

# Intensive English Language / New Arrivals Program

## Mathematics and Numeracy: Teaching Learning Sequence

<b>Strand</b>	Number and algebra
<b>Sub-strand</b>	Fractions and decimals
<b>Levels</b>	A B C D Reception, Year 1, Year 2, Year 3
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<b>Year developed</b>	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](http://tiny.cc/IELP-NAP-TLS). Please forward feedback to [Erika Vonaspern](#)



# Intensive English Language / New Arrivals Program

## Mathematics and Numeracy Teaching Learning Sequence

WHAT DO WE WANT STUDENTS TO LEARN?				
Strand: Number and Algebra		Learning Goals		
Substrand: Fractions and Decimals		Achievement Standards	Content Descriptions	Proficiencies
Mathematics Levels: ABCD (Year R, 1, 2, 3)	Time Line:	A	<p>A Recognise a whole and parts of a whole in everyday contexts</p> <p>A Recognises that a whole can be divided into equal parts</p> <p>A Identifies quantities such as more, less and the same in everyday comparisons.</p>	<p>The student demonstrates the following proficiencies.</p> <p><b>Understanding</b></p> <ul style="list-style-type: none"> <li>Connects fractions to real life experiences</li> <li>Sees the connection between fractions and other symbols that represent how many.</li> <li>Defines a fraction</li> </ul> <p><b>Fluency</b></p> <ul style="list-style-type: none"> <li>Identifies quantities using more, less and the same.</li> </ul> <p><b>Reasoning</b></p> <ul style="list-style-type: none"> <li>Generalise the naming pattern of fractions.</li> </ul>
<p><b>Overarching Ideas</b></p> <p>There are numbers between whole numbers.</p> <p>We can express these quantities using fractions or decimals.</p> <p>Wholes can be divided/ shared into equal parts and can be expressed as fractions.</p> <p>Fractions can also be used to express ratios and relationships between quantities.</p>	B	<p><b>Identifies representations of one half.</b></p>	<p>B Recognise and describe one half as one of two equal parts of a whole.</p> <p>B Explores the naming pattern for fractions (no. of pieces relates to the name. 6 pieces equals sixths)</p>	
		<p><b>Divides shapes into halves, quarters and eighths</b></p> <p><b>Divides collections into halves, quarters and eighths</b></p>	<p>C Recognise and interpret common uses of halves, quarters and eighths of shapes and collections.</p> <p>C Make the connections between the increasing number of parts to the decreasing size of parts.</p> <p>C Explores the different ways of representing fractions using symbols, words and diagrams (halves, quarters, eighths)</p>	
		D	<p><b>Models and represents unit fractions</b></p>	<p>C Visualises halves and quarters</p> <p>D Model and represent unit fraction, including <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{5}</math> and their multiples to a complete whole.</p>

## WHAT DO WE WANT STUDENTS TO LEARN?

### Numeracy General Capability

Interpreting and Applying Proportional Reasoning

#### Level 1a

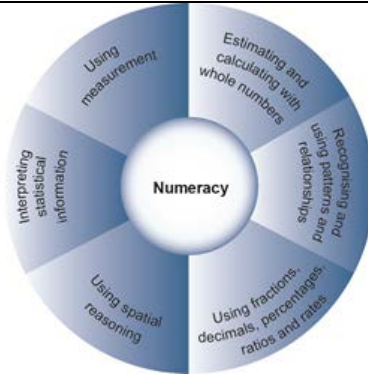
Students recognise a whole and parts of a whole in everyday contexts

#### Level 1b

Students recognise that a whole object can be divided into equal parts and can identify quantities in every day comparisons (more, less, same)

#### Level 2

Students visualise and describe halves and quarters and solve problems using them.



