 FSHo1CEC Accommodation costs: buying and renting

MG1H-1 uses mathematics and statistics to evaluate and construct arguments in a range of familiar contexts

MG1H-2 analyses representations of data in order to make predictions

MG1H-3 makes predictions about everyday situations based on simple mathematical models

MG1H-5 interprets the results of measurements and calculations and makes judgements about reasonableness, including the conversion to appropriate units

MG1H-6 makes informed decisions about financial situations likely to be encountered post-school

MG1H-9 chooses and uses appropriate technology to organise information from a range of practical and everyday contexts

MG1H-10 uses mathematical argument and reasoning to evaluate conclusions drawn from other sources, communicating a position clearly to others.

| Content | Teaching Strategies | Resources |
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|  | Moving Out  Students are likely to underestimate the costs of moving out of their current home to live by themselves or in a shared arrangement.  Starter: watch the video (30 sec) “Goodbye family, hello bills”  Brainstorm in pairs or small groups the costs associated with moving out / living in your own place.  Capture these ideas as a class - save them for later reference (e.g. take a photo, or save from an IWB).  You may wish to scaffold this task for students by breaking down costs in categories, e.g.  housing, food and groceries, entertainment and holidays (e.g. movies, TV subscription), work expenses (e.g. travel, lunch)  “Moving Out” (7 min) discusses some of these costs and related issues. | Video: Goodbye family, hello bills  <http://mths.co/4209>  Video: Moving Out  <http://mths.co/4210> |
|  | Choosing your place  Using real estate web-sites (or local papers) students choose properties to rent and buy. At this stage, students will not necessarily make “sensible” choices, so the teacher may need to have more realistic options available. | Real Estate web-sites:  [realestate.com.au](http://www.realestate.com.au/)  [Domain](http://www.domain.com.au/)  Worksheet for recording findings:  FSHo1CEC Moving Out.docx |
| Calculate the affordability of accommodation based on income, using generalised rules such as monthly payments should not be greater than a certain percentage of income; and the amount to be borrowed should not exceed a certain multiple of the annual household income | “Housing affordability relates to a person’s ability to pay for their housing.”  “The common definition of ''mortgage stress'' is this: if you spend more than 30 per cent of your pre-tax income on your home loan repayments, then you are officially in the danger zone.” | Source:  [Housing affordability](http://www.ahuri.edu.au/themes/housing_affordability), AHURI  Source:  [Avoid the stress zone on your home loan](http://www.smh.com.au/money/borrowing/avoid-the-stress-zone-on-your-home-loan-20120714-222t9.html), SMH |
|  | Activity  Create a “Housing Affordability” calculator using Excel |  |
|  | Mapping Australia: Housing affordability  Have students use this interactive to investigate affordability in a few areas. Consider exploring the various combinations presented in the interactive (single vs couple and unit vs house). Students might consider the local area, a regional area, a city area. (clicking on the map works if the postcode for an area is unknown)  Note: this interactive “presumes a lender will provide a mortgage to the borrower (based on current lending rates) of 3.5 times their gross salary”. | Resource (from SBS News)  Mapping Australia: Housing affordability  Teacher: <http://mths.co/4211>  Students: <http://gomaths.net/4211> |
|  | **Discussion Stimulii**  These articles may help in describing the need to determine affordability.  “... in 1982, the ABS Survey of Income and Housing revealed that 168,000 or 10% of home buyers spent more than 30% of their gross household income on housing costs. Nearly 30 years later in 2011 these numbers had soared to 640,000, equivalent to 21% of all home buyers.” | Discussion Stimulii:  [The facts on Australian housing affordability](http://theconversation.com/the-facts-on-australian-housing-affordability-42881), The Conversation |
