accessories.

Features include:

- an interactive context in which to explore target vocabulary and phrases by experimenting with the design of bikes
- opportunities to practise word order in the target language
- simple instructions and feedback in German
- cultural information about cycling in Germany
- authentic photographic images of places in Germany.

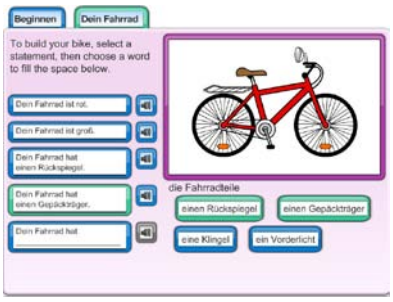
Students:

- use adjectives to describe and compare size and colour
- learn words and phrases associated with bike parts, but useable in other contexts.

Image reproduced courtesy of Manfred Gottschalk./Lonely Planet Images.

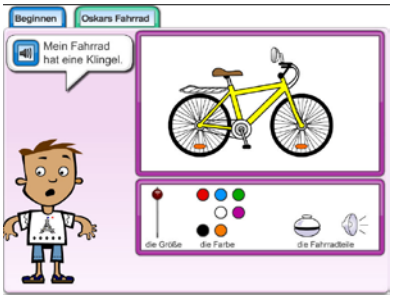
Lost bike (German)
L8728 – Years P–2

Students use words that describe size, colour and accessories to design bikes. They use pictures and feedback to find where some bikes are hidden in a village.



Lost bike: build your own bike (German)
L8730 – Years P–2

Students match pictures of bikes with words describing size, colour and accessories. They choose words to complete a description of a bike they would like to build. Then they use pictures and feedback to find where the bikes are hidden in a town.



Lost bike: build to order (German)
L8729 – Years P–2

Students match pictures of bikes with words describing size, colour and accessories. They build a bike to match a description given by a German friend. Then they use pictures and feedback to find where bikes are hidden in a town.

This series contains non-TLF Content. See Acknowledgements in the learning objects.

Number trains series (German) (Years P–3)

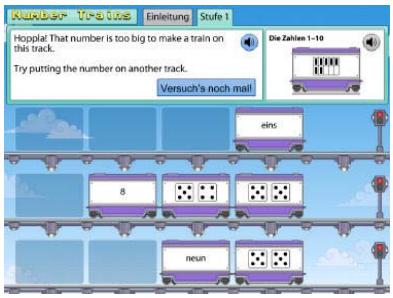
Students use their knowledge of German numbers from 1 to 400 to arrange train carriages according to numbers on their sides.

Features include:

- visual and audio equivalents of numbers in German
- a visual context in which students sequence numbers in German by predicting, testing and confirming
- an interactive context in which students develop and consolidate counting skills that are fundamental to addition and subtraction skills
- randomised number generation that encourages repeated use.

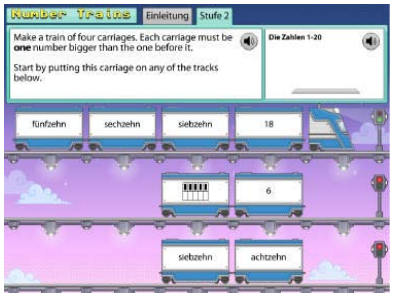
Students:

- practise using and identifying numbers in German
- relate number 'names' and values in a variety of representations to German numbers and number words
- identify the number before and after a given number
- connect German number words and numerals to the quantities they represent using dice dots and ten-frames
- identify place value in two-digit and three-digit numbers.



Number trains: 1–10 (German)
L9874 – Years P

Students use their knowledge of German numbers from 1 to 10 to sequence train carriages.

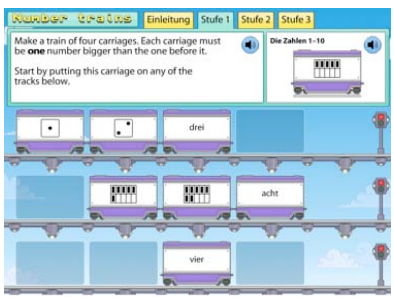


Number trains: 1–20 (German)
L9875 – Years 1–2

Students use their knowledge of German numbers from 1 to 20 to sequence train carriages.

Number trains: 10–400 (German)
L9876 – Years 1–3

Students use their knowledge of how to count by tens in German to sequence train carriages. The numbers are represented in a range of formats such as German number words, numerals, dice dots or counting frames.



Number trains (German)
L8707 – Years P–3

Students use their knowledge of German numbers from 1 to 400 to sequence train carriages. The numbers are represented in a range of formats such as German number words, numerals, dice dots or counting frames.

Kite kit series (German) (Years P–6)

Students follow instructions in German to construct and decorate a kite.

Features include:

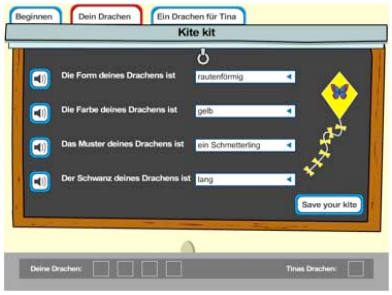
- simple adjectives for describing size, shape and colour
- instructions and feedback in German
- a kite-flying display mode in which students can fly kites in three different locations, and at different compass directions, wind speeds and altitudes
- photographic images of a German village and vineyards, a German beach scene and a park in Munich.

Students:

- design a kite by responding to requests in German
- follow simple instructions in German
- recognise and use German words and phrases associated with shape, size, colour, symbols and kite parts.

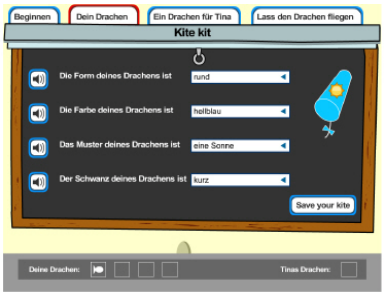
Kite kit: flying (German)
L8718 – Years P–3

Students fly kites in a range of places in Germany. They can adjust wind direction, wind speed and flying height and are introduced to a number of basic vocabulary items. This is the least complex of the three learning objects.



