Intensive English Language / New Arrivals Program Mathematics and Numeracy: Teaching Learning Sequence

| Strand | Number and algebra |
| :--- | :--- |
| Sub-strand | Money and financial mathematics |
| Levels | A B C |
| Reception, Year 1, Year 2 |  |
| Contributed by | Marites Hadden <br> Salisbury North R-7 School, South Australia |
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| Year developed | 2016 |

Use this units with your own student cohort
Teachers are invited to trial and modify this teaching learning sequences. Content may need to be modified to meet the particular learning needs of a student cohort.
Designers started with the same template, and while there was broad agreement on the use of the template - there may be some variations between this Teaching Learning Sequence and other Teaching Learning Sequences that were developed by DECD educators.

- differentiated activities may be found in either the activities column or the evidence and differentiation column
- generally, language elements were not repeated once they were recorded in an earlier activity
- cross curriculum priorities are included in some unites but not in others.

A feedback form is available at tiny.cc/IELP-NAP-TLS. Please forward feedback to Erika Vonaspern

## Intensive English Language Program/New Arrivals Program Mathematics and Numeracy Teaching Learning Sequence

## WHAT DO WE WANT STUDENTS TO LEARN?

| Strand: Number and Algebra <br> Sub strand: Money and Financial Mathematics |  | Learning Goals |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | hievement Standards | Content Descriptions | Proficiencies |
| Mathematics Levels: A B C <br> (Year R, 1, 2) | Time Line: 4 weeks | A |  |  | The student demonstrates the following proficiencies. <br> Understanding <br> - Understands why and how |
| Overarching Ideas <br> Money is exchanged in return for goods and services. <br> Money comes in a variety of forms. <br> Money can be saved to meet needs and wants. <br> There are differences between needs and wants, and this affects budget choices. |  | B | Students recognise Australian coins according to their value. <br> Students associate collections of Australian coins with their value. | B Recognise, describe and order Australian coins according to their value (ACMNA017) <br> C Count and order small collections of Australian coins and notes according to their value (ACMNA034) | money was invented. <br> - Makes connections between their calculating skills and the use of money. <br> Fluency <br> - Recognises coins and notes automatically and use in context. <br> - Uses a range of calculation strategies that allow them to work out the value of a collection. <br> Reasoning <br> - Explains what needs and wants are, and gives an example in their everyday life. |

[^0]
## NATIONAL CONSUMER AND FINANCIAL LITERACY FRAMEWORK (YEAR 2)

In this Teaching and Learning Sequence, elements of the National Consumer And Financial Literacy Framework (Year 2) are indicated in blue.

| Knowledge and understanding | Competence | Responsibility and enterprise |
| :---: | :---: | :---: |
| Students can: <br> - recognise Australian money includes notes and coins <br> - recognise that money is limited and comes from a variety of sources <br> - recognise that money can be saved to meet needs and wants <br> - explain how money is exchanged in return for goods and services <br> - identify and describe the differences between needs and wants | Students can: <br> - recognise common symbols and terms used on a variety of Australian notes and coins <br> - identify consumer and financial matters that are part of daily life such as earning money, spending, saving, paying bills, making donations <br> - compare the cost of similar items | Students can: <br> - identify simple ways the consumer decisions of individuals may impact on themselves, their families, the broader community and/or the environment <br> - demonstrate awareness that family, community and socio-cultural values and customs can influence consumer behaviour and financial decision-making |

[^1] Mathematics and Numeracy Teaching Learning Sequence | Contributed by: Marites Hadden and Virginia Wong

## WHAT DO WE WANT STUDENTS TO LEARN?

| Numeracy General Capability |
| :--- |
| Estimating and calculating with whole numbers |
| Level 1a |
| Identify situations that involve |
| the use of money |
| Level 1b |
| Recognise the different value |
| of coins and notes in the |
| Australian monetary system |

## Level 2

Identify and use combinations of coins and notes for simple purchases

\section*{| Other General Capabilities | Cross Curriculum Priorities |
| :--- | :--- |}

$\square$ Literacy The literacy capability of Composing Texts is guided by and reported in the sequence of the IELP Progress Report. In addition, the following aspects of the Comprehending Texts continuum are taught and assessed.

