

How can we access money overseas?

Year 8

This unit is aligned with the following Australian Curriculum learning areas:
Mathematics, supported by English and Economics and Business



ASIC's



MONEYSMART Teaching



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How can we access money overseas?

Year level	8
Duration of unit	9.5 hours*
Learning areas	Mathematics focus supported by English and Economics and Business

Unit description

Maria's Japanese language class is going on an excursion to Japan. Among other activities, they will visit the moneyless markets in Kaminoseki, a small town in the Kumage District. These are markets where people exchange items but no money is used. Maria will take some cash with her for expenses, but her grandmother wants Maria to be able to access money overseas. This would be especially important if there was an emergency.

Maria's friends and family are excited about her trip. A few friends have asked her to buy some products for them while she is in Japan – but only if the products are cheaper there than in Australia. Maria is wondering how she can work out the relative prices.

In this unit, students explore the concepts of currency and currency conversion in the context of overseas travel. This context provides opportunities for several mathematical investigations, including some homework and assessment.

By the end of the unit, students will have investigated the need for currency, performed currency conversions and performed calculations related to common fees and charges on financial products. In addition, a second task challenges students to work out the advantages and disadvantages of operating in markets that do not use money.

They will conclude the unit by preparing a visual presentation to provide information to people who are preparing to travel overseas.

As an alternative: this unit could be adapted to the study of other countries, languages, and cultures.

Knowledge and understandings

- ▶ Understanding currency conversions allows us to compare prices across currency systems.
- ▶ Exchange rates can vary over time. Understanding rates, fees and charges helps us to evaluate financial products.
- ▶ There are different ways of accessing money overseas.

Prerequisite skills

To undertake this unit, students require an understanding of:

- ▶ ratios and percentages – increases and decreases
- ▶ profit and loss
- ▶ exchange rates.

Note

Concepts and ideas explored in MoneySmart Teaching: Keiren's Coin (Year 2 Mathematics) could be applied to enhance this unit.

** Timings are provided as a guide only. Teachers will tailor the activities to suit the capabilities and interests of their class. The unit and student worksheets can be adapted to your needs.*

Links

The following table provides the relevant links to the Australian Curriculum learning areas, achievement standards and general capabilities.

Australian Curriculum learning areas and achievement standards	
Mathematics	Content descriptions <ul style="list-style-type: none"> ▶ Strand: Number and Algebra <ul style="list-style-type: none"> — Sub-strand: Number and place value <ul style="list-style-type: none"> ○ Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183) — Sub-strand: Real numbers <ul style="list-style-type: none"> ○ Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies (ACMNA187) ○ Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188) — Sub-strand: Money and financial mathematics <ul style="list-style-type: none"> ○ Solve problems involving profit and loss, with and without digital technologies (ACMNA189)
	Achievement standards <p>By the end of Year 8, students solve everyday problems involving rates, ratios and percentages. They describe index laws and apply them to whole numbers. They describe rational and irrational numbers. Students solve problems involving profit and loss. They make connections between expanding and factorising algebraic expressions. Students solve problems relating to the volume of prisms. They make sense of time duration in real applications.</p> <p>They identify conditions for the congruence of triangles and deduce the properties of quadrilaterals. Students model authentic situations with two-way tables and Venn diagrams. They choose appropriate language to describe events and experiments. They explain issues related to the collection of data and the effect of outliers on means and medians in that data.</p> <p>Students use efficient mental and written strategies to carry out the four operations with integers. They simplify a variety of algebraic expressions. They solve linear equations and graph linear relationships on the Cartesian plane. Students convert between units of measurement for area and volume. They perform calculations to determine perimeter and area of parallelograms, rhombuses and kites. They name the features of circles and calculate the areas and circumferences of circles. Students determine the probabilities of complementary events and calculate the sum of probabilities</p>
English	Content descriptions <ul style="list-style-type: none"> ▶ Strand: Literacy <ul style="list-style-type: none"> — Sub-strand: Interacting with others <ul style="list-style-type: none"> ○ Use interaction skills for identified purposes, using voice and language

conventions to suit different situations, selecting vocabulary, modulating voice and using elements such as music, images and sound for specific effects (ACELY1808)

- Plan, rehearse and deliver presentations, selecting and sequencing appropriate content, including multimodal elements, to reflect a diversity of viewpoints (ACELY1731)
- Sub-strand: Creating texts
 - Create imaginative, informative and persuasive texts that raise issues, report events and advance opinions, using deliberate language and textual choices, and including digital elements as appropriate (ACELY1736)

Achievement standards

By the end of Year 8, students understand how the selection of text structures is influenced by the selection of language mode and how this varies for different purposes and audiences. Students explain how language features, images and vocabulary are used to represent different ideas and issues in texts.

Students interpret texts, questioning the reliability of sources of ideas and information. They select evidence from the text to show how events, situations and people can be represented from different viewpoints. They listen for and identify different emphases in texts, using that understanding to elaborate on discussions.

Students understand how the selection of language features can be used for particular purposes and effects. They explain the effectiveness of language choices they make to influence the audience. Through combining ideas, images and language features from other texts, students show how ideas can be expressed in new ways.

Students **create texts for different purposes, selecting language to influence audience response. They make presentations and contribute actively to class and group discussions, using language patterns for effect. When creating and editing texts to create specific effects, they take into account intended purposes and the needs and interests of audiences.** They demonstrate understanding of grammar, select vocabulary for effect and use accurate spelling and punctuation.