Kite kit: colour, shape and design: level 1 (German)
L8716 – Years P–3

Students recognise and use simple German words describing colour, size, shape and cultural images to design a kite. They then follow instructions to make a second kite and fly it in three different places in Germany. They can adjust compass directions, wind speed and flying height.



Kite kit: colour, shape and design: level 2 (German)
L8717 – Years 4–6

This object is similar to level 1, except students use more complex words to design the kite and to complete instructions for making a kite.

This series contains non-TLF Content. See Acknowledgements in the learning objects.

Greek

Dressing up series (Greek) (Years P–2)

Students are introduced to a range of basic clothing items for three distinct occasions: going to school, going to the carnival and going to the beach. The series is designed for beginning learners of Greek.

Featured include:

- scenes showing children in a classroom, at the lake and skiing
- vocabulary related to getting dressed
- a range of clothing items suitable for school, the lake and skiing
- a choice between a female and a male school-aged character
- instructions and feedback in Greek.

Students:

- identify items of clothing and explore vocabulary related to dressing for school, the lake and skiing
- follow instructions given in Greek to dress a boy or a girl.

Dressing up: school (Greek)
L9375 – Years P–2

Students identify items of clothing suitable for going to school.

Dressing up: beach (Greek)
L9376 – Years P–2

Students identify items of clothing suitable for going to the beach.

Dressing up: carnival (Greek)
L9377 – Years P–2

Students identify items of clothing suitable for the carnival.

Dressing up (Greek)
L6833 – Years P–2

This learning object is a combination of three objects in the same series.

Number trains series (Greek) (Years P–3)

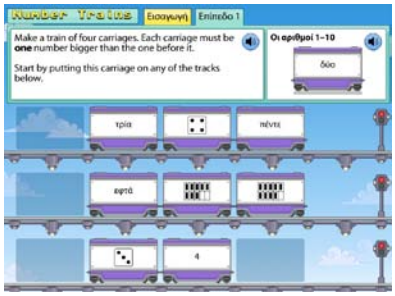
Students use their knowledge of Greek numbers from 1 to 400 to arrange train carriages according to numbers on their sides.

Features include:

- visual and audio equivalents of numbers in Greek
- a visual context in which students sequence numbers in Greek by predicting, testing and confirming
- an interactive context in which students develop and consolidate counting skills that are fundamental to addition and subtraction skills
- randomised number generation that encourages repeated use.

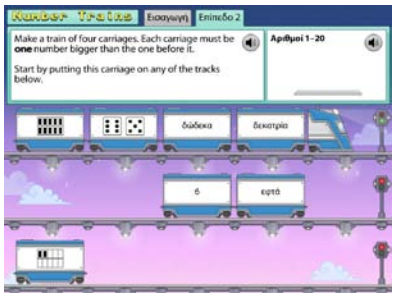
Students:

- practise using and identifying numbers in Greek
- relate number 'names' and values in a variety of representations to Greek numbers and number words
- identify the number before and after a given number
- connect Greek number words and numerals to the quantities they represent using dice dots and ten-frames
- identify place value in two-digit and three-digit numbers.



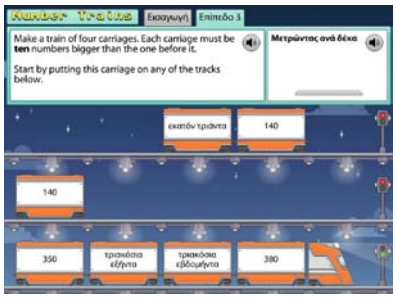
Number trains: 1–10 (Greek)
L9879 – Year P

Students use their knowledge of Greek numbers from 1 to 10 to arrange train carriages according to numbers on their sides. The numbers are represented in a range of formats such as Greek number words, numerals, dice dots or counting frames.



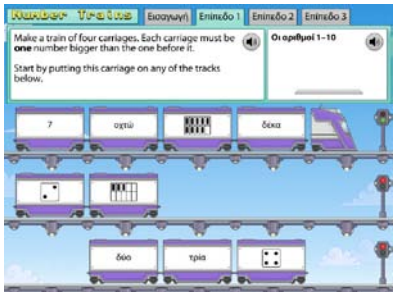
Number trains: 1–20 (Greek)
L9880 – Years 1–2

Students use their knowledge of Greek numbers from 1 to 20 to arrange train carriages according to numbers on their sides. They identify the numbers that come before and after each starting number.



Number trains: 10–400 (Greek)
L9881 – Years 1–3

Students use their knowledge of how to count by tens in Greek to arrange train carriages according to numbers on their sides. For example, identify the numeral or number word that comes after τριακόσια.



Number trains (Greek)
L8709 – Years P–3

Students use their knowledge of Greek numbers from 1 to 400 to arrange train carriages according to numbers on their sides. This is an aggregate learning object combining the other three objects in the series.

Kite kit series (Greek) (Years P–6)

Students follow instructions in Greek to construct and decorate a kite.

Features include:

- simple adjectives for describing size, shape and colour
- audio support for instructions and feedback in Greek
- a kite-flying display mode in which students can fly kites in three different locations, and at different compass directions, wind speeds and altitudes
- photographic images of the National Archaeological Museum of Athens, a blue-domed church and a beach on the island of Corfu.

Students:

- follow simple instructions and requests in Greek
- interpret language via tone and gestures
- recognise and use Greek words and phrases associated with shape, size, colour, symbols and kite parts.