Level 1 e
Listen and respond to brief questions
Level 2
Listen to two or more step instructions for undertaking learning tasks
$\square$ Aboriginal and Torres Strait Islander histories and cultures

Discuss the graphics and symbols of Australian culture.

Information and Communication Technology
Level 2
Identify the impacts of ICT in society

Intercultural Understandings
Level 2
Explore and compare cultural knowledge, beliefs and practices
Describe and compare the way they live with
people in other places or times
$\square$ Critical and Creative Thinking
Level 2
Use information from a previous experience to
inform a new idea

## Asia and Australia's engagement with Asia

The peoples and countries of Asia have contributed and continue to contribute to world history and human endeavour.

[^2]
## HOW WILL WE KNOW IF THEY'VE LEARNT IT?

| Diagnostic Assessment: (What do the students bring?) | Assessment of Learning | Assessment as Learning | Assessment for Learning |
| :---: | :---: | :---: | :---: |
| Through gathering prior knowledge, what did we find out about what students already know, their interest, misconceptions and what they want to learn? <br> See 'Gathering Prior Knowledge' under Sequenced Learning Activities. <br> Use 'Explain everything app' or video recording for students to record what they are interested in and what they want to learn. | - Questioning <br> - Feedback <br> - Observation <br> - Conferencing <br> - Work analysis <br> Use 'Explain Everything app’ for students to record 3 things that they have learnt. <br> Students order coins and notes from the least value to the most value. | - Self and peer assessment <br> - Feedback <br> Proving Cards for sorting, patterning and making collections | - Display know, do and understand <br> - Feedback <br> - Questioning <br> - Observation <br> I know the difference between needs and wants. Use the sorting template. |

## KEY

Content Descriptions: Plain font

Achievement Standards: Bold font

Numeracy Learning Continuum Description: Underlined font

Financial Literacy Framework: Blue font

[^3]|  | WHAT WILL WE DO TO GET THERE? |  |  | HOW WILL WE KNOW IF THEY'VE LEARNT IT? |
| :---: | :---: | :---: | :---: | :---: |
| Mathematical Skills and Concepts | Sequenced learning activities | Language Elements | Resources | Evidence and Differentiation |
| Identify situations that involve the use of money. (1a) <br> Identify consumer and financial matters that are part of daily life such as earning money, spending, saving, paying bills, making donations (Financial Literacy Framework) | Gathering Prior Knowledge <br> Students are asked: What is money? What does money look like? How can you use money and where does money come from? <br> Similarly, for older students you may also ask: <br> What is money like in your home country? What does money look like in your home country? How do you use money in your home country and where does money come from in your home country? <br> Use 'Explain Everything' app or video to record students' responses. Use student responses to develop more sophisticated language structures throughout the unit. <br> Use this information to inform your teaching. What knowledge do the students bring? <br> 1.1 Define Money <br> Conversation Focus: What is money? Why do we need it? What would happen if we did not have money? <br> Use 'Think, Pair, Share' to discuss How have you used money? What did you use it for? Record on paper using drawings or simple sentences (depending on language levels). | Participants: money, coin, note <br> Plurals <br> Money is a collective noun <br> Money is <br> Coins are <br> Notes are <br> Describers: Features of money, e.g. round, heavy, thin, thicker, silver, gold, paper, plastic. <br> Tense: present and simple past <br> Money comes from a bank. Dad worked on a farm. He got food for us, not money. <br> Complex Sentences: e.g. If we didn't have money ... We need money because <br> Processes: <br> mental 'I think ...' <br> action: 'I bought...' <br> relational: Money is...' | Develop a class resource of the language structures that students produce, which form the basis for further elaboration and sophistication. eg. In Japan I use Yen. The currency in Japan is Yen. 100 Sen equals 1 Yen. | Engages in short spoken exchanges and shares likes/dislikes, recounts a shared experience that demonstrate an understanding of the purpose of money. |