Economics and Business

Content descriptions

► Strand: Knowledge and Understanding

- The ways markets in Australia operate to enable the distribution of resources, and why they may be influenced by government (ACHEK027)
- The traditional markets of Aboriginal and Torres Strait Islander communities and their participation in contemporary markets (ACHEK028)

► Strand: Skills

- Sub-strand: Questioning and research
 - Develop questions about an economic or business issue or event, and plan and conduct an investigation or project (ACHES032)
 - Gather relevant data and information from a range of digital, online and print sources (ACHES033)
- Sub-strand: Interpretation and analysis

- Interpret data and information displayed in different formats to identify relationships and trends (ACHES034)
- Sub-strand: Economic reasoning, decision-making and application
 - Generate a range of alternatives in response to an observed economic or business issue or event, and evaluate the potential costs and benefits of each alternative (ACHES035)
 - Apply economics and business knowledge, skills and concepts in familiar and new situations (ACHES036)
- Sub-strand: Communication and reflection
 - Present evidence-based conclusions using economics and business language and concepts in a range of appropriate formats, and reflect on the consequences of alternative actions (ACHES037)

Achievement standards

By the end of Year 8, students explain how markets operate and recognise why governments may influence the market's operation. They explain the rights and responsibilities of consumers and businesses in terms of financial and economic decision-making. They explain why different types of businesses exist and describe the different ways businesses can respond to opportunities in the market. Students describe influences on the way people work and factors that may affect work in the future.

When researching, students develop questions and gather relevant data and information from different sources to investigate an economic or business issue. They interpret data to identify trends and relationships. **They propose a range of alternative responses to an issue and evaluate the costs and benefits of each alternative. They apply economics and business knowledge, skills and concepts to familiar and unfamiliar problems. Students develop and present evidence-based conclusions using appropriate texts, subject-specific language and concepts.** They identify the effects of an economic or business decision and the potential consequences of alternative actions.

General capabilities

Typically, by the end of Year 8 students:

Literacy

- ▶ Navigate, read and view a variety of challenging subject-specific texts with a wide range of graphic representations
- ▶ Interpret and evaluate information, identify main ideas and supporting evidence, and analyse different perspectives using comprehension strategies
- ▶ Compose and edit longer sustained learning area texts
- ▶ Use pair, group and class discussions and formal and informal debates as learning tools to explore ideas, test possibilities, compare solutions, rehearse ideas and arguments in preparation for creating texts
- ▶ Plan, research, rehearse and deliver presentations on learning area topics, sequencing selected content and multimodal elements for accuracy and their impact on the audience
- ▶ Use wide knowledge of the structure and features of learning area texts to comprehend and compose texts, using creative adaptations of text structures and conventions for citing others
- ▶ Recognise and use aspects of language to suggest possibility, probability, obligation and conditionality

Numeracy	<ul style="list-style-type: none"> ▶ Solve complex problems by estimating and calculating using efficient mental, written and digital strategies ▶ Identify and justify 'best value for money' decisions ▶ Visualise and describe the proportions of percentages, ratios and rates ▶ Solve problems using simple percentages, ratios and rates
ICT	<ul style="list-style-type: none"> ▶ Locate, retrieve or generate information using search facilities and organise information in meaningful ways ▶ Design and modify simple digital solutions, or multimodal creative outputs or data transformations for particular audiences and purposes following recognised conventions ▶ Independently select and operate a range of devices by adjusting relevant software functions to suit specific tasks, and independently use common troubleshooting procedures to solve routine malfunctions
Creative & Critical Thinking	<ul style="list-style-type: none"> ▶ Pose questions to probe assumptions and investigate complex issues ▶ Clarify information and ideas from texts or images when exploring challenging issues ▶ Draw parallels between known and new ideas to create new ways of achieving goals ▶ Generate alternatives and innovative solutions, and adapt ideas, including when information is limited or conflicting ▶ Predict possibilities, and identify and test consequences when seeking solutions and putting ideas into action ▶ Justify reasons for decisions when transferring information to similar and different contexts ▶ Differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions ▶ Explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified
Personal & Social Capability	<ul style="list-style-type: none"> ▶ Assess the extent to which individual roles and responsibilities enhance group cohesion and the achievement of personal and group objectives

Cross-curriculum priorities

Aboriginal and Torres Strait Islander Histories

Diversity of learners

The Australian Curriculum is based on the assumptions that each student can learn and that the needs of every student are important. These needs are shaped by individual learning histories and abilities as well as personal, cultural and language backgrounds, and socio-economic factors. Teachers may adapt or plan additional learning activities depending on the multiple, diverse and changing needs of their students.

Proficiency strands

- ▶ **Understanding**
 - Students understand the concept of a profit, the practical need for calculations involving rates and the ways that financial products can be compared.
- ▶ **Fluency**
 - Students perform currency conversions and other rates problems in a practical context. They perform calculations involving whole numbers, percentages and decimals.
- ▶ **Problem Solving**
 - Students solve mathematical problems related to travel and model practical situations where rates problems are solved.
- ▶ **Reasoning**
 - Students compare financial products and justify recommendations including both quantitative and qualitative considerations.

National Consumer and Financial Literacy Framework

(Note: the student learnings in the National Consumer and Financial Literacy Framework are divided into, and are applicable over, bands covering two chronological years.)

Dimension	Student learnings by the end of Year 8
Knowledge and understanding	<ul style="list-style-type: none"> ▶ Research, identify and discuss the rights and responsibilities of consumers in a range of 'real-life' contexts ▶ Analyse and explain the range of factors affecting consumer choices ▶ Identify where to access reliable information and advice concerning the rights and responsibilities of consumers and business
Competence	<ul style="list-style-type: none"> ▶ Determine and compare the actual cost of using different ways of paying for goods and services such as cash, credit, lay-by and loans ▶ Justify the selection of a range of goods and services in a variety of 'real-life' contexts ▶ Convert from one currency to another in 'real-life' contexts ▶ Explore the pros and cons of a range of payment options for goods and services such as: cash, debit card, credit card, direct debit, PayPal, BPay, pre-pay options, phone and electronic funds transfer ▶ Identify and explain marketing strategies used in advertising and social media to influence consumer decision-making
Responsibility and enterprise	<ul style="list-style-type: none"> ▶ Explain how individual and collective consumer decisions may have an impact on the broader community and/or the environment ▶ Apply informed and assertive consumer decision-making in a range of 'real-life' contexts ▶ Recognise that people have different ways of living and expectations according to their values and/or financial situation ▶ Recognise that their ability to make informed decisions about personal finance and financial products is strengthened by finding and evaluating relevant information and accessing reliable advice ▶ Demonstrate awareness that family, community and socio-cultural values and customs can influence consumer behaviour and financial decision-making

