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| STRAND: Number SUBSTRAND: Fractions (B) + Mass (A) STAGE: 3 |
| TERM: | 1 | 2 | 3 | 4 | WEEK: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| AHC-ICON-Aboriginal Torres Strait Islander histories-300dpiAboriginal and Torres Strait Islander histories and cultures | A-ICON-Asia Australias engagement with Asia-300dpiAsia and Australia’s engagement with Asia | S-ICON-Sustainability-300dpiSustainability | CCT-ICON-critical creative thinking-300dpiCritical and creative thinking | EU-ICON-ethical understanding-300dpiEthical understanding | ICT-ICON-300dpiInformation and communication technology capability | IU-ICON-intercultural understanding-300dpiIntercultural understanding | L-ICON-literacy 300dpiLiteracy | N-ICON-numeracy-300dpiNumeracy\* | PSC-ICON-personal social capability-300dpiPersonal and social capability | WE-work and enterprise-300dpiWork and enterprise |
| ***What are we learning to do (WALT):*** Model and represent strategies to add and subtract fractions with the same denominator.Add and subtract fractions, included mixed numerals, with the same or related denominators.Recognise the need for tonnes to measure mass.Record masses using abbreviations (t, kg and g). |
| ***Adjustment:*** | **Post Assessment Highlighted**  |
| **TEACHING AND LEARNING ACTIVITIES** | **REG** |
| **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| ***What I’m Looking For (WILF):***  | ***What I’m Looking For (WILF):***  | ***What I’m Looking For (WILF):***  | ***What I’m Looking For (WILF):***  | ***What I’m Looking For (WILF):***  |
| **Lesson Breakers** | **Lesson Breakers** | **Lesson Breakers** | **Lesson Breakers** | **Lesson Breakers** |
| **Introduction** | **Introduction**  | **Introduction** | **Introduction**Introduce the key vocabulary used in recording metric mass by discussing these prefixes: milli - thousandth ofcenti - hundredth of kilo - 1000 wholes These prefixes are used with measurements. They tell us how much of something we have. The prefixes milli and centi tell us there is less than one whole.Milli means a thousandth of; centi means a hundredth of; kilo means 1000 wholes. A kilometre means 1000 metres and kilogram means 1000 grams.Use concrete examples of equivalence in mass to illustrate each unit. | **Introduction****Problem Solving** Students complete problems similar to: **Mass** Estimate and place in order the following: a standard family car a million cubic centimetres of water a team of international male rugby players (15 players) enough potatoes to make chips to feed everyone in the school for a week. Students solve problems involving different units of mass, eg find the total mass of three items weighing 50 g, 750 g and 2.5 kg  |
| **Body** | **Body*** Play the game Coloured Fractions. Coloured Fractions may be played as a whole class activity, in pairs or small groups.
* This activity links closely with the Stage 3 Crossing the Wall activity described on page 52 of Fractions: pikelets and lamingtons.

Equipment * green dice (numerator) labelled:

http://www.schools.nsw.edu.au/learning/7-12assessments/naplan/teachstrategies/yr2011/images/nn_numb_frde_16.jpg* blue dice (denominator) labelled:

http://www.schools.nsw.edu.au/learning/7-12assessments/naplan/teachstrategies/yr2011/images/nn_numb_frde_17.jpg* one gameboard for 2 students

http://www.schools.nsw.edu.au/learning/7-12assessments/naplan/teachstrategies/yr2011/images/nn_numb_frde_18.jpgTake turns to throw the dice. Colour in the equivalent of the fraction represented by the dice. Record each fraction as the game is played. The first pair to colour the entire game board is the winner. At the completion of the game, students add the fractions to check that they total 6.  | **Body** | **Body**Discuss how to convert between kilograms and grams. Students practise converting from grams to kilograms and kilograms to grams.http://www.schools.nsw.edu.au/learning/7-12assessments/naplan/teachstrategies/yr2011/images/nn_meas_mass_01_02.jpgIn pairs, students play 'Top Heavy'.Prepare a set of cards (see example); each card has a mass written on it in either grams or kilograms. Cards are shuffled and dealt face down to each player. Players each turn over a card; the player who turned over the card with the heavier mass, scores one point.Play continues until all cards have been played.The player with the highest score wins the game. | **Body*** Students weigh and record each item in their lunch box. Express each item in grams. Total the number of grams of their lunch. Compare with other students. *Note:* ensure the students have access to scales that can accurately measure small masses in grams; lunches which have been ordered at the school canteen will need to be collected early to be available for the activity.
* *A*sk students to use kitchen scales at home to find the mass of their breakfast and dinner, then calculate the total mass of food eaten in a day.
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| **Conclusion**<http://fen.com/student>activities/MathSplat/mathsplat.htm | **Conclusion** | **Conclusion** | **Conclusion**<http://www.bbc.co.uk/education/mathsfile/shockwave/games/animal.html> | **Conclusion****School bags full** Students in groups of four or five find the average mass of their full school bags. This measurement is used to calculate the mass of all bags in the class. Students predict the mass of all bags in the school. *H*ow many teachers’ bags or baskets make a tonne?  |
| **Resources**<http://fen.com/student>activities/MathSplat/mathsplat.htm | **Resources*** Coloured Fractions. (Game from Picklets and Lamingtons)
* Dice
* Fraction wall (template)
 | **Resources** | **Resources*** ‘Top Heavy’
* Converting sheet
* <http://www.bbc.co.uk/education/mathsfile/shockwave/games/animal.html>
 | **Resources*** School bags
* Lunch boxes
* Scales/ balance
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| **Reflection/Check In** | **Reflection/Check In** | **Reflection/Check In** | **Reflection/Check In** | **Reflection/Check In** |