[^4]| Explain how money is exchanged in return for goods and services. (Financial Literacy Framework) | Summarise the children's thoughts and introduce the definition "Money is used to exchange goods and services." <br> Complete Level 1: Sorting Goods and Services on the ASIC Money Smart website. <br> https://s3-ap-southeast-2.amazonaws.com/mst- <br> resources/goods-and-services/index.html <br> 1.2 History of Money <br> Conversation Focus: Why was money invented? Who invented money? <br> Watch YouTube clip: 'Story of Money' https://www.youtube.com/watch?v=ADaY6THQp3Y <br> Earliest forms of money were based on exchanging and trading goods and services. <br> Read the story book DK Eyewitness Books: 'Money' by Joe Cribb <br> As you read the story identify currencies from different countries and mark their location on a world map. <br> What services did people need? How has that changed? | Technical Language: exchange, trade, barter, goods and services, value, weight, perish <br> Common vocabulary: e.g. not fair, too heavy, didn't last <br> Circumstance of Time: years ago, a long time ago, these days <br> Participants: names of coins and notes <br> Tense: Present and Past Regular verbs, use/used, <br> Irregular verbs, buy/bought pay/paid, costs/ cost | ASIC Money Smart website. Goods and Services. <br> https://s3-ap-southeast- <br> 2.amazonaws.com/mst- <br> resources/goods-and- <br> services/index.html <br> YouTube Clip: ‘Story of Money' <br> https://www.youtube.com <br> watch?v=ADaY6THQp3 <br> $\underline{Y}$ <br> DK Eyewitness Books: <br> 'Money' by Joe Cribb <br> World Map <br> Pictures of Australian money from the past. Real money if possible. <br> Real Australian coins. <br> Pictures of current Australian notes. Real money if possible. | What is more valuable? <br> Students are given 20 tokens that represent a unit of money. <br> They place the tokens alongside a collection of objects to indicate the personal value they place on that object, e.g. Pokemon cards, a jacket, a soccer ball, a make-up kit, a loaf of bread, a cow. Students explain the reason for their choice. <br> Now change the context. Which objects had greater value in your country? <br> Which objects would your parents choose as having the greatest value? |
| :---: | :---: | :---: | :---: | :---: |

[^5]|  | Homework Task: Ask parents if money has changed in your country? Is money the same now as it was for your parents/grandparents? What types of things did your parents/grandparents used to pay for and what types of things do they pay for now? <br> Discuss how money has changed in Australia over the years i.e. Paper to plastic, deletion of 1c and 2c coins, 50c coin was once round, the new 'tactile' $\$ 5$ note. Why did these changes occur? |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Identify situations that involve the use of money. (1a) | 2.1 Forms of money <br> Conversation Focus: What are all the forms that money can come in? Use visuals (including cash, PayPal, bank transfer, gift cards, ATM, credit card, cheque) ask children if they think they are all forms of money? <br> Task: Use a print out of Appendix 1 to sort which forms they think are classified as money? <br> Task: Children to identify and pick out one of the forms of money that they or their families have used. <br> Watch YouTube: buy/paying with your mobile phone, commonwealth bank clip https://www.youtube.com/watch?v=y TbWtbSf3o <br> Watch BTN: Cashless Society http://www.abc.net.au/btn/story/s3556547.htm <br> Conversation Focus: Can you spend money that you don't have? Why would people use this form of payment? | Technical Language: cash, PayPal, bank transfer, gitt cards, ATM, visa card, debit card, cheque and money order, PIN (Personal Identification Number), deposit, withdrawal, credit <br> Complex Sentences: This is a form of money because ... <br> This is not money because <br> Processes: sort, identify, pick out | Forms of money document, see <br> Appendix 1 <br> YouTube clip: <br> 'Buying/Paying with mobile phones' https://www.youtube.com /watch? $v=y$ TbWtbSf3o <br> BTN Cashless Society http://www.abc.net.au/btn /story/s3556547.htm |  |