Sequenced teaching and learning activities

Introducing	Resources
<p>Activity 1 An introduction to foreign currencies (60 minutes)</p> <p>Students reflect on their existing knowledge of currencies and currency exchange, both in writing and through a class discussion. This task allows the delivery of the unit to be based on students' prior knowledge and experience.</p>	<ul style="list-style-type: none"> ▶ Computer access ▶ Video: 'First time in Japan – 7 travel tips' (3:41) https://www.youtube.com/watch?v=GEgzgqX8KWA ▶ Worksheet 1: Foreign currency ▶ Examples of different currencies – students could be asked to bring these from home
<p>Assessment: Diagnostic</p> <p>Students record what they know about exchanging Australian dollars for another currency. Students provide an example of their experiences of currency exchange. The mathematical concepts required for this unit are assessed and revised as necessary.</p>	

Developing	Resources
<p>Activity 2 Bartering and the moneyless market (120 minutes)</p> <p>Students experience the act of exchange as they participate in a moneyless class market and barter for goods. This provides a stimulus for student reflection on the concepts of exchange and value.</p> <p>A range of mathematical problems involving rates is encountered in this context.</p>	<ul style="list-style-type: none"> ▶ Computer access ▶ Video: Why We Use Money – youtube.com/watch?v=RqgakSViVwI ▶ Items to be brought from home to be exchanged in the moneyless market ▶ Worksheet 2: Maria and the moneyless market
<p>Activity 3 Buying and selling Australian dollars and Japanese yen (90 minutes)</p> <p>Students investigate the concept of a currency exchange rate and perform currency exchange calculations in a practical context. They compare financial products, including the consideration of fees, and use calculations to assist financial decision-making.</p>	<ul style="list-style-type: none"> ▶ Computer access ▶ Video: Travel Tips: Foreign Money? What not to do when exchanging your money – youtube.com/watch?v=ST-ToFVsMMM ▶ Article: Japanese yen (https://www.japan-guide.com/e/e2196.html) ▶ Online currency converters (e.g. https://www.oanda.com/currency/converter/ or xe.com/ucc/) ▶ Worksheet 3: Swapping Australian dollars for Japanese yen ▶ Worksheet 4: To buy or not to buy ▶ Digital activity: Money and People – moneysmart.gov.au/teaching/teaching-resources/digital-activity-money-and-people

Developing	Resources
<p>Assessment: Formative</p> <p>Collect 'Worksheet 3: Swapping Australian dollars for Japanese yen' to determine students' progress and further learning needs.</p>	
<p>Activity 4 Travel money (120 minutes)</p> <p>Students research financial products that allow money to be accessed while travelling overseas, and compare these products by performing calculations and considering features, fees, terms and conditions.</p>	<ul style="list-style-type: none"> ▶ Worksheet 5: Accessing money overseas ▶ Computer access/or printed copies of Choice and Sydney Morning Herald articles ▶ Choice articles: Travel money choice.com.au/reviews-and-tests/money/banking/travel-money.aspx ▶ International Traveller article: 'How to manage your travel money' https://www.internationaltraveller.com/how-to-manage-your-travel-money/ ▶ Examples of credit cards, debit cards, traveller's cheques, various travel money cards

Culminating	Resources
<p>Activity 5 Travel advice (180 minutes)</p> <p>Students provide advice to travellers in relation to exchanging currency and accessing money overseas. This task encourages students to reflect on the unit and allows teachers to assess students' understanding.</p>	<ul style="list-style-type: none"> ▶ Worksheet 6: Advice to travellers ▶ Materials for creating posters, brochures, PowerPoint presentations etc. – card, A3 paper, scissors, glue, coloured paper, etc.
<p>Assessment: Summative</p> <p>Criteria for assessment are provided for this task. Both the mathematical and financial concepts of this unit are assessed.</p>	

Assessment rubric

This rubric aligns with Year 8 Australian Curriculum: Mathematics, which is the focus of this unit. Teachers may wish to expand to include other learning areas. This rubric is intended as a guide only. It can be modified to suit teachers' needs and to be integrated into existing assessment systems.

Teachers may also wish to collect the worksheets as work samples for individual student folios.

Student's name: _____

Skill	Relevant content description(s)	Relevant activities and worksheets	Competent	Developing at level	Needs further development	Notes
The student can select and apply mathematical operations in a practical context	Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183)	Activity 2 Worksheet 2 Activity 3 Worksheets 3 and 4 Activity 4 Worksheet 5	The student consistently selects the correct mathematical operations, and uses efficient mental or written strategies with and without a calculator to obtain correct solutions	The student generally selects the correct mathematical operations, and uses appropriate mental or written strategies with and without a calculator to obtain solutions that are mostly correct	The student sometimes selects correct mathematical operations, and attempts to use a mental or written strategy with and without a calculator to obtain solutions	
The student can calculate a percentage of an amount of money	Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies (ACMNA187)	Activity 4 Worksheet 5	The student shows all working for calculating a percentage fee and determines the correct answer with and without a calculator	The student shows some working for calculating a percentage fee and determines an answer with and without a calculator. An error may occur	The student shows little or no working for calculating a percentage fee and requires teacher guidance and support to determine an answer with and without a calculator	

Assessment rubric (cont)