### Other General Capabilities

- **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 1e

- Navigate, read and view learning area texts with familiar vocabulary and supportive illustrations
- Listen and respond to learning area texts (brief questions, one and two step instructions, and listen for information in simple spoken texts)
- Interpret simple texts using comprehension strategies

#### Level 2


- Navigate, read and view learning area texts with illustrations and simple graphics
- Listen and respond to learning area texts (two or more step instructions )
- Interpret and use texts to gather information and make some obvious inferences

- **Critical and creative thinking**

#### Level 2

- Pose questions to explore issues, and compare information in their world
- Identify and describe familiar information and ideas during a discussion or investigation
- Build on what they know to create ideas and possibilities in ways that are new to them
- Describe thinking and learning strategies, with support.

## HOW WILL WE KNOW IF THEY'VE LEARNT IT?


Diagnostic Assessment: (What do the students bring?) How are you going to find out?	Assessment of Learning <i>summative</i>	Assessment as Learning <i>Self &amp; peer assessments</i>	Assessment for Learning <i>Formative</i>
<p>Assess understanding of the concept of whole by sorting/ identifying whole objects, collections, shapes and measures.</p> <p>Investigate understanding of equal and unequal</p> <p>Assess understanding of what a fraction is</p> <p>Be able to name fraction pieces(1/10, 1/5,1/8)</p>	<p>Brainstorm students' ideas</p> <p>Drawings and photographs to demonstrate understanding</p> <p>Written/ picture evidence</p> <p>Use symbols and notation and apply knowledge to activities</p> <p>Be able to explain and represent a fraction</p> <p>Complete fraction naming activity</p>	<p>Explain ideas to peers and teacher</p> <p>Inquiry and clarification of understanding of concepts</p> <p>Pair share- discussing, evaluating own and partner's understanding</p> <p>Ability to complete task independently</p> <p>Record and represent what a fraction is</p> <p>Identify and label fraction pieces</p> <div style="text-align: center;">  </div>	<p>Brainstorm students' ideas</p> <p>Anecdotal evidence of understanding</p> <p>Written/ photographic evidence</p> <p>Label equal and unequal quantities, pieces, areas</p> <p>Oral retell and demonstration of what a fraction is</p> <p>Identify fraction names and be able to match the diagrams</p>