|  | The articles give the example of a paramedic who lives one hour from his workplace in order to afford his home.  The article includes an interactive “Where a nurse can afford to buy in Sydney”. | [Housing affordability crisis has essential workers fleeing Sydney](http://www.smh.com.au/nsw/housing-affordability-crisis-has-essential-workers-fleeing-sydney-20150707-gi70bl.html), SMH |
|  |  | [Loan repayments soar as Sydney's housing affordability slumps](http://www.smh.com.au/nsw/loan-repayments-soar-as-sydneys-housing-affordability-slumps-20151030-gkmwxj.html), SMH |
| calculate the costs involved in purchasing a house or unit, including stamp duty, mortgage application fees, and conveyancing | Upfront costs  Using the upfront costs calculator, students could complete a table (like the scaffolded worksheet) to investigate a number of scenarios. Where possible, use the unit and house selected to buy in the earlier activity. | What would my upfront costs be?  Commonwealth Bank  Teacher: <http://mths.co/4213>  Students: <http://gomaths.net/4213>  Worksheet (completed):  FSHo1CEC Upfront Costs.docx  Office of State Revenue  [Transfer of land or business calculator](https://www.apps08.osr.nsw.gov.au/erevenue/calculators/landsalesimple.php) (Stamp Duty)  [About transfer of land or business duty](http://www.osr.nsw.gov.au/taxes/transfer-land/about) - includes a section on Calculating duty with a rates and thresholds table.  Article: [Tallying up all the costs of buying a home](http://www.yourmortgage.com.au/article/tallying-up-all-the-costs-of-buying-a-home-79472.aspx) (Your Mortgage) |
|  | In order to show the true costs, it would be worth mentioning the First Home Owner Grant scheme in NSW. In 2015 this scheme offers a $15,000 grant, reducing to $10,000 on 1 January 2016. | Information:  [First Home Owner Grant scheme](http://www.osr.nsw.gov.au/grants/fhog), Office of State Revenue |
| calculate the costs involved in renting a house or unit, including the cost of a rental bond |  | Article: [Ultimate Rental Guide](http://advice.realestateview.com.au/renting/ultimate-renting-guide/)  realestateview.com.au  Factsheet: [Bond](http://www.tenants.org.au/factsheet-03-bond)  Tenants NSW |
| use published tables from financial institutions to determine monthly repayments on a reducing balance home loan |  |  |
| use monthly repayment tables for a home loan to calculate the total amount to be repaid and the total interest to be paid |  |  |
| construct a graph of changes in interest rates over a given period of time | EXCEL  Indicator Lending Rates  Indicator Lending Rates - F5  <http://www.rba.gov.au/statistics/tables/#interest-rates> | [Chart Pack - Interest Rates](http://www.rba.gov.au/chart-pack/interest-rates.html)  Reserve Bank of Australia  <http://www.rba.gov.au/chart-pack/interest-rates.html>  Graph #3 is the Australian Cash Rate  (Downloaded (20/08/2015) as:  australian-cash-rates\_150805.gif)  and Australian Home Lending Rates, Graph #17  (Downloaded (20/08/2015) as:  australian-housing-lending-rates\_150805.gif)  Data Source: Reserve Bank of Australia  Cash Rate Target <http://www.rba.gov.au/statistics/cash-rate/>  <http://www.tradingeconomics.com/australia/interest-rate>  <http://www.rba.gov.au/chart-pack/interest-rates.html> |
| construct tables and graphs using online loan calculators to investigate the implications of changes to interest rates, changes in minimum repayments, and changes in the length of the total repayment period for a loan. | <http://www.nab.com.au/personal/loans/home-loans/loan-calculators/extra-repayments-calculator> |  |

Additional Links: [MathsLinks FSHo1CEC: Accommodation costs: buying and renting](https://mathslinks.net/browse/fsho1cec)

Assessment

Household Finance Quiz, via Curriculum Support (Downloaded as hfquiz.swf or hfquiz.pdf)

<https://www.youtube.com/watch?v=XGs5HeqMPOE>

from

<https://www.moneysmart.gov.au/borrowing-and-credit/home-loans>

Pay Calculator

<http://www.paycalculator.com.au/>

Budgeting

MoneySmart has an online interactive Budget Planner (Teacher: <http://mths.co/4212> and Student: <http://gomaths.net/4212> ). Also available is an Excel version of the Budget Planner (see budget-planner\_moneysmart.xls).