Skill	Relevant content description(s)	Relevant activities and worksheets	Competent	Developing at level	Needs further development	Notes
The student can calculate and apply rates used for bartering and currency conversions	Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188)	Activity 2 Worksheet 2 Activity 3 Worksheets 3 and 4 Activity 4 Worksheet 5	The student calculates and applies rates correctly to solve a range of problems. The student justifies their solutions clearly and accurately	The student calculates and applies rates to solve simple problems and has some success attempting others. The student provides some valid justification of their solutions	The student attempts a few problems using simple rates with some success but justification is unclear	
The student can calculate profit from business transactions	Solve problems involving profit and loss, with and without digital technologies (ACMNA189)	Activity 3 Worksheet 3	The student correctly determines overall profit (\$ and %) from calculations of monies received from buying and selling currency, including fees where applicable	The student determines an overall profit (\$ and %) from calculations of monies received from buying and selling currency, but is incorrect. The student may not have included fees where applicable and/or has calculated % profit incorrectly	With teacher guidance, the student calculates monies received from buying and selling currencies, but is unsuccessful working with profit	

Assessment rubric (cont)

Skill	Relevant content description(s)	Relevant activities and worksheets	Competent	Developing at level	Needs further development	Notes
<p>The student can provide and present information about using money overseas to advise people preparing to travel</p> <p>The student includes mostly accurate and useful information that addresses all criteria</p> <p>The student provides calculations that demonstrate a satisfactory knowledge and understanding of concepts, facts and procedures</p> <p>The student presents in a form that is suitable for the given purpose and audience</p>	<p>Suggested Summative Assessment</p> <p>ACMNA183 ACMNA187 ACMNA188 ACMNA189</p>	<p>Activity 5</p> <p>Worksheet 6 (includes assessment criteria)</p>	<p>The student provides accurate and useful information/explanation about:</p> <ul style="list-style-type: none"> – exchanging currency in Australia – accessing money while overseas – the needs of a variety of travellers – fees – considerations involved in making financial decisions <p>The student provides at least three different, accurate calculations that clearly demonstrate and explain the conversion between Australian dollars and other currencies and the inclusion of fees.</p> <p>The student presents in a form that is highly effective for the given purpose and audience</p>	<p>The student provides mostly accurate and useful information about:</p> <ul style="list-style-type: none"> – exchanging currency in Australia – accessing money while overseas – the needs of a variety of travellers – fees – considerations involved in making financial decisions <p>The student provides at least three different calculations that demonstrate and explain the conversion between Australian dollars and other currencies and the inclusion of fees, but there are errors.</p> <p>The student presents in a form that is suitable for the given purpose and audience</p>	<p>The student provides some information about some of the following:</p> <ul style="list-style-type: none"> – exchanging currency in Australia – accessing money while overseas – the needs of a variety of travellers – fees – considerations involved in making financial decisions <p>The student provides one or two calculations that attempt to demonstrate the conversion between Australian dollars and other currencies, but there are major errors.</p> <p>The student presents in a form that is lacking in detail for the given purpose and audience</p>	

Teacher notes

Activity 1

An introduction to foreign currencies (60 minutes)

This unit is about overseas travel and how we can exchange Australian dollars for currency from other countries. Students will complete activities based on the scenario below.

Scenario

Maria's Japanese language class is going on an excursion to Japan. Among other activities, they will visit the moneyless markets in Kaminoseki, a small town in the Kumage District. These are markets where people exchange items but no money is used. Maria will take some cash with her for expenses, but her grandmother wants Maria to be able to access money overseas. This would be especially important if there was an emergency.

Maria's friends and family are excited about her trip. A few friends have asked her to buy some products for them while she is in Japan – but only if the products are cheaper there than in Australia. Maria is wondering how she can work out the relative prices.

- ▶ Set the scene with the video Video: 'First time in Japan – 7 travel tips' (3:41)
<https://www.youtube.com/watch?v=GEgzqgX8KWA>
- ▶ Ensure that students have a sound understanding of the language of money and personal finances as they arise during learning. It is common for students to have misunderstandings about specific words and what they mean. Be aware that some words have different meanings depending on the context in which they are used, e.g. **value**, **conversion**, **equivalence** and **barter**.
- ▶ Students record what they know about converting Australian dollars into another currency. Students include information about mathematical calculations required and an example of where (if) they have used a foreign currency. This could be an online transaction.
- ▶ In a class discussion, explore currencies from different countries ensuring the discussion includes:
 - exchange rates and reasons why they vary over time
 - the number system used by some well-known foreign currencies, e.g. multiples of 10, 1000, 12
 - the 'value' of different currencies compared to the Australian dollar
 - developing a mathematical generalisation when dealing with purchases made in another country.
- ▶ Complete **Worksheet 1: Foreign currency**.
- ▶ Collect and review students' written and discussion responses to identify what students know about exchanging currencies with Australian dollars. (**Worksheet 1: Foreign currency**)
- ▶ Invite students to bring in coins from other countries. Students show these coins to the class and discuss the names of these coins and their value in relation to both the Australian dollar and to other coins in the currency they are a part of.

- ▶ Revision of students' ability to calculate percentages of quantities, convert between percentages and decimals, multiply whole numbers by decimals, divide whole numbers by decimals and solve problems involving rates will assist students to complete the remaining tasks.

Note

Worksheet 1: Foreign currency can be treated as a discussion.

Activity 2

Bartering and the moneyless market (120 minutes)

Scenario

Maria's teacher explained that in some countries there are markets where people exchange goods directly without using any money. Maria and her friends were intrigued by the moneyless market that they would see in Japan. Maria wondered what it would be like to visit one of these markets. How would they work?