### KEY

Content Descriptions are in plain font


**Achievement Standards: Bold font**

Numeracy Learning Continuum Description. Underlined font

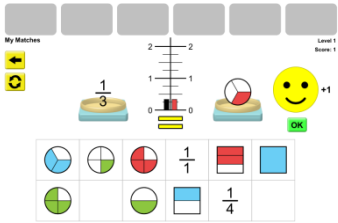

WHAT DO WE WANT STUDENTS TO LEARN?	WHAT WILL WE DO TO GET THERE?			HOW WILL WE KNOW IF THEY'VE LEARNT IT?
Mathematical Skills and Concepts	Sequenced learning activities	Language Elements	Resources	Evidence and Differentiation
<p>A- <u>Recognises a whole and parts of a whole in everyday contexts</u></p>	<p><b>1- UNDERSTANDS EQUAL PART / WHOLE</b> <b><u>Gathering Prior Knowledge</u></b></p> <p><b><u>Activity 1.1</u></b> Ask the students, what is a fraction? Discuss when you might need to use fractions. Get them to think, pair share to access their existing knowledge. Display the definition – ‘a fraction is an equal part of a whole’. Explain that you are going to explore equal part and whole.</p> <p><b><u>Activity 1.2</u></b> Display the four different kinds of wholes (shapes/regions, objects, collections and measures) and explain that you are going to be an “Equal Part Detective” for each one of these wholes. Talk through with the class what they think equal means (same as). Put the four activities out on four different tables and students rotate through them in pairs. Set up the tables as follows.</p> <p><b>Shapes</b> – Give students an A3 piece of paper which has a range of regular and irregular shapes on it, some of which have been divided into equal parts, some which have been divided into unequal parts. Give each pair of students some sticky labels with the words FRACTION – EQUAL PARTS written on them. They have to stick the label on the ones they think meet the definition of a fraction</p>	<p><b>Participants:</b> <i>Whole, part of a whole, equal part, fraction, collection, shape, size, quantity</i></p> <p><b>Describers:</b> <i>equal, unequal</i></p> <p><b>Processes:</b> <i>explore, notice explain, identify, label</i></p> <p><b>Commands:</b> <i>Explore the activities on the table. Identify and label the fractions. Explain your choices.</i></p> <p><b>Simple sentence:</b> <i>This is a fraction.</i></p> <p><b>Complex sentences:</b> <i>These are fractions because they are divided into equal parts, quantities or measures.</i></p> <p><b>Tense:</b> simple present tense.</p>	<p>Watch ‘Investigating halves of familiar objects- Splash ABC</p> <p>splash.abc.net.au/home#!/media/29646/</p>  <p>2D shapes, 3D objects, counters, unifix cubes, pop sticks containers eg. cups classroom objects eg rulers, pencils</p> <p>A3 paper with pictures of 2D shapes Sticky labels with <i>equal parts</i> written on them.</p>	<p><input type="checkbox"/> I can recognise a whole or equal parts.</p> <p><b>Needs support</b> then continue to explore this concept focusing on length models, such as Cuisenaire Rods.</p> <p>Virtual Cuisenaire Rods can be found at <a href="http://nrich.maths.org/4782">http://nrich.maths.org/4782</a></p> <p><b>Needs extension</b> then extend the range of shapes, objects, collections and measures. <a href="http://www.scottle.edu.au/ec/search?accContentId=ACMNA058">http://www.scottle.edu.au/ec/search?accContentId=ACMNA058</a></p>

	<p><b>Key learning:</b> A fraction of a shape has equal size.</p> <p><b>Objects</b> - On this table you have a basket of everyday 3D objects where you have used a texta/tape to mark parts on them, some of which have been divided into equal parts, some which have been divided into unequal parts. Give each pair of students some sticky labels with the words FRACTION – EQUAL PARTS written on them. They have to stick the label on the ones they think meet the definition of a fraction.</p> <p><b>Key learning:</b> A fraction of an object has equal size.</p> <p><b>Collections</b> – On this table you have an A3 piece of paper which has a number of collections on it, some of which have been divided into equal parts, some which have been divided into unequal parts. Give each pair of students some sticky labels with the words FRACTION – EQUAL PARTS written on them. They have to stick the label on the ones they think meet the definition of a fraction</p> <p><b>Key learning:</b> A fraction of a collection has, equal quantity (how many).</p> <p><b>Measures</b> – have a photo of the school oval, the basketball court, a cup, a jug which have had parts marked on them with a texta (some equal/unequal) Give each pair of students some sticky labels with the words FRACTION – EQUAL PARTS written on them. They have to stick the label on the ones they think meet the definition of a fraction.</p> <p><b>Key learning:</b> A fraction of a measure has equal size.</p> <p>Introduce the = and <math>\neq</math></p>	<p><b>Participants:</b> classroom objects- ruler, eraser, pencil container, ball</p> <p><b>Participants :</b> unifix cubes, counters, popsticks, buttons</p> <p><b>Tense:</b> simple present tense. <i>I see the basketball court has 3 equal parts.</i></p> <p><b>Visual Literacy</b> equal and unequal symbols = and <math>\neq</math></p>	<p>Assortment of objects with parts marked on them.</p> <p>Sticky labels Collections of counters, popsticks, bottle tops</p> <p>School oval, basketball courts, cups, jugs with tape or texta marks</p>	
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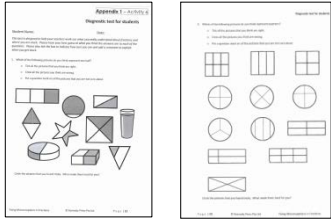
<p>A - <u>Recognises that a whole can be divided into equal parts</u></p>	<p><b>2. EQUAL AND NOT EQUAL-</b></p> <p>Divide fruit loops between students (focus on amount). Do they have the same? How can we make sure that everyone has the same amount, that it is equal?  Ask groups of students to divide other collections such as counters and textas so that the students can gauge whether they have been divided equally.  Show the students shapes that have been cut into parts, are the parts equal? How do we know? Brainstorm suggestions. Articulate which part is equal.</p>	<p><b>Processes:</b>  <i>divide, share, count out, brainstorm</i></p> <p><b>Describers:</b> <i>equal, unequal</i></p> <p><b>Circumstance:</b>  <i>divide equally</i></p>	<p>Fruit loops/ cheerios counters, textas</p>	<p><input type="checkbox"/> I can recognise that a whole can be divided into equal parts.</p> <p><b>Needs support</b>  Then provide tasks where students explore equal share of area, shape, other collections and measures.  Share a jug of liquid equally between 3 people.</p> <p><b>Needs extension</b>  Students repeat activity with other materials. Vary the quantity or number of groups Eg collection of marbles given to 7 students.</p>
<p>A - <u>Identifies quantities such as more, less and the same in everyday comparisons.</u></p>	<p><b>3. MORE, LESS OR EQUAL</b></p> <p>Using the 4 tables of activities as in activity 1, explore more or less in each of these contexts. For example using sticky labels on the Collections table, label more or less or the same for the collection shown.</p>	<p><b>Comparative Language:</b>  <i>more than, less than, same as</i></p>		<p><input type="checkbox"/> I can compare quantities of everyday resources.</p> <p><b>Needs support</b>  Then reduce number of distractions that students may be attending to e.g. share less of any item.</p> <p><b>Needs extension</b>  Then attempt Studyladder interactive activities for comparing groups.  <a href="http://www.studyladder.com.au">www.studyladder.com.au</a></p>