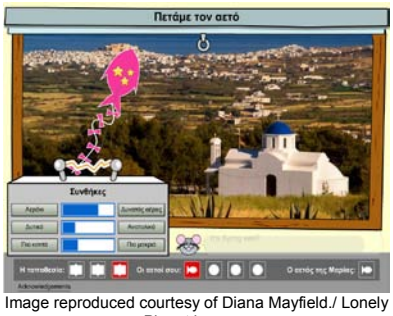


Image reproduced courtesy of Diana Mayfield./ Lonely Planet images.

Kite kit: flying (Greek)
L8724 – Years P–3

Students are introduced to a number of basic vocabulary items for shape, size and colour. They fly kites in a range of places in Greece. They can adjust wind direction, wind speed and flying height. This is the least complex of the three learning objects.

This learning object is in development.

Kite kit: colour, shape and design: level 1 (Greek)
L8722 – Years P–3

Kite kit: colour, shape and design: level 2 (Greek)
L8723 – Years 4–6

This object is similar to level 1, except students use more complex words to design the kite and to complete instructions for making a kite.

This learning object contains non-TLF Content. See Acknowledgements in the learning objects.

Indonesian

Dressing up series (Indonesian) (Years P–2)

Designed for beginning learners of Indonesian, students are introduced to a range of basic clothing items for three distinct occasions: going to school, going to volleyball training and attending the mosque.

Features include:

- Indonesian terms for items of clothing such as the jilbab, as well as common clothing items (socks, shoes, skirt, trousers)
- simple instructions and feedback

Students:

- choose from two primary school-aged characters, Yanti (girl) and Yono (boy)
- select the correct item of clothing and gradually compose a complete outfit appropriate for each occasion: for school, volleyball training or attending the mosque
- explore vocabulary, listening and reading skills in Indonesian as well as gain important cultural information relating to clothing.

Dressing up: school (Indonesian)
L1015 – Years P–2

Students identify clothing items suitable for wearing to school.

Dressing up: volleyball (Indonesian)
L1016 – Years P–2

Students identify clothing items suitable for playing volleyball.

Dressing up: mosque (Indonesian)
L1017 – Years P–2

Students identify clothing items suitable for wearing to a mosque.

Dressing up (Indonesian)
L1018 – Years P–2

This is a combination of the three ‘Dressing up’ learning objects.

Lost bike series (Indonesian) (Years P–2)

Designed for younger language learners, students build bikes based on the characteristics of size, colour and bike accessories. They then go to find the bikes in a village.

Features include:

- repetition and visual, textual and spoken feedback to support students' language learning
- images showing the prolific use of bicycles as modes of transport and recreation
- comparisons and contrasts between Indonesian and Australian cultures.

Students:

- use descriptive words and phrases, terms of comparison, adjectives and word order, and familiar language around thanks and greetings.

Image reproduced courtesy of Asian Field Study Centres Pty. Ltd.

Lost bike: build your own bike (Indonesian)
L945 – Years P–2

Students match pictures of bikes with words describing size, colour and accessories. They choose words to complete a description of a bike they would like to build. Then they use pictures and feedback to find where the bikes are hidden in a town.

Lost bike: build to order (Indonesian)
L946 – Years P–2

Students match pictures of bikes with words describing size, colour and accessories. They build a bike to match a description given by an Indonesian friend. Then they use pictures and feedback to find where bikes are hidden in a town.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Number trains series (Indonesian) (Years P–3)

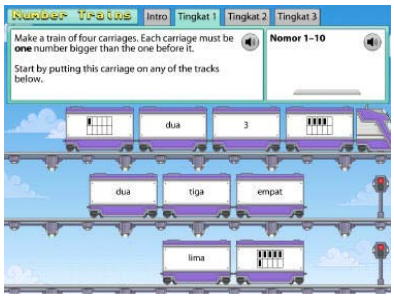
Students use their knowledge of Indonesian numbers from 1 to 400 to arrange train carriages according to numbers on their sides.

Features include:

- visual and audio equivalents of numbers in Indonesian
- a visual context in which students sequence numbers in Indonesian by predicting, testing and confirming
- an interactive context in which students develop and consolidate counting skills that are fundamental to addition and subtraction skills
- randomised number generation that encourages repeated use.

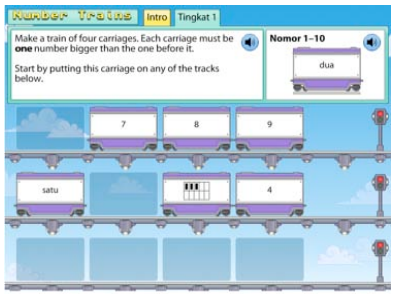
Students:

- practise using and identifying numbers in Indonesian
- relate number 'names' and values in a variety of representations to Indonesian numbers and number words
- identify the number before and after a given number
- connect Indonesian number words and numerals to the quantities they represent using dice dots and ten-frames
- identify place value in two-digit and three-digit numbers.



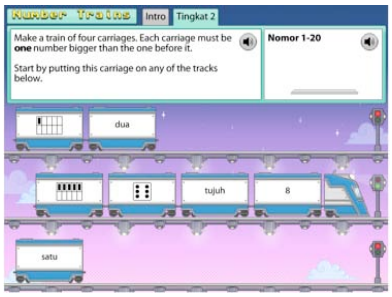
Number trains (Indonesian)
L8711 – Years P–3

Students use their knowledge of Indonesian numbers from 1 to 400 to arrange train carriages according to numbers on their sides.



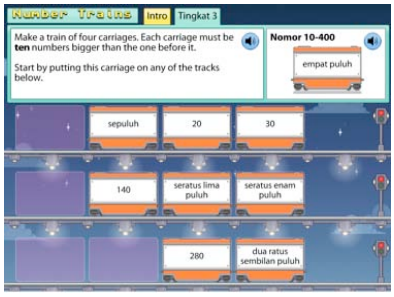
Number trains: 1–10 (Indonesian)
L9885 – Year P

Students use their knowledge of Indonesian numbers from 1 to 10 to sequence train carriages. The numbers are represented in a range of formats such as Indonesian number words, numerals, dice dots or counting frames.