- ▶ The decreasing use of cash in society can make it harder for students to conceptualise exchange and value. The moneyless market allows students to explore these concepts and to appreciate the need for currency.
- ▶ During this activity, students could work in groups and trade within their group. Alternatively, groups of students could trade in front of the class and exchanges could be discussed. This would allow the teacher to bring out the ideas of relative value (e.g. three pens are worth one notepad) and also to emphasise some of the advantages and disadvantages of this type of exchange.
- ▶ Show the video 'Bartering System' – [youtube.com/watch?v=RggakSViVwI](https://www.youtube.com/watch?v=RggakSViVwI)
- ▶ Describe and clarify the terms 'bartering' and 'bartering systems'. Students investigate the historical significance of bartering, including the significance of bartering in Aboriginal and Torres Strait Islander communities and the use of rum as a unit of exchange in early colonial Sydney. Identify examples of formal and informal bartering used today, e.g. the use of shells by island communities. See MoneySmart Teaching: 'Bertie's Socks (Year 1 Mathematics, Activity 6: Too many shells) – a practical activity that demonstrates using pasta shells as currency for bartering.
- ▶ **A class moneyless market**
 1. Students find unwanted items at home for bartering and bring them to class to trade with their classmates.
 2. Set up a market and ask students to trade their items in the market.
 3. Students discuss the following questions with a friend:
 - Do you feel that you ended up with more valuable items or fewer valuable items?
 - Do all people consider the value of an item to be the same?
 - What are some ways that the value of an item can be decided?
 - Was it easy or difficult to trade items? What made it easy or difficult?
 4. Students work with a partner to complete **Worksheet 2: Maria and the moneyless market**.
- ▶ Optional activities include conducting a class debate on 'Bartering is a better way of obtaining goods and services than using currency' or a class discussion on the advantages and disadvantages of using currency over bartering.

Activity 3

Buying and selling Australian dollars and Japanese yen (90 minutes)

Scenario

Maria's class was excited that they would be visiting the moneyless market, but some students were looking forward to doing some 'real' shopping in Japan.

'What if there is something I would like to buy in Japan as a souvenir? I might need some local currency', her friend Tony said.

Maria agreed. In fact, some of her family and friends had already been asking Maria if she could buy some Japanese items for them.

After presenting the scenario, show students the video 'Travel tips – Foreign Money? What not to do when exchanging your money' – [youtube.com/watch?v=ST-ToFVsMMM](https://www.youtube.com/watch?v=ST-ToFVsMMM). Discuss the main tips and ideas presented in the video.

Task 1: Exploring currencies

Students work with a partner and answer the following questions about currency:

- ▶ Read the article: Japanese yen (<https://www.japan-guide.com/e/e2196.html>). The currency used in Japan is the yen. What is the symbol for the yen? What three-letter abbreviation for 'Japanese yen' is sometimes used?
- ▶ Use an internet search 'Yen to Australian dollars' and complete this equation:
1 yen = _____ Australian dollars.
- ▶ Use an internet search 'Australian dollars to yen' and complete this equation:
1 Australian dollar = _____ yen.
- ▶ Which is worth more: 1 Australian dollar or 1 yen? Students devise a mathematical generalisation as a ratio or percentage, comparing one to the other. A generalisation is useful for doing a quick comparison of the cost of specific items.
- ▶ Investigate other currencies using an online currency converter (e.g. <https://www.oanda.com/currency/converter/> or xe.com/ucc/). Choose a few currencies from different countries and find how much of each currency is worth 100 Australian dollars.
- ▶ Look at the digital resource 'Money and people' – moneysmart.gov.au/teaching/teaching-resources/digital-activity-money-and-people and record how much 2 litres of milk costs in the various currencies. Learners compare the prices of similar items around the world. Discuss.

Task 2: Exchange rates: buying and selling

The **'buy' rate** applies when local currency is exchanged for foreign currency.

The **'sell' rate** applies when foreign currency is exchanged for local currency.

Note

Students could read the Wikipedia article 'Japanese yen' (en.wikipedia.org/wiki/Japanese_yen) and use an online currency converter (e.g. oanda.com/currency/converter/ or xe.com/ucc/) for this task.

- ▶ Student tasks:
 - Find and name three businesses in Australia where Australian dollars can be exchanged for yen and one place in Japan where people can exchange other currencies for yen.
 - What is the exchange rate at each of these businesses? In other words, how many yen would people get for an Australian dollar? Check and record these findings over a couple of days.
 - Record any fees or charges that might be incurred at these different places.
- ▶ Students could do the following to assist them with the tasks:
 - Check the Australia Post website for exchange rates. Different currencies can be purchased from most post offices. This means that people can order Japanese yen.
 - Check a local bank – in many areas, the exchange rates are often displayed in the front window
 - Look for currency conversion shops in their area, or in the city or nearest airport
 - Identify some Japanese banks with English language websites that publish exchange rates.
- ▶ Class discussion:
 - What were the best 'buy' rates for buying foreign currency (i.e. getting more of that currency for the dollar)?
 - Which businesses offered the best 'buy' rates for buying foreign currency?
 - What types of fees and charges were involved?
 - What were the highest rates for buying foreign currency (i.e. getting less of that currency for the dollar)?
 - Which businesses offered the highest rates for buying foreign currency?
 - What fees or charges were involved?
 - Why would exchanging currency at the airport be more expensive than exchanging currency at your local bank?
 - Did anyone find a rate that matched the rate they found online in **Task 1** on page 15, without any extra fees or charges? Why couldn't this rate be found?
 - It's often cheaper to swap currency overseas, but some people still make sure that they buy some foreign currency before they leave Australia. Why would they choose to do this?
 - Check the same site/location/business on two different days. What did you notice about the exchange rates?
- ▶ Students work with a partner. As a class, read the example in **Worksheet 3: Swapping Australian dollars for Japanese yen**. It may be necessary to demonstrate additional transactions.
 - Working with their partner:
 - students read and complete **Worksheet 3: Swapping Australian dollars for Japanese yen** to learn how currency conversion works. They submit this worksheet to their teacher.
 - students complete **Worksheet 4: To buy or not to buy**
- ▶ Review the solutions to **Worksheet 4: To buy or not to buy** with the class.

Activity 4

Travel money (120 minutes)

Scenario

Maria's grandmother wanted to make sure that Maria could access extra money in Japan if she needed to.

'This could be very important – especially if there is an emergency', Maria's grandmother told her.

Maria agreed. She decided to choose a good travel money card that would allow her to access cash in Japan.