<p><b>B</b> - Explores the naming pattern for fractions</p>	<p><b>4 EXPLORES THE NAMING PATTERN FOR FRACTIONS.</b></p> <p>Explain that when the mathematicians were inventing fractions and how they worked, they came up with a naming pattern that would make it really easy to remember. However many equal parts there are – that’s what they are called.</p> <p>Eg: 6 equal parts &gt; sixths, 28 equal parts? Twenty eighths</p> <p>Engage the students in the pattern. Eg: flash on the screen 10 parts would be called _____</p> <p>Only do it for those that follow the pattern. When students are fluent with this, introduce the anomalies – ie. which ones are exceptions to the pattern- .1ths, (firsts)2ths (halves), 3ths, (thirds), fourths and quarters,</p>	<p><b>Technical Vocabulary:</b> Naming pattern <i>sixths, sevenths etc,</i></p> <p><b>Processes:</b> action: <i>name</i> relational: <i>equals, is</i> mental: <i>think</i> verbal: <i>is called</i></p> <p><b>Compound Sentences:</b> <i>There are x equal parts so each part is called a ____.</i></p> <p><b>Embedded clause A</b> <i>whole (which is) divided into 12 parts has 12 twelfths.</i></p> <p><b>Complex Sentences:</b> <i>I think this is a fifth because there are 5 equal parts.</i> <i>Fractions have ‘th’ added to the number, but not fractions that end in 1,2,3.</i></p>	<p>Use Interactive whiteboard to flash equal parts.</p>	<p><input type="checkbox"/> I can name fractions.</p> <p><b>Needs support</b> Then practise ordinal numbers. Use a calendar for the naming pattern.</p> <p><b>Needs extension</b> Then explore the larger the number of equal parts, the smaller the size of the part.</p>
<p><b>C</b> - Makes the connections between the increasing number of parts to the decreasing size of parts.</p>	<p><b>5. RELATIONSHIP BETWEEN DENOMINATOR AND FRACTION SIZE</b></p> <p><b>Activity 5.1</b> Visually show the students that the number of equal pieces in a whole relates to the fraction name. Use fraction pies. Compare the denominator to the size of the part.</p> <p>Paper dividing. Give students strips of equal sized paper. Start by folding one into 2 equal parts, the next into 4, then into 8. Write the symbol. Notice that the bigger the denominator, the smaller the part. Stick strips into maths books to demonstrate concept. What do students notice?</p>	<p><b>Technical Vocabulary:</b> <i>relates, denominator,</i></p> <p><b>Comparatives:</b> <i>bigger, smaller,</i></p> <p><b>Sentence Structure</b> Paired constructions with verb <i>to be</i> omitted. <i>The larger the denominator, (is), the smaller the fraction (is)</i> Explore other constructions eg <i>The smaller the pizza,</i></p>	<p>View video ABC <a href="http://Splash.abc.net.au">Splash.abc.net.au</a></p> 	<p><input type="checkbox"/> I can explain the connection between number of parts and size of the parts.</p> <p><b>Needs support</b> Then expose the children to more fraction pies. Use grid paper for folding into halves and quarters.</p> <p><b>Needs extension</b> Then fold paper into thirds,</p>



