Activity / Project / Activity Title: **Getting a Driver's Licence**

VCAL Unit Name: Numeracy Skills	**Student Name:**
VCAL Unit Level: Senior **Teacher Name:**	**Project/Activity Dates:** **Evidence Final Due Date:**

Overview Of The Activity/Project/Theme.

Student Roles And Responsibilities In Relation To The Task.

You will need to

- submit a project report that includes response to all questions and investigations set
- obtain copies of maps that cover
  - your house and the Vic Roads depot in East Geelong
  - your house and Wangaratta
- access the internet to at least
  - find out how much it costs for a driver's licence test, and how long it takes
- find out approximately how much tax could be taken out when working 10 hours per week at $11.50 per hour
- find out the current cost of unleaded petrol in Geelong

Level Of Teacher Support

I will be available to

- Provide practice examples of the types of calculations you will require,
- assist with any difficulties you encounter,
- interview you to discuss your estimates, how you obtained them and how they compared to your final calculations.

References

Vic Roads
www.vicroads.vic.gov.au/Home

Corio Bay Senior College
VCAL Numeracy Skills Senior 2007

Students must demonstrate competency in ***six out of the seven*** learning outcomes to be credited with this unit

Activity / Project / Activity Title: **Getting a Driver's Licence**

VCAL Unit Name: **Numeracy Skills**	**Student Name:**
VCAL Unit Level: **Senior**	**Project/Activity Dates:**
Teacher Name:	**Evidence Final Due Date:**

Student Evidence Required	Teacher Sighted (Sign)	Learning Outcome Criteria Covered Please Tick						
		LO 1	LO2	LO 3	LO4	LO5	LO6	LO7
Completed and accurate calculations and estimations for costs, times, distances and fuel set out clearly.				✓		✓		
Routes marked out on maps for testing routes; Melbourne & Geelong				✓				
Routes marked out on maps for trip from home to Vic Roads				✓				
Routes marked out on maps for trip to Wangaratta				✓				
Instructions for a Melbourne driving test route.				✓				
Instructions for a Geelong driving test route.				✓				
Locations given marked on maps				✓				
Drawn sketch map from wrecker to workshop.				✓				
Compass bearings for given locations				✓				
Estimates of times, distances and costs				✓				
Explanation of estimates and factors that effect them				✓				
Teacher checklist of estimates and route descriptions				✓				
		Outcome 1 **Numeracy for Practical Purposes — Design** Can translate between 2-dimensional and 3-dimensional real life objects and their diagrammatic representations for the purposes of measurement, design,	**Outcome 2** **Numeracy for Practical Purposes — Measuring** Can use measurements, the metric system and simple measurement formulae for the purpose of interpreting, making or purchasing materials in practical	**Outcome 3** **Numeracy for Personal Organisation — Location** Can use the conventions of distance, location and direction to read, create and use maps.	**Outcome 4** **Numeracy for Interpreting Society — Data** Can create, use and interpret tables and graphs, and calculate and use averages, in order to reflect on information of relevance to self, work or community.	**Outcome 5** **Numeracy for Interpreting Society — Numerical Information** Can use, and calculate with, fractions, percentages, decimals, rates and large numbers, to reflect on aspects of personal, work or community life.	**Outcome 6** **Numeracy for Knowledge — Further Study in Maths (formulae)** Can develop and use simple formulae to describe and represent relationships between variables in real life contexts.	**Numeracy for Knowledge — Further Study in Maths (problem solving)** Can use simple mathematical problem solving techniques to interpret and solve straightforward mathematical problems.

Outcome 3
Numeracy for Personal Organisation — Location
Can use the conventions of distance, location and direction to read, create and use maps.

Competence in all assessment criteria must be demonstrated.
Not all assessment criteria need to be met in the one assessment task or activity.