Number trains: 1–20 (Indonesian)
L9886 – Years 1–2

Students use their knowledge of Indonesian numbers from 1 to 20 to sequence train carriages.



Number trains: 10–400 (Indonesian)
L9887 – Years 1–3

Students use their knowledge of how to count by tens in Indonesian numbers to sequence train carriages. The numbers are represented in a range of formats such as Indonesian number words, numerals, dice dots or counting frames.

Kite kit series (Indonesian) (Years P–6)

Students make kites based on the characteristics of shape, colour, designs and tails. These kites can be 'flown' in various different locations and flying conditions, which can be controlled by the student using language around types of weather.

Features include:

- descriptive words and phrases, terms of comparison, adjectives, and word order and familiar language around thanks and greetings
- repetition plus visual, textual and spoken feedback to support students' language learning.

Students:

- design as many kites as they like, and then help a friend make a kite
- recognise and apply Indonesian words and phrases associated with compass directions, wind speed and height
- learn language about places, including cultural features in Indonesia.

Image reproduced courtesy of Asian Field Study Centres Pty. Ltd.

Kite kit: flying (Indonesian)
L1223 – Years P–6

Students fly kites in a range of places in Indonesia. They can adjust wind direction and flying height and are introduced to a number of basic vocabulary items. This is the least complex of the three learning objects.

Kite kit: colour, shape and design: level 1 (Indonesian)
L1221 – Years P–3

Students use and recognise simple words describing colour, size, shape and cultural images. They choose simple words to complete instructions for making a kite. They then make another kite by following instructions given by an Indonesian friend.

Kite kit: colour, shape and design: level 2 (Indonesian)
L1222 – Years P–6

This is similar to level one however the students use more complex words to design the kite and to complete instructions for making a kite.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Dragon's jumble series (Indonesian) (Years 1–3)

Students put images and sentences in order to unjumble a dragon's dream.

Features include:

- opportunities for students to put a sequence of pictures in order, and then match Indonesian sentences to the sequence
- opportunities for students to use temporal connectives to link the events in a recount
- audio support of target language text to assist student comprehension
- three print options for students' completed recounts: pictures only, text only, or both pictures and text.

Students:

- put pictures from a recount in the correct sequence
- match sentences written in Indonesian to pictures
- use temporal connectives to link different phases of a recount
- observe that some Indonesian temporal connectives are interchangeable.

Dragon's jumble: dream (Indonesian)
L9704 – Years 1–3

Students place four pictures in order to help a dragon remember what happened in his dream. They choose sentences to match what is shown in each picture and add temporal connectives such as 'pertama-tama', 'kemudian' and 'akhirnya' to show the order of events.

Dragon's jumble: garden (Indonesian)
L9744 – Years 1–3

Students help a dragon remember what happened in his garden. They place four pictures from a recount in the correct order and add temporal connectives such as 'pertama-tama', 'mula-mula' and 'kemudian' to show the order of events.

My design series (Indonesian)* (Years 2–4)

Students design an animated cat or car by following simple instructions in Indonesian and choosing labelled elements that describe mood, size, position, colour, expression and voice.

Features include:

- a range of design elements for students explore
- audio support for all Indonesian text, including instructions and labels
- an animation of the student's completed cat or car
- an option to print the student's design.

Students:

- combine a range of graphic and audio elements to create a talking cat or car
- recognise and respond to words, phrases and simple sentences in spoken and written Indonesian
- evaluate how changes they make to the elements affect the impact of their design.

My design: talking cat (Indonesian)
L10279 – Years 2–4

Students design a cat that speaks Indonesian. They choose a voice and background picture for their cat, decide on a name and select a note about their cat.

This learning object is in development.

My design: talking car (Indonesian)
L10273 – Years 2–4

This learning object contains non-TLF Content. See Acknowledgements in the learning objects.

Italian

Lost bike series (Italian) (Years P–2)

Students design bikes by using Italian vocabulary and phrases associated with size, colour and bike accessories.

Features include:

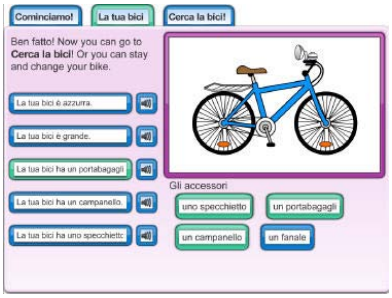
- an interactive context in which to explore target vocabulary and phrases by experimenting with the design of bikes
- opportunities to practise word order in the target language
- simple instructions and feedback in Italian
- cultural information about cycling in Italy
- authentic photographic images of places in Italy.

Students:

- use adjectives to describe and compare size and colour
- learn words and phrases associated with bike parts, but useable in other contexts.

Lost bike (Italian)
L8731 – Years P–2

Students use words that describe size, colour and accessories to design bikes. They use pictures and feedback to find where some bikes are hidden in a village.



Lost bike: build your own bike (Italian)
L8733 – Years P–2

Students match pictures of bikes with words describing size, colour and accessories. They choose words to complete a description of a bike they would like to build. Then they use pictures and feedback to find where the bikes are hidden in a town.

Image reproduced courtesy of Photolibrary.com.

Lost bike: build to order (Italian)
L8732 – Years P–2

Students match pictures of bikes with words describing size, colour and accessories. They build a bike to match a description given by an Italian friend. Then they use pictures and feedback to find where bikes are hidden in a town.

This series contains non-TLF Content. See Acknowledgements in the learning objects.

Dressing up series (Italian) (Years P–2)

Students are introduced to a range of basic clothing items for three distinct occasions: going to school, going skiing and going to a carnival. The series is designed for beginning learners of Italian.

Featured include:

- scenes showing children in a classroom, at the lake and skiing
- vocabulary related to getting dressed
- a range of clothing items suitable for school, the lake and skiing
- a choice between a female and a male school-aged character
- instructions and feedback in Italian.