<p><b>B</b> - Recognise and describe one half as one of two equal parts of a whole.</p> <p><b>C</b> - Explore the different ways of representing fractions using symbols, words and diagrams (halves, quarters, eighths)</p>	<p>Give students shapes such as circles, squares and collections such as egg boxes, write the symbols.</p> <p><b>Activity 5.2</b> Students work in pairs, divide collections of objects or shapes into equal parts, write the fraction name on each part, discuss what you notice about the number of parts and the size of the part./ collection . Use sharing mats for collections (eg: divide A3 paper into 3 equal parts for students to share thirds of a collection).</p> <p><b>Activity 5.3</b> Students work in pairs. You give each pair the same Shape/ object/ collection/ measure but ask each pair to show you a different fraction on that Shape/ object/ collection/ measure eg: halves, thirds, fourths, eighths, tenths Get them to share. Is there anything they can notice? What would be their theory? Can they prove their theory?</p>	<p><i>the less we all eat.</i></p> <p><b>Processes:</b> <i>write, discuss, use</i></p> <p><b>Technical Vocabulary:</b> <i>sharing mats</i></p>		<p>sixths and twelfths.</p> <p>Play Fraction Matcher – (differentiated levels) <a href="http://www.topmarks.co.uk">www.topmarks.co.uk</a> (fractions)</p>  <p>5.2 could be a formative assessment.</p> <p>5.3 could be a summative assessment.</p>
<p><b>C</b>. Divides shapes/objects into halves, quarters and eighths.</p> <p><b>C</b>. Divides collections into halves, quarters and eighths</p>	<p><b>6. ONE WHOLE: DIFFERENT WAYS OF PARTITIONING</b></p> <p><b>Activity 6.1</b> Students select a shape, object, collection, measure (one of each) – show me at least three fractions for each WHOLE. EG: you might set up four tables one for each WHOLE. Students rotate through the tables, at each table they show three ways of making fractions for that WHOLE. They then have to describe what they have done. Eg: here is my WHOLE shape (a regular hexagon), I divided it into quarters</p> <p><b>Activity 6.2</b> Provide students with at least one of each kind of WHOLE, and ask them to show you half with that whole. Students justify their thinking to a partner.</p>	<p><b>Technical Vocabulary:</b> <i>half, halves, investigate, justify</i></p> <p><b>Processes:</b> <i>select, describe, show, justify, investigate,</i></p> <p><b>Compound sentences:</b> <i>Here is my whole shape and I divided it into quarters etc.</i></p> <p><b>Complex sentence:</b> <i>This is a half of a whole because...</i></p>		<p>This could be a formative assessment.</p> <p><b>Needs support</b> Then investigate Scootle activities for showing halves</p>  <p><b>Needs extension</b> Then extend the challenge by providing more complex wholes to partition and into different parts. Diagnostic testing on halves and quarters (Fixing Misconceptions in</p>

Eg: *This is a half because...*



Fractions by Tierney Kennedy)