[^6]| Recognise Australian money includes notes and coins. <br> (Financial Literacy Framework) <br> Recognises the different value of coins and notes in the Australian monetary system. (1b) | 2.2 What does our currency look like? <br> Task: Give children a bucket of coins and notes to sort using their own criteria. <br> Children share their criteria for sorting and teacher records on a list. <br> Children identify two criteria that they haven't tried yet and use them to sort their money accordingly eg. colour, size, shape, value, dollars, cents, features on the notes and coins such as the different animals. <br> Watch YouTube: Australian Notes and Coins - Skwirk, Stage 1 <br> https://www.youtube.com/watch?v=rMy7WDt2Hr4\&list=PL6 IOor7-2-545MUiMFHbf2ILOcjxNFJbO\&index=5 | Participants: Names of coins and notes being sorted, e.g. 5c coins, 10c coins, value, dollar, cent, kangaroo, emu, echidna, platypus, aboriginal elder <br> Describers: round, silver, big, small <br> Processes: sort, group, match, do it another way <br> Commands: Make groups, sort by (criteria) | Bucket of Australian coins, approximately $\$ 60$ worth of coins is a suitable amount. <br> YouTube: Australian Notes and Coins - <br> Skwirk, Stage 1 <br> https://www.youtube.com <br> /watch?v=rMy7WDt2Hr4 <br> \&list=PL6IOor7-2- <br> 545MUiMFHbf2ILOcjxNF JbO\&index=5 |
| :---: | :---: | :---: | :---: |
| Identify situations that involve the use of money. (1a) <br> Recognise that money is limited and comes from a variety of sources. <br> (Financial Literacy Framework) | 3.1 How do you earn money? <br> Conversation Focus: How do we earn money, how do we 'get' it? What does 'earn' mean? <br> Task: In pairs (advanced language learner with early language learner) draw where they and their family get money from? <br> Each pair shares one finding with class. Teacher makes a shared class list. <br> Task: Use role play cards in Appendix 2 to act out how people can earn money. For example, my dad works for his boss, his boss gives him money called 'a wage', some of this money goes to the Government and this is called 'tax'. The Government uses this tax to give to schools, the sick, elderly, unemployed etc. <br> Other scenarios to role play: pocket money, gifts, employment etc. | Technical Language: earn <br> Non-finite clauses: My parents earn money by going to work. The government taxes people to help the poor or sick or elderly. <br> Technical Language: government, boss, unemployed, employed, wage, tax <br> Speech Functions: Responds to a range of 'wh' questions. | Role play cards, see Appendix 2 |

[^7]Identify consumer and financial matters that are part of daily life such as earning money, spending, saving, paying bills, making donations.

Recognise that money can be saved to meet needs and wants.

Identify and describe the differences between needs and wants.
(Financial Literacy Framework)

### 3.2 How do you use money?

Conversation Focus: What do we use money for?

Task: Children brainstorm all the things they use money for ie. Buy food, pay bills, buy a car, catch a bus, give as a gift. Teacher scribes and creates a list around the outside of the smartboard.

Introduce the three headings 'Spend, Save, Donate'.

Clarify each of the three headings
Children sort and drag their ideas under the correct heading.

Save: What does 'save' mean? Why would you save? Have you ever saved and how? Can you buy it immediately or will you need to save for it? i.e. piggy bank, bank

Donate: What does 'donate' mean? Why would you donate? View online The Australia Charity Guide http://www.australiancharityguide.com look at different charities and discuss ones that are familiar to them? Donating is giving without any expectation of getting anything back.
E.g. In our school we have many children from Nepal and we raised money and donated it after the Nepal earthquake. Have you/your family donated and how? (This question is an excellent opportunity to look at religious practices, such as the donations made by Muslims during Ramadan.)

Processes: buy, shop,
pay, save, spend, donate, give, lend, payback

Participants: everyday nouns, e.g. food, clothes, toys, piggy bank,

## Technical Language:

donate, interest

Modality: Use a limited range of comparatives, eg. more, less, better, worse, worst.

## Technical Language:

needs and wants

## Modality:

must have = need don't need= want

## Evaluative Language:

Expresses simple opinions based on personal likes/dislikes, e.g. ‘I think...' 'We need..."