Students:

- identify items of clothing and explore vocabulary related to dressing for school, the lake and skiing
- follow instructions given in Italian to dress a boy or a girl.

Dressing up: school (Italian)
L9378 – Years P–2

Students identify items of clothing suitable for going to school.

Dressing up: skiing (Italian)
L9379– Years P–2

Students identify items of clothing suitable for going skiing.

Dressing up: carnevale (Italian)
L9380 – Years P–2

Students identify items of clothing suitable for going to a carnival.

Dressing up (Italian)
L6834 – Years P–2

This is an aggregated learning object combining the other learning objects.

Number trains series (Italian) (Years P–3)

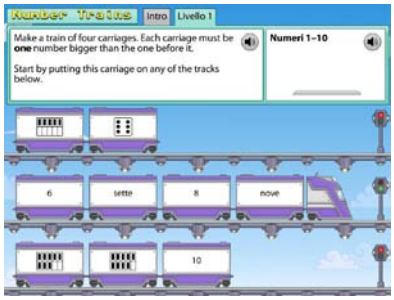
Students use their knowledge of Italian numbers from 1 to 400 to arrange train carriages according to numbers on their sides.

Features include:

- visual and audio equivalents of numbers in Italian
- a visual context in which students sequence numbers in Italian by predicting, testing and confirming
- an interactive context in which students develop and consolidate counting skills that are fundamental to addition and subtraction skills
- randomised number generation that encourages repeated use.

Students:

- practise using and identifying numbers in Italian
- relate number 'names' and values in a variety of representations to Italian numbers and number words
- identify the number before and after a given number
- connect Italian number words and numerals to the quantities they represent using dice dots and ten-frames
- identify place value in two-digit and three-digit numbers.



Number trains: 1–10 (Italian)
L10791 – Year P

Students use their knowledge of Italian numbers 1 to 10 to arrange train carriages according to numbers on their sides. The numbers are represented in a range of formats such as Italian number words, numerals, dice dots or counting frames.

Number trains: 1–20 (Italian)
L9877 – Years 1–2

Students use their knowledge of Italian numbers from 1 to 20 to arrange train carriages according to numbers on their sides. They identify the numbers that come before and after each starting number.

Number trains: 10–400 (Italian)
L9878 – Years 1–3

Students use their knowledge of how to count by tens in Italian to arrange train carriages according to numbers on their sides. For example, identify the numeral or number word that comes after trecento.

Number trains (Italian)
L8708 – Years P–3

Students use their knowledge of Italian numbers from 1 to 400 to arrange train carriages according to numbers on their sides. This is an aggregate learning object combining the other three objects in the series.

Kite kit series (Italian) (Years P–6)

Students follow instructions in Italian to construct and decorate a kite.

Features include:

- simple adjectives for describing size, shape and colour
- instructions and feedback in Italian
- a kite-flying display mode in which students can fly kites in three different locations, and at different compass directions, wind speeds and altitudes
- photographic images of the Tower of Pisa, the beach and the countryside.

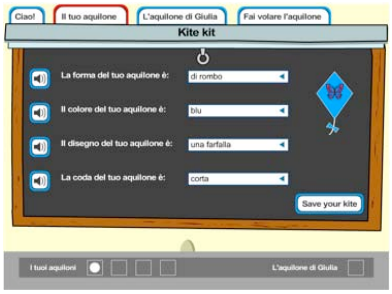
Students:

- design a kite by responding to requests in Italian
- follow simple instructions in Italian
- recognise and use Italian words and phrases associated with shape, size, colour, symbols and kite parts.

Image reproduced courtesy of Japan Travel Bureau/Photolibrary.com.

Kite kit: flying (Italian)
L8721 – Years P–3

Students fly kites in a range of places in Italy. They can adjust wind direction, wind speed and flying height and are introduced to a number of basic vocabulary items. This is the least complex of the three learning objects.



Kite kit: colour, shape and design: level 1 (Italian)
L8719 – Years P–3

Students recognise and use simple Italian words describing colour, size, shape and cultural images to design a kite. They then follow instructions to make a second kite and fly it in three different places in Italy. They can adjust compass directions, wind speed and flying height.

Kite kit: colour, shape and design: level 2 (Italian)
L8720 – Years 4–6

This object is similar to level 1, except students use more complex words to design the kite and to complete instructions for making a kite.

This learning object contains non-TLF Content. See Acknowledgements in the learning objects.

Dragon's jumble series (Italian) (Years 1–3)

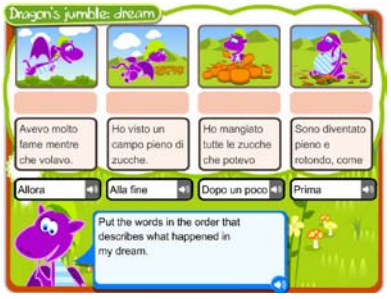
Students put images and sentences in order to unjumble a dragon's dream.

Features include:

- opportunities for students to put a sequence of pictures in order, and then match Italian sentences to the sequence
- opportunities for students to use temporal connectives to link the events in a recount
- audio support of target language text to assist student comprehension
- three print options for students' completed recounts: pictures only, text only, or both pictures and text.

Students:

- put pictures from a recount in the correct sequence
- match sentences written in Italian to pictures
- use temporal connectives to link different phases of a recount
- observe that some Italian temporal connectives are interchangeable.
-



Dragon's jumble: dream (Italian)
L9798 – Years 1–3

Students help a dragon remember what happened in his dream. They view four pictures from a recount and choose sentences to match what is shown in each picture. They add temporal connectives such as 'prima', 'poi' and 'finalmente' to show the order of events.

Dragon's jumble: garden (Italian)
L9804 – Years 1–3

Students help a dragon remember what happened in his garden. They place four pictures from a recount in the correct order and add temporal connectives such as 'prima', 'poi' and 'finalmente' to show the order of events.