Tick all the pictures that represent quarters and halves.  
Appendix 1

**D. Represents a fraction of a whole**

**7. REPRESENTS FRACTIONS**

Revisit the previous task of making fractions but this time the emphasis is on them naming the parts. Model and explain the three conventions for representing fractions eg: symbol (numerator /denominator /vinculum) and number name (fourth)

Eg: Students pick a shape, an object, a collection, and a measure (one of each) – show me at least two fractions for each WHOLE and label its parts. Eg: you might set up four tables, one for each WHOLE. Students rotate through the tables, at each table they show two ways of making fractions for that WHOLE. They then have to describe what they have done. Eg: *Here is my WHOLE shape (a regular hexagon), I divided it into quarters.*

**Technical Vocabulary:**  
*numerator, denominator, vinculum,*

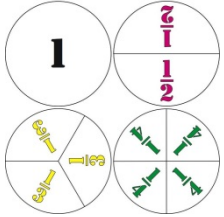
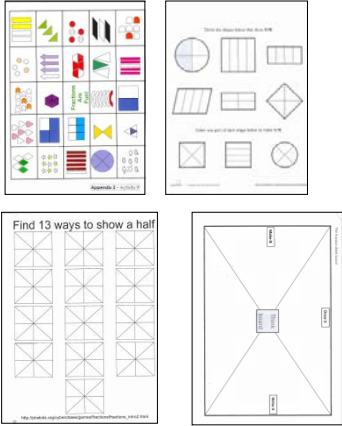
**Processes:** *model, explain, describe, show, write, demonstrate*

**8. EXPLORES THE RELATIONSHIP BETWEEN PARTS AND WHOLE AND NAMING**

Provide students with a fraction kit that doesn't have the pieces named (or alternatively pieces of felt/paper that have been cut up to have proportional relationships) Ask them to choose a fraction piece – what is the value of each of the other pieces to make a whole? Label each piece.

**Technical Vocabulary:**  
*select, theory,*

**Processes:** *choose, label, explore, prove*

	 <p>eg If a child they would another half chooses one half then need to see that is needed to make a whole.</p>			
<p>B- <u>Students visualise and describe halves and quarters and solve problems using them</u></p>	<p><b>9. VISUALISATION ACTIVITIES</b></p> <p>Write the word one half on the board, choose students to name something in the room that they know is <math>\frac{1}{2}</math>, how do they know it is? Write the fraction notation on the board &amp; then working in pairs show <math>\frac{1}{2}</math> in as many ways as they can think either by drawing or using materials. Check that the 2 parts in each representation are equal. Repeat for <math>\frac{1}{4}</math>.</p> <p>Using small white boards, students draw then divide a shape into quarters, check the shapes are divided into quarters equally.</p> <p>Create a fraction poster which represents <math>\frac{1}{4}</math> of collections. Either make a collage or draw for display.</p>	<p><b>Processes:</b> tick, explain, check, draw, create, make, draw, paste, cut,</p> <p><b>Technical Vocabulary:</b> quarter/ fourth</p> <p><b>Complex sentences:</b> I know this is a half because it has 2 equal parts.</p>		<p><b>Needs support</b></p> <p>Then extend with other activities solving problems using halves and quarters.</p> <p>Fraction worksheets  <a href="http://www.education.com/worksheets">www.education.com/worksheets</a>  <a href="http://pbskids.org/cyberchase/find-it/fractions/">http://pbskids.org/cyberchase/find-it/fractions/</a></p> <p>The fraction think board</p>  <p>Appendix 2</p>

**10. INTRODUCTION TO THIRDS AND FIFTHS.**

Demonstrate a collection shared equally into 3 groups and a collection shared unequally, ask if all groups represent  $\frac{1}{3}$ . Can they explain? Share collections of lollies/ cubes/ counters into 3 equal groups. Discuss thirds and the symbol. Record the results. Repeat for  $\frac{1}{5}$

Show the students an A4 paper divided unequally into 8, ask them if each part is  $\frac{1}{8}$ . Give them an A4 piece of paper and ask them to demonstrate how it could be divide it into eighths. Explain  
Write  $\frac{1}{8}$  and eighth on the parts.