- ▶ Students explore what they know about travel money cards and supplement their knowledge as necessary.
- ▶ When travelling overseas there is a variety of ways to access money to pay for goods and services. As money continues to evolve in the way that it is stored and accessed, over time the financial products available for overseas travel have also changed. Whereas, once travellers would purchase 'travellers cheques' in the currency of the country they were travelling to, many travellers now choose to purchase cash before heading overseas, to use for their initial purchases and/or airport transport costs, and then withdraw cash from compatible ATMs while overseas.
- ▶ The option to withdraw cash from ATMs now includes the purchase of a travel money card, which often allows access to more than one currency. There are two main categories of travel money cards: prepaid and credit/debit. There are advantages and disadvantages with both.
- ▶ Work through the example on **Worksheet 5: Accessing money overseas** with the class.
- ▶ Students complete **Worksheet 5: Accessing money overseas**. Read online or print:
 - Choice articles on 'Travel money' at choice.com.au/reviews-and-tests/money/banking/travel-money.aspx
 - International Traveller article: 'How to manage your travel money' <https://www.internationaltraveller.com/how-to-manage-your-travel-money/>
- ▶ Class activity: Investigate a travel money transaction card
 - Locate information on a travel money card, e.g. the Commonwealth Bank Travel Money Card, although any travel money card could be used.
 - Review the information identified and organise it into a class chart. Choose a few of the following categories: prepaid/debit/credit, currencies available, card costs, fees, maximum withdrawal amount.
 - Review the information on a travel money card.
 - Record the information they find on the class chart.
- ▶ Group discussion: students work in groups to answer the following questions:
 - What are the pros and cons of the various travel money transaction cards on the class chart?
 - Describe three different types of travellers, and identify the travel money transaction card that would be appropriate for each type. Explain why that card would be the best option.

Activity 5

Travel advice (180 minutes)

- ▶ Students complete the task on **Worksheet 6: Advice to travellers** using the criteria for assessment provided on the worksheet.
- ▶ Students present their completed task to the class.

Worksheets

Name: Class: Date:

Worksheet 1: Foreign currency

What I know about converting A\$ into a foreign currency:

An example of converting A\$ into a foreign currency familiar to me:

What I would like to know about converting A\$ into a foreign currency:

Worksheet 2: Maria and the moneyless market

Worked examples

Maria watched some members of her class exchanging items at the moneyless markets. She observed the following trades:

TRADE 1

- Zena obtained 5 pears by trading 3 apricots.
- Daniel obtained 18 pears by trading 12 apricots.
- Who gained better value for their apricots – Zena or Daniel?

Calculations:

There are many ways to approach this question.

The easiest way is to notice that 12 is a multiple of 3.

$$3 \times 4 = 12$$

So Daniel 'paid' four times as much as Zena.

Next, we check if Daniel received four times as much as Zena.

$$5 \times 4 = 20$$

Daniel received only 18 pears, so he received less than four times as much as Zena.

Answer:

Zena gained better value than Daniel.

TRADE 2

- Fiona obtained 10 figs by trading 4 oranges.
- Sandy obtained 16 figs by trading 6 oranges.
- Who gained better value for their oranges – Fiona or Sandy?

Calculations:

This time, there are no convenient multiples as in the previous example, so we will need to use decimal numbers.

Fiona 'paid' 4 oranges to obtain 10 figs.

$$4 \div 10 = 0.4$$

So each fig 'cost' Fiona 0.4 oranges.

Sandy 'paid' 6 oranges to obtain 16 figs.

$$6 \div 16 = 0.375$$

So each fig 'cost' Sandy 0.375 oranges.

Notice that for each fig, Sandy 'paid' less than Fiona.

Answer:

Sandy gained better value than Fiona.

Name: Class: Date:

Worksheet 2: Maria and the moneyless market (cont)

Your turn

Who gained the better value in the following transactions that Maria saw?

- John obtained 3 bananas by trading 2 apricots.
- Joanne obtained 5 bananas by trading 4 apricots.
- Who gained better value for their apricots – John or Joanne?

Calculations:

Answer:

- Gerri obtained 4 tomatoes by trading 3 capsicums.
- Harish obtained 13 tomatoes by trading 9 capsicums.
- Who gained better value for their capsicums – Gerri or Harish?

Calculations:

Answer:

Name: Class: Date:

Worksheet 2: Maria and the moneyless market (cont)

- George obtained 3 peaches by trading 7 apples.
- Dominic obtained 8 peaches by trading 18 apples.
- Who gained better value for their apples – George or Dominic?

Calculations:

Answer:

Maria watched Allie trade 3 plums for 2 apricots. At this exchange rate, how many plums would Allie have needed if she wanted to trade for 14 apricots?

Calculations:

Answer:

Name: Class: Date:

Worksheet 2: Maria and the moneyless market (cont)

Here are some more exchanges that Maria saw.

- George traded 5 carrots for 10 tomatoes.
- George then traded 2 of his tomatoes for 3 eggs.
- Joanne traded 20 carrots for 50 eggs.

Maria was a bit concerned about Joanne's trade. When she compared Joanne's trade to George's trades, she felt that perhaps Joanne should have received more for her 20 carrots.

Explain why Maria felt this. Include calculations to show the relative prices of carrots, eggs and tomatoes in terms of the other products.

Calculations:

Answer:

Name: Class: Date:

Worksheet 3: Swapping Australian dollars for Japanese yen

Read the information below and answer the questions.

SalvoBank and the Little Ex exchange shop both exchange yen for Australian dollars over the counter, but they calculate the price in different ways.

- ▶ SalvoBank charges an \$8 conversion fee.
- ▶ The current exchange rate used by SalvoBank when **we buy yen** is JPY1 = AUD0.01276.

Worked examples

Suppose we wanted to buy 1000 yen.

$$1000 \times 0.01276 = 12.76$$

So, 1000 yen is worth 12.76 Australian dollars at this exchange rate.

- ▶ The current exchange rate used by SalvoBank when **we sell yen** is JPY1 = AUD0.0125.