Japanese

Lost bike series (Japanese) (Years P–2)

Students build bikes based on the characteristics of size, colour and bike accessories. They then go to find the bikes in a village.

Features include:

- repetition and visual, textual and spoken feedback to support students' language learning
- images showing the use of bicycles as modes of transport and recreation
- comparisons and contrasts between Japanese and Australian cultures.

Students:

- use descriptive words and phrases, terms of comparison, adjectives and word order, and familiar language around thanks and greetings.

Image reproduced courtesy of The Japan Forum Photo Data Bank.

Lost bike: build your own bike (Japanese)
L1214– Years P–2

Match pictures of bikes with words describing size, colour and accessories. Choose words to complete a description of a bike you would like to build. Use pictures and feedback to find where bikes are hidden in a town.

Lost bike: build to order (Japanese)
L1215 – Years P–2

Match pictures of bikes with words describing size, colour and accessories. Build a bike to match a description given by a Japanese friend. Use pictures and feedback to find where bikes are hidden in a town.

Lost bike (Japanese)
L1216 – Years P–2

This is a combination of the two 'Lost bike' learning objects.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Dressing up series (Japanese) (Years P–2)

Students are introduced to a range of basic clothing items for three distinct occasions: going to school, going skiing and attending the lantern festival (matsuri).

Featured include:

- vocabulary, listening and reading skills in Japanese as well as important cultural information relating to clothing
- a range of clothing items suitable for school, skiing and attending a festiva
- a choice between school-aged characters Saeko (girl) and Kenichi (boy)
- simple instructions and feedback in Japanese.

Students:

- identify items of clothing and explore vocabulary related to dressing for school, skiing or attending the lantern festival (matsuri)
- follow instructions given in Japanese to dress a boy or a girl.

Dressing up: school (Japanese)
L1019– Years P–2

Explore clothes worn in Japan. Identify clothing items suitable for wearing to school. Follow instructions to dress a boy or girl.

Dressing up: skiing (Japanese)
L1020 – Years P–2

Explore clothes worn in Japan. Identify clothing items suitable for skiing. Follow instructions to dress a boy or girl.

Dressing up: lantern festival (Japanese)
L1021 – Years P–2

Explore clothes worn in Japan. Identify clothing items suitable for going to a lantern festival. Follow instructions to dress a boy or girl.

Dressing up (Japanese)
L1022 – Years P–2

This is a combination of the three ‘Dressing up’ learning objects.

Kite kit series (Japanese) (Years P–6)

Students make kites based on the characteristics of shape, colour, printed designs and tails. As they construct a kite to their own liking, students are introduced to a range of basic and useful vocabulary.

Features include:

- descriptive words and phrases, terms of comparison, adjectives, and word order and familiar language around thanks and greetings
- repetition plus visual, textual and spoken feedback to support students' language learning
- all characters used in this series appear in the Character catalogue.

Students:

- design as many kites as they like, and then help a friend make a kite
- recognise and apply Japanese words and phrases associated with compass directions, wind speed and height
- learn language about places, including cultural features in Japan.

Kite kit: flying (Japanese)
L1220 – Years P–6

Students to fly kites in a range of places in Japan. They can adjust wind direction and flying height and are introduced a number of basic vocabulary items. This learning object is the least complex of the three 'Kite kit' learning objects.

Kite kit: colour, shape and design: level 1 (Japanese)
L1219 – Years P–3

Students use and recognise simple words describing colour, size, shape and cultural images. They choose simple words to complete instructions for making a kite. They then make another kite by following instructions given by a Japanese friend. Opportunities are available to fly the kites in a range of places in Japan by adjusting compass direction, wind speed and flying height.

Kite kit: colour, shape and design: level 2 (Japanese)
L857 – Years 4–6

Students use and recognise complex words describing colour, size, shape and cultural images. They choose complex words to complete instructions for making a kite. They then make another kite by following instructions given by a Japanese friend. Opportunities are available to fly the kites in a range of places in Japan by adjusting compass direction, wind speed and flying height.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Dragon's jumble series (Japanese)* (Years 1–3)

Students put images and sentences in order to unjumble a dragon's dream.

Features include:

- opportunities for students to put a sequence of pictures in order, and then match Japanese sentences to the sequence
- opportunities for students to use temporal connectives to link events in a recount
- audio support of target language text to assist student comprehension
- three print options for students' completed recounts: pictures only, text only, or both pictures and text.

Students:

- put pictures from a recount in the correct sequence
- match sentences written in Japanese to pictures
- use temporal connectives to link different phases of a recount
- observe that some Japanese temporal connectives are interchangeable.

Dragon's jumble: dream (Japanese)
L9800 – Years 1–3

Students help a dragon remember what happened in his dream. They view four pictures from a recount and choose sentences to match what is shown in each picture. They add temporal connectives such as はじめに そして ，それから, おわりに to show the order of events.

This learning object is in development.

Dragon's jumble: garden (Japanese)
L9806 – Years 1–3

Australian history

Golden fleece (Years P–2)

Students learn that Australia has many sheep, that sheep make wool and that many everyday items are made from wool.

Features include:

- a mystery object for students to investigate.

Students:

- look closely at an unusual historic object and use clues to identify it and where it fits in the sheep industry
- understand that sheep are farmed because they grow woolly fleece that can be shorn every year
- identify everyday items made from wool
- discover that Australia has millions of sheep – there are more sheep than people!

Golden Fleece
L681 – Years P–2

Students discover that the object is the Ferrier wool press, which was manufactured around 1878, and used for over 100 years to compact loose fleeces into bales.

This series contains non-TLF content. See Acknowledgements in the learning objects.

The Cobb & Co coach (Years P–2)

Students explore how people travelled and sent messages in the mid nineteenth century.

Features include:

- Illustrations of a range of modern transport methods and communications technologies
- a narrative character to engage the interest of younger children.