**Technical Vocabulary:**  
*eighths, represent,*

**Process:** *share, record notice, demonstrate, write*

D - Model and represent unit fraction, including  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{3}$ ,  $\frac{1}{5}$  and their multiples to a complete whole.

**11. UNIT FRACTIONS-**

Introduce unit fraction with definition. A unit fraction is fraction where the numerator is 1. Have the students hold up  $\frac{1}{5}$  fraction parts. How many do we need for 1 whole. Repeat for other fractions.

Introduce the Unifix fraction game- they roll a 1-10 die. Whatever numeral comes up becomes the unit fraction eg: 6, Then each unifix cube is  $\frac{1}{6}$ . They explore how many  $\frac{1}{6}$  cubes they would need to make a whole. Give them a grid to record.  
What do you notice?  
What would be your theory?  
Can you prove it?

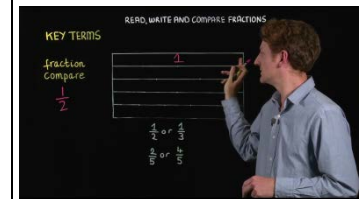
Unit fraction	How many multiples did you need?

**Technical Vocabulary:**  
*unit fraction, multiple*

**Complex sentence:**  
*I notice that*

View video ABC Splash splash.abc.net.au

Read write and compare fractions.



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

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

Oral Texts	Visual Texts and Symbols	Text Knowledge	Grammar Knowledge	Word Knowledge
<p><b>Spoken Texts</b> Participates in oral texts to explore understandings about our number system.</p> <p><b>Verbal elements</b> Pronounces unit fractions eg thirds, halves, quarters.</p> <p><b>Speech functions</b> Responds to statements /commands and asks questions when required. Describes fractions and learning using statements.</p> <p><b>Social exchanges</b> Collaborates with others</p> <p>Explains strategies in small groups/whole class.</p> <p>Reflects on strategies used.</p>	<p><b>Visuals in Multimodal texts</b></p> <p><b>Symbolism</b> Symbols to represent fractions eg <math>\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{5}, \frac{1}{6}, \frac{1}{3} &lt;, &gt;, =, \neq</math></p> <p><b>Semiotics</b> Fraction wall Number line</p>	<p><b>Written texts:</b> Label fractions.</p> <p><b>Reference items</b> It, they, this, these</p>	<p><b>Simple sentences</b> <i>This is a fraction.</i></p> <p><b>Compound sentences</b> <i>There are <math>x</math> equal parts so each part is called a</i></p> <p><b>Complex sentences</b> <i>I think this is a fifth because there are 5 equal parts.</i></p> <p><b>Print Conventions</b> setting out mathematically</p> <p><b>Processes</b> Action: <i>divide, share, find, select, fold, share,</i> mental: <i>think,</i> relational: <i>equals, is, are</i> Paired constructions with verb <i>to be</i> omitted. <i>The larger the denominator (is), the smaller the fraction (is).</i></p> <p><b>Multi word verb group</b> One whole (circle, block, box of paperclips, basketball court) <i>has been divided</i> into equal parts</p> <p><b>Simple present tense</b> <i>The basketball court has 3 equal parts.</i></p> <p><b>Past tense for problematised stories</b> <i>I had 20 library books and gave each class...</i></p> <p><b>Nouns and Noun Groups</b> classroom objects, shapes, collections</p> <p><b>Comparative Language</b> <i>This part is smaller than...</i></p>	<p><b>Technical Vocabulary</b> <i>whole, part fraction, collection, equal to, equivalent, numerator, denominator, vinculum, same as, theory, unit fraction, multiple, rule</i></p> <p><i>relate, investigate, compare, record, order, justify, represent, test, label,</i></p> <p>Ordinal numbers (regular and irregular) and fraction names (We say first instead of oneth, second instead of twoth.)</p>

# Appendix