Assessment Criteria	Activity	Assessment/Evidence
Mathematical knowledge and techniques (a) estimate and determine distances on maps and street directories.	Students to estimate distances marked out on a maps with scales: • Melbourne test route x2 • Student choice of a route in Melbourne • Geelong test route • From student house to Vic Roads Geelong • Route to wreckers & workshop • Route to Wangaratta.	**Project Report with a response to each section and which includes:**
(b) apply rates concepts such as speed, fuel consumption rates, price rates, to practical calculations of time and cost related to distances to be travelled.	Students calculate: • Cost of driving lessons • Timings of driving lessons • Driving times from speed & distances on map with wreckers and Wangaratta. • Fuel use and cost from distance, speed and distances	• Completed and accurate calculations and estimations for costs, times, distances and fuel set out clearly. • Routes marked out on maps for testing routes; Melbourne & Geelong • Routes marked out on maps for trip from home to Vic Roads • Routes marked out on maps for trip to Wangaratta
(c) estimate and measure angles relating to direction and use this to describe the location of places, e.g. N, NE or bearings such as N50oE.	Students estimate compass bearings to and from locations given on maps, expecting N, NE etc. • Travelling between wreckers, Azz's house and friends workshop • Trip to and from Wangaratta	• Instructions for a Melbourne driving test route. • Instructions for a Geelong driving test route. • Locations given marked on maps • Drawn sketch map from wrecker to workshop. • Compass bearings for given locations • Estimates of times, distances and costs
(d) describe routes using oral or written instructions or using accurate sketch maps with scale and direction details.	Students • give written instructions for o a driving test route they devise in Melbourne. o A driving test route they devise in Geelong. • Mark out on a map o a driving test route for Melbourne o a driving test route fro Geelong o a driving test route for Geelong o a route from home to Vic Roads Geelong • students draw a sketch map from wrecker to friends place	• Explanation of estimates and factors that effect them • Teacher checklist of estimates and route descriptions
Language		

Outcome 3

Numeracy for Personal Organisation — Location

Can use the conventions of distance, location and direction to read, create and use maps.

Competence in all assessment criteria must be demonstrated.
Not all assessment criteria need to be met in the one assessment task or activity.

Assessment Criteria	Activity	Assessment/Evidence
(e) interpret and use symbols for distance, speed and rates, including ratio notation, visual keys, terminology, such as km/h, kph, litres/100km, $/l.	Students use • map scales • speed as km/hour and kph • fuel use as litres/100km • Cost as $ per hour • Compass for North on map, NE etc • Time; am; pm.	Students • Accurately reading relevant symbols within information used in this project • Accurately using the appropriate symbols in their responses • Accurately using language in discussions with teacher: teacher checklist
Interpretation (f) decide whether descriptions are accurate by self checking and observations of other interpretations.	Students check • route description • estimates with teacher observation & discussion	Teacher checklist of • accurate discussion of route • estimations based on some logic and evaluation
(g) evaluate calculations through a combination of estimation techniques and reference to prior experience and knowledge.	Students are asked to respond to their estimations by considering how the estimations & calculation results compare and could be effected by other factors: • times for testing • costs, times and distances for the Wangaratta trip • time to drive to wreckers	Teacher checklist of • consideration of other factors and how these could effect results & estimations

Outcome 5
Numeracy for Interpreting Society — Numerical Information
Can use, and calculate with, fractions, percentages, decimals, rates and large numbers, to reflect on aspects of personal, work or community life.

Competence in all assessment criteria must be demonstrated.
Not all assessment criteria need to be met in the one assessment task or activity.

Assessment Criteria	Activity	Assessment/Evidence
Mathematical knowledge and techniques (a) determine an appropriate mathematical procedure to solve the problem.	Students will select the correct method/operation to make calculations of time, cost and distances given speeds, map scales, rates of pay and fuel consumption.	• Completed and accurate calculations and estimations for costs, times, distances and fuel set out clearly.
(b) make a rough estimate to numerical calculations.		
(c) select the appropriate arithmetical operation and accurately calculate with large whole numbers, fractions, decimals, percentages, rates and ratios.	Students will choose appropriate operations, but only with decimals and rates.	
(d) convert between equivalent values for fractions, decimals, percentages and ratios, choosing a form appropriate to the calculation		
Language (e) read and write decimal numbers such as point two four five, 0.245, two and five thousandths, 2.005, etc.		
(f) use appropriately the common words, phrases and symbols for mathematical procedures such as percentages, rates, and arithmetical operations.		
Interpretation (g) check the reasonableness of calculations against initial rough estimates and interpret the meaning of the result in terms of personal and/or social consequences.	Students are asked to respond to their estimations by considering how the estimations & calculation results compare could be effected by other factors: • times for testing • costs, times and distances for the Wangaratta trip • time to drive to wreckers	Teacher checklist of • consideration of other factors and how these could effect results & estimations