Suppose we wanted to exchange 7360 yen for Australian dollars.

$$7360 \times 0.0125 = 92$$

So, 7360 yen is worth 92 Australian dollars at this exchange rate.

There is an \$8 fee.

So, we would receive \$84.

Name: Class: Date:

Worksheet 3: Swapping Australian dollars for Japanese yen (cont)

Your turn

1. How many Australian dollars would you need to pay to receive:

2500 yen?

Show calculations by writing the equations in the boxes

8600 yen?

2. What is the cost per yen for each of the conversions in question 1?

3. How many Australian dollars would you receive if you paid:

1000 yen?

20000 yen?

Worksheet 3: Swapping Australian dollars for Japanese yen (cont)

4. What is the profit made by SalvoBank if it buys 10000 yen from one customer and then sells 10000 yen to another customer?

5. The Little Ex currency exchange shop doesn't charge a currency conversion fee. Instead they offer a more expensive rate.

a. Suppose the exchange rate when we buy yen from Little Ex is
 $\text{JPY}1 = \text{AUD}0.014$.

How many Australian dollars would you need to pay to receive:

JPY2500?

JPY8600?

b. What is the cost per yen for each of the conversions in question a?

Name: Class: Date:

Worksheet 3: Swapping Australian dollars for Japanese yen (cont)

c. Suppose the exchange rate when we sell yen to Little Ex is
JPY1 = AUD0.0104.

How many Australian dollars would you receive if you exchanged:

JPY1000?

JPY20000?

d. What is the profit made by the Little Ex currency exchange shop if it buys
10000 yen from one customer and then sells 10000 yen to another customer?

Worksheet 4: To buy or not to buy

Read and answer each question.

- ▶ Show your calculations in the boxes provided.
- ▶ Assume that the exchange rate is JPY1 = AUD0.012

1. Maria's friend has asked her to buy some packets of Yuhisu biscuits in Japan. In Australia, each packet costs \$4.50. In Japan, each packet costs 380 yen.
 - a. Are the biscuits cheaper in Japan?
 - b. Would it be more profitable for Maria to buy the biscuits in Australia or Japan?

Calculations:

Answer:

2. Maria's cousin has asked her to buy a Protoko necklace in Japan. In Australia, the necklace costs \$400. In Japan, it costs 24000 yen.
 - a. Is the necklace cheaper in Japan?
 - b. Would it be more profitable for Maria to buy the necklace in Australia or Japan?

Calculations:

Answer:

Name: Class: Date:

Worksheet 4: To buy or not to buy (cont)

3. Maria has budgeted \$20–\$25 to buy a picture frame as a present for her friend. She has looked at picture frames in Australia, but she couldn't find one within that price range that she liked. She thought she might be able to find one in Japan. What is Maria's budgeted price range in yen?

Calculations:

Answer:

Worksheet 5: Accessing money overseas

Maria has three options that allow her to access extra money in Japan.

Option 1

Maria's bank has told her that she can access money from her account using her regular card at some ATMs in Kyoto. She will be charged a 3% currency conversion fee (in other words, she will be charged a fee equal to 3% of the money withdrawn), plus an additional \$5 fee each time she withdraws money overseas.

The exchange rate offered by her bank is JPY1 = AUD0.0101.

For example, if she wanted to withdraw 10000 yen:

$$10000 \times 0.0101 = 101$$

So, 10000 yen is worth 101 Australian dollars at this exchange rate.

There is a 3% currency conversion fee, so we increase the cost by 3%.

$$103\% \text{ of } 101$$

$$= 1.03 \times 101$$

$$= 104.03$$

There is also a \$5 fee.

So, Maria's bank balance would decrease by \$109.05 (to the nearest 5 cents).

1. By how much would Maria's bank balance decrease if she withdrew 30000 yen?

2. If Maria withdraws 10000 yen, how much is she actually paying for each yen? (In other words, what is the actual cost in Australian dollars per yen?)

Worksheet 5: Accessing money overseas (cont)

3. If Maria withdraws 30000 yen, how much is she actually paying for each yen?

Option 2

Prizard offers a travel card. It costs \$10 to activate the card, and each time Maria loads money onto the card she will be charged a fee that is equal to 2% of the money loaded. There are no currency conversion fees, but the exchange rate is not as generous as Maria's bank. There is also a monthly fee of \$5 and the minimum term is 2 months.

The exchange rate offered by Prizard is $\text{JPY}1 = \text{AUD}0.0107$.

Suppose Maria loads $\text{JPY}20000$ onto the card, and she cancels the card after 2 months.

1. At the exchange rate offered by Prizard, how many Australian dollars would be worth $\text{JPY}20000$?

2. Calculate 2% of your answer to question 1. This is the fee that Maria pays when she loads $\text{JPY}20000$ onto the card.

Worksheet 5: Accessing money overseas (cont)

3. How much would Maria pay altogether (including all of the fees and charges?)

4. What would be the cost per yen? (Remember it will be more than \$0.0107 because of the fees and charges?)

Option 3

Sagus also offers a travel card. There is a 3% currency conversion fee (in other words, a fee that is 3% of the amount being converted from one currency to another), and a \$100 establishment fee. If there is still money on the card when Maria finishes her trip, it will cost \$50 to have this money deposited into her bank account. There is also a \$4 charge each time she makes a withdrawal in Japan.

The exchange rate offered by Sagus is $JPY1 = AUD0.011$.

Suppose Maria loads JPY20000 onto the card and makes three withdrawals in Japan totalling JPY3800, so when she gets home she needs to have the extra money on the card deposited into her bank account.

1. How much would JPY20000 be worth at the exchange rate offered by Sagus?

Name: Class: Date:

Worksheet 5: Accessing money overseas (cont)

2. Calculate the currency conversion fee.

3. How much would Maria pay altogether (including all of the fees and charges)?

4. What would be the cost per yen?

Worksheet 6: Advice to travellers

What advice about using money overseas would you give to people who are preparing to travel?