Students:

- compare transport and communications in the 1860s and modern day Australia
- compare the travel experience with a similar trip on a modern bus, and then see how much faster travel is today using transport such as trains, cars and planes
- examine the challenges involved in providing transport and communications services in colonial Australia
- engage with images of a Cobb & Co coach, including illustrations and spoken text describing the significance of the parts
- explore road transport and postal services in colonial Australia.

The Cobb & Co coach
L675 – Years P–2

Students examine a genuine horse–drawn Cobb & Co coach made in the 1860s. Students load the luggage and people onto the coach then trace the journey of coach passengers on a mail delivery trip through country New South Wales.

'The Cobb & Co coach' contains non-TLF Content. See Acknowledgements in the learning object.

National parks series (Years P–2)

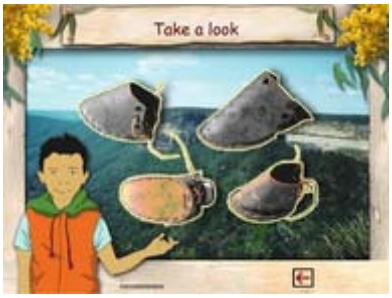
Students explore some unusual artefacts created by Myles Dunphy, an early Australian bush conservationist, in the Blue Mountains region of New South Wales. He created these artefacts to help his family enjoy the Australian bush in more comfort.

Features include:

- a mentor character to engage the interest of young children
- a map showing the location of Australia's national parks
- photographs of authentic historical objects and descriptions of their structure and use.

Students:

- explore a case study of an early conservationist family.



National parks: boots in the bush
L669 – Years P–2

Students examine some unusual boots and work out their purpose. As they examine the boots and find out about members of the Dunphy family, students discover the difference between National Parks and other areas. Students are prompted to decide who the boots belong to and receive assistive feedback to complete the identification.

Campfire with billy photo courtesy APL/Paul Franklin.

National parks: wheels in the bush
L932 – Years P–2

Students examine a pram customised by Myles Dunphy to take his young son on long bushwalks. The pram unfolds and more information about National Parks is uncovered as the students explore the pram.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Civics and citizenship

Your rules series (Years P–2)

Students are encouraged to consider how to get along with others. The 'Your rules' series is useful for students who are beginning school, or in settings where conflict may be occurring between students.

Features include:

- audio support throughout the activity
- a final review of rules and behaviour
- options to identify responsible actions and personal safety issues in public places.

Students:

- identify causes of conflicts between children in a playground setting and behaviours that will resolve playground conflicts
- arrive at a set of rules that promote sharing, participation and consideration of others
- evaluate social behaviours in a playground setting and to identify causes and solutions to conflicts
- view animated scenarios of conflict.

Playground rules
L949 – Years P–2

Students encounter situations including a child refusing to share, a child stealing food, one child making fun of another, litter being scattered on the ground and a child being left out of a game.

Your rules: in the park
L6351 – Years P–2

Students encounter situations including a child chasing away birds, one child pushing another, dog droppings being left on the ground, a child destroying another's sandcastle and a child wandering away from their family.

Your rules: in the supermarket
L6352 – Years P–2

Students encounter situations including a child needing to go to the toilet, children not sharing, a child pestering a parent, children chasing each other in a shop, and a child taking something that doesn't belong to them.

What's your job? (Years P–2)

Students realise that Australian families vary in size, age, location, ethnicity, structure and responsibilities.

Features include:

- a range of cultures and geographical locations in the depiction of the families
- a printable worksheet for students to match members of their own families with the jobs they do around their homes.

Students:

- compare some of the roles fulfilled by members of a range of Australian families
- explore role division in families, including the importance of cultural factors
- identify differences between ranges of Australian families
- match family members with the jobs they do around their homes
- note similarities and differences in families that vary according to size, ethnicity, location, number of adults, recreational pursuits, type of dwelling and pets.

What's your job?
L1006 – Years P–2

Students visit a number of families and consider the jobs undertaken by different family members. The families include an extended family, a single-parent family, a nuclear family, a family in which children are raised by relatives rather than their parents, and a family with a step-parent.

Make the rules series (Years P–2)

Students are introduced to the need for rules in some situations. Students are prompted to make some rules while engaged in a soccer–based computer game that has some unexpected twists.

Features include:

- repeated play option of the computer game after the rules have been corrected
- highlights the importance of rules and fairness in games.

Students:

- explore the consequences of varying a simple set of rules in a computer game
- correct the rules, then have five kicks at goal to obtain the highest score they can
- identify rules needed to ensure fairness in game scenarios.

Make the rules: fair play
L1007 – Years P–2

Students play a new soccer-based computer game. Extra goalies appear from nowhere, the goals change size or move away suddenly, and the ball changes size and direction. When unusual events occur, students are prompted to suggest rules that will make the game fun and fair.

Island life series (Years P–6)

Students distinguish between needs and wants when selecting six items that will ensure their survival on a tropical island.

Features include:

- challenges for students to choose items needed for survival on a tropical island
- careful distinctions between needs and wants
- animated feedback to demonstrate the consequences of decisions made
- a colourful setting and bright calypso music.

Students:

- distinguish between needs and wants when planning to live on a tropical island
- observe the social, environmental and personal consequences of selecting needs or wants.

Island life: needs and wants
L1008 – Years P–2

Island life prompts students to distinguish between needs and wants in an engaging, fun manner. To survive on a tropical island, students choose six items to take with them. When they arrive on the island the consequences of their choices become apparent. If they have chosen unwisely people get sick, the water becomes polluted, rubbish accumulates, trees disappear and buildings fall into disrepair. Students are prompted to revise their selections on subsequent visits to the mainland.

Island life: smart choices
L1034 – Years 3–4

Students continue to distinguish between needs and wants, but at more sophisticated levels. Choices are less black and white and require greater consideration. For example, students must decide whether a fishing rod is more important than a surfboard, or a packet of seeds is of greater worth than a packet of lollies.