## Complex Sentence:

because..., so that..., if

Smartboard / IWB

Piggybanks, money boxes to show

Pictures or flyers from charity organizations

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| Demonstrate awareness that family, community and sociocultural values and customs can influence consumer behaviour and financial decision-making. (Financial Literacy Framework) <br> Identify simple ways the consumer decisions of individuals may impact on themselves, their families, the broader community and/or the environment. <br> (Financial Literacy Framework) | Look at the book 'IF...' by David J. Smith and discuss how countries of the world have more/less money. <br> Spend: When you spend there are two types of spending, needs and wants. <br> Task: Show children the pictures of children's bedrooms from around the world and discuss in each room items that could be classed as needs and those that are wants. Watch YouTube Clip: This clip is based on the book called 'Where Children Sleep' by James Mollison https://www.youtube.com/watch?v=t-Fg2CMsDvc <br> Task: Children to draw on a template 10 things that people in your household buy. Ask students to sort into needs and wants. <br> Task: Using laminated pictures from shopping catalogues, sort items into needs and wants. Put only the items we need into the shopping bag. | Participants: bedroom furniture, eg bed, table, toys, television | Book: "IF" by David J.Smith <br> 10 things people in your household buy. See Appendix 3 <br> Laminated pictures of items from shopping catalogues <br> Shopping bags | I know the difference between needs and wants. Gather information from the completed sorting activities. |
| :---: | :---: | :---: | :---: | :---: |

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Compare the cost of similar items (Financial Literacy Framework)


Task: Value Match
Match items on cards with a reasonable money value.

Task: Value Match II
Teacher holds up a coin or a note, and students find something in a catalogue that they could buy with that amount.

Question: Select three items that students have found for $\$ 2$. What item is the best value for money?

Use food, toy and clothing catalogues

Task: Representing Money Values
Using the template in Appendix 5, place a value in the middle box. Students use coins to show four different ways of making that value.


Task: Banker Game

Comparative Language Bread costs $\$ 2$ at IGA. It costs more than $\$ 2$ at Woolworths.

## Modality:

Two dollars can be made with a $\$ 2$ coin, $4 x 50$ cent coins, $40 \times 5$ cent coins and 2 \$1 coins.

Matching Value cards, see Appendix 4


A range of catalogues from supermarkets, department stores, toy shops

Representing Money Value, see Appendix 5

Proving cards: Making collections
When children think they are able to represent money amounts in different ways, they demonstrate it to the teacher who then stamps and dates card.
Student must demonstrate on three different occasions.


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|  | Version 1: Have a coin die with the image of the coins, children sit in groups of 4 , set an egg timer for 4 mins; each child rolls the die and takes that amount of money from the bank (a tub of money) and place it in their piggy bank in Appendix 6. <br> Continue taking turns until timer stops. Each child needs to tell the group how much money they have in their piggy bank. <br> Version 2: Same as version one except use a die with the money symbol. Students will need to collection the correct coin to match the symbol. <br> Version 3: Same as version one except use a die with different value amounts on each face of the die so students will need to make collections of coins to create the value eg. \$1.75, \$0.25 etc | Participants: Name of coins 5cent, 10cent, 20cent, 1 dollar <br> Processes: roll, collect, pick out, select, sort, count, add, take, set, take turns, tell | Piggy Bank template, see Appendix 6 <br> Coin dice <br> Egg timer <br> Value dice <br> Different value dice | NOTE: <br> If children can sort money they move on with the following tasks. If they cannot sort money yet, they stay with sorting tasks and continue to play version 1 of banker game. |
| :---: | :---: | :---: | :---: | :---: |


|  | Assessment task: Use an app from iTunes Store called <br> "Explain Everything Interactive Whiteboard" By Explain <br> Everything <br> Ask each student to record three things that they have <br> learnt. See sample in Appendix 7. | 'Explain Everything' App <br> on iPad | Use 'Explain Everything app' for <br> students to record three things that <br> they have learnt. |
| :--- | :--- | :--- | :--- |

## Overview of language and examples used in the teaching, learning and assessing program

A summary of the language mostly pertaining to this substrand as used in the following teaching, learning and assessing program.

| Oral | Visual and Written <br> Text | Text Knowledge | Grammar Knowledge |
| :--- | :--- | :--- | :--- | :--- |

[^8]
[^0]:    2 | Number and algebra: Money and financial mathematics | Reception, Year 1, Year 2 | Intensive English Language / New Arrivals Program | http://tiny.cc/IELP-NAP-TLS Mathematics and Numeracy Teaching Learning Sequence | Contributed by: Marites Hadden and Virginia Wong

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[^2]:    4 | Number and algebra: Money and financial mathematics | Reception, Year 1, Year 2 | Intensive English Language / New Arrivals Program | http://tiny.cc/IELP-NAP-TLS Mathematics and Numeracy Teaching Learning Sequence | Contributed by: Marites Hadden and Virginia Wong

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