1. You will need to provide information that will:
 - ▶ help them to make smart decisions about:
 - exchanging currency in Australia before they travel
 - accessing money while they are overseas
 - ▶ help them perform currency conversion calculations. (You will need to write your own currency conversion problems and demonstrate how they can be solved.)
2. You can present this information in the form of:
 - ▶ a poster
 - ▶ an internet site
 - ▶ a brochure
 - ▶ a radio or TV segment (with some supplementary print material showing how to perform currency conversion calculations)
 - ▶ a PowerPoint presentation
 - ▶ or any other method you can think of.
3. You will need to address the following assessment criteria in your presentation:
 - ▶ Accurate and useful information about exchanging currency in Australia is provided.
 - ▶ Accurate and useful information about accessing money while overseas is provided.
 - ▶ The needs of a variety of travellers are considered.
 - ▶ Fees are explained.
 - ▶ The considerations involved in making financial decisions are included.
 - ▶ At least three currency conversion calculations are demonstrated and explained.
 - ▶ At least one of these three calculations demonstrates how to take into account additional fees.
 - ▶ At least one of the calculations involves conversion between Australian dollars and another currency that is not the Japanese yen.

Solutions

Worksheet 1

Students record individual personal responses/thoughts to the questions.

Worksheet 2

Calculations:

$$2 \times 2 = 4$$

$$2 \times 3 = 6$$

Joanne paid twice as much as John and received only 5 bananas. Therefore, John gained the better value.

Calculations:

$$3 \times 3 = 9$$

$$3 \times 4 = 12$$

Harish paid three times as much as Gerri but received more tomatoes. Therefore, Harish gained the better value.

Calculations:

George: $7 \div 3 = 2.3$ apples per peach

Dominic: $18 \div 8 = 2.25$ apples per peach

Dominic gained the better value because he 'paid' less per peach than George.

Calculations:

$$14 \div 2 = 7$$

3 plums were traded for 2 apricots, so 21 plums are needed to trade for 14 apricots.

Calculations:

George traded 5 carrots for 10 tomatoes, so 1 carrot = 2 tomatoes

George traded 2 tomatoes for 3 eggs, so 1 carrot = 3 eggs

Based on his trading, George would receive 60 (20×3) eggs for 20 carrots.

Joanne traded 20 carrots for 50 eggs, therefore Maria's concern about Joanne's trade was correct.

Worksheet 3

1. $0.01276 \times 2500 \div \31.90 (Note – Worked example hasn't included the \$8 conversion fee for this type of exchange, but this fee is charged by banks. When included, the answer is \$39.90)
 $0.01276 \times 8600 = \$109.74$ (+ \$8 fee = \$117.74)
2. $\$39.90 \div 2500 = \$0.01596/\text{yen}$
 $\$117.74 \div 8600 = \$0.01369/\text{yen}$
3. $1000 \times 0.0125 - \$8 \text{ fee} = \4.50
 $20000 \times 0.0125 - \$8 \text{ fee} = \242
4. Bank pays customer 1: $10000 \times 0.0125 = \$125$, but customer is charged \$8 fee, so bank pays out \$117
 Banks receives from customer 2: $10000 \times 0.01276 = \$127.60$ plus \$8 fee = \$135.60
 Bank's profit = $\$135.60 - \$117 = \$18.60$
5. **Little Ex exchange shop**
 - a. $2500 \times 0.014 = \$35$
 $8600 \times 0.014 = \$120.40$
 - b. $\$35 \div 2500 = \$0.014/\text{yen}$
 $\$120.40 \div 8600 = \$0.014/\text{yen}$
 - c. $1000 \times 0.0104 = \$10.40$
 $20000 \times 0.0104 = \$208$
 - d. Bank pays customer 1: $10000 \times 0.0104 = \$104$
 Bank receives from customer 2: $10000 \times 0.014 = \$140$
 Profit = $\$140 - \$104 = \$36$

Worksheet 4

1. $380 \times 0.012 = \$4.56$, so the biscuits are dearer in Japan
 $380 \text{ yen} = \$4.56$, so it is better to buy the biscuits in Australia at \$4.50
2. $24000 \times 0.012 = \$288$, so the necklace is cheaper in Japan
 $24000 \text{ yen} = \$288$ so it is better to buy the necklace in Japan
3. If $\text{JPY}1 = \$0.012$
 Let $\text{JPY}x = \$20$, so $x = 20 \div 0.012$
 Therefore, $\$20 = 1667 \text{ yen}$, approximately
 Let $\text{JPY}x = \$25$, so $x = 25 \div 0.012$
 Therefore, $\$25 = 2083 \text{ yen}$, approximately
 Therefore, Maria's budgeted price range would be 1667–2083 yen, approximately

Worksheet 5**Option 1**

1. $30000 \times 0.0101 = \$303$

Increase the cost by 3%: $1.03 \times 303 = \$312.10$

Add the fee: $\$312.10 + \$5 = \$317.10$

So, Maria's bank balance would decrease by \$317.10

2. Using the answer from the worked example, Maria pays \$109.05 for withdrawing 10000 yen

Actual cost = $\$109.05 \div 10000 = \0.010905 per yen

3. Actual cost = $\$317.10 \div 30000 = \0.01057 per yen

Option 2

1. $20000 \times 0.0107 = \$214$

2. $2\% \times \$214 \times \4.28 (\$4.30)

3. Total cost = $\$214 + \$10 + \$4.30 + \$5 \times 2 = \$238.30$

4. Cost per yen = $\$238.30 \div 20000 = \0.011915 per yen

Option 3

1. $20000 \times 0.011 = \$220$

2. Conversion fee = $3\% \times 220 = \$6.60$

3. Total cost = $\$220 + \$6.60 + \$100 + \$50 + \$4 \times 3 = \388.60

4. Cost per yen = $\$388.60 \div 20000 = \0.01943 per yen

Worksheet 6

Students present advice/information about using money overseas for people preparing to travel. See worksheet and Assessment rubric for criteria.