Island life: life choices
L1035 – Years 5–6

Students continue to distinguish between needs and wants, but at more sophisticated levels. Choices are less black and white and require greater consideration. For example, students must decide whether a fishing rod is more important than a surfboard, or a packet of seeds is of greater worth than a packet of lollies.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Job match series (Years 1–2)

Students explore stereotypes while selecting characters to fulfill different jobs. If they make their selections based on appearances only, they are in for some surprises.

Features include:

- animated feedback revealing the consequences of students' decisions.

Students:

- identify stereotypes in a sequence of scenarios
- make fact-based decisions about people's abilities rather than judgements based on gender, physical appearance or ethnicity
- identify the best ways to select people to fulfill roles in an emergency setting
- select characters to undertake four roles: firefighter, doctor, builder and cook
- explore whether occupational abilities are related to physical appearance, gender and ethnicity.

Job match: save the day
L1009 – Years 1–2

Students select characters to resolve the respective crises. The characters do not always behave in predictable ways. The learning object challenges a number of stereotypes when students choose someone to put out a house fire provide medical care for an injured neighbour, then rebuild the damaged house.

Environmental education for sustainability

Make it alive series (Years P–4)

This series helps students understand the habitat, threats and survival needs of endangered Australian animals and birds in a game–like environment.

Features include:

- images and brief texts about various endangered Australian species and their habitats
- simulations of predator behaviour and competitor species and the dangers faced by various endangered Australian species over a single day or night
- an animated game-based activity
- instant feedback at all investigation stages
- randomised activity elements support repeated use.

Students:

- identify factors that threaten the survival of various endangered species in Australia
- identify features of ecosystems that various endangered Australian species depend on for their survival
- take appropriate environmental initiatives on the basis of research findings.

The night of the bilby: find food
L896 – Years P–2

Students help bilbies gather food including seeds, bulbs and spiders while avoiding feral predators such as,cats and foxes and competing with rabbits.

The night of the bilby: get home alive
L907 – Years 3–4

Students help bilbies gather food including seeds, bulbs and spiders while avoiding feral predators such as,cats and foxes and competing with rabbits.
This learning object is similar to the 'night of the bilby: find food', however students have less time to complete the activity.

The night of the bilby: safe habitat
L908 – Years 3–4

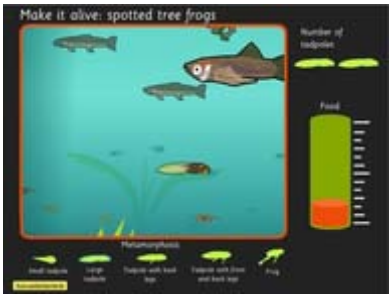
Students determine how many bilbies a desert habitat can support by trapping and weighing insects, which form a significant part (up to 70 per cent) of the bilby diet. Students identify tracks in the desert sand to determine the presence of predators then take steps to remove the predators.

Make it alive: superb parrots
L6357 – Years 3–4

Students help a superb parrot to escape from dangerous feral cats, find sufficient food, then search for an empty tree hollow to safely nest in.
Students discover how feral birds and insects such as Indian Mynahs, starlings and honeybees are affecting the parrots' survival by occupying tree hollows.

Make it alive: brush-tailed rock wallabies
L6355 – Years 3–4

Students help the rock wallaby to find enough food, such as flowers, native grasses and their seeds, and to search for safe places to hide from dangerous wild dogs to survive. They discover that feral animals such as goats, which eat the same plants, are affecting their chances of survival.



Make it alive: spotted tree frogs
L6358 – Years 3–4

Students discover what developing frogs eat then help them find enough food so they develop from the tadpole stage through to adulthood. They help the tadpoles escape from predatory fish, such as the introduced rainbow trout, and search for safe places in the bottom of the stream habitat for shelter.

Make it alive: flatback turtles
L6356 – Years 3–4

Students examine how feral animals such as wild pigs are affecting the flatback turtle's chances of survival. Once the turtles hatch from their nests, students help them to reach the safety of the ocean without being eaten by predators.

This series contains non-TLF content. See Acknowledgements in the learning objects.

Finance, business and enterprise

Buds (Years P–8)

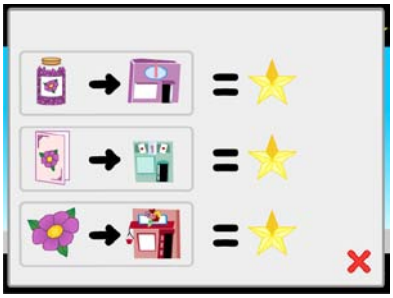
Students are encouraged to discover opportunities to sell and innovate on their product to win an award for finding business opportunities.

Features include:

- introduction to concepts such as the global market place, sustainable business practice and triple bottom line business practices.

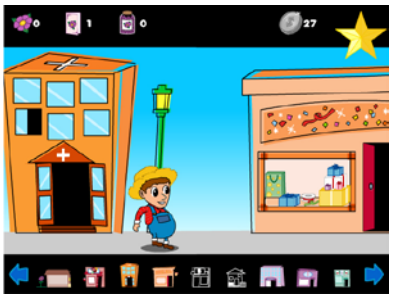
Students:

- take risks, explore opportunities and, in an immersive multimedia experience, engage in entrepreneurial pursuits
- identify, respond to and create opportunities within a goods and services industry
- implement business ideas by interacting with retail and business customers
- invest in equipment to take advantage of new business opportunities.



Buds: level 1
L902 – Years P–2

Level 1 introduces the concept with the discovery of opportunities necessary to win the business award.



Buds: level 1 [includes audio prompts]
L905 – Years P–2

This version includes audio prompts to provide hints and strategies to assist students in the discovery of various opportunities.

Buds: level 2
L903 – Years 3–4

Level 2 is a development on the complexity and number of opportunities students need to discover to win the award.

Buds: level 3
L904 – Years 5–8

Level 3 further develops the type of opportunities including charity, reputation, stock and resource management, and sustainability.