



Australian Government

Royal Australian Mint

# Investigating Australian Coins

## Lower Primary Unit of Work



## **INTRODUCTION**

In the early years of schooling, students begin to learn about money and financial mathematics by exploring Australian coins. They learn to recognise, describe and order coins according to their values and experiment with counting small coin collections. Children are often curious about money and how it works. This unit of work will encourage their curiosity and assist in building students' knowledge about Australia's coins.

### **The unit of work**

There are five lessons in the unit. Each one can be completed in a standard 'lesson', or may require several, depending on your class. Each lesson contains specified learning outcomes, a list of required resources (including activity sheets) and step-by-step instructions.

The lessons follow a 'whole class introduction', 'group work', 'whole class conclusion' format. Each lesson will begin with a whole class shared activity followed by three small group work activities which are provided. These could be completed as rotations within one lesson or over several lessons. The lesson concludes with a whole class plenary session where learning is discussed and consolidated. This may take the form of a class discussion, partner discussion or a game.

Fast finishing / extension ideas are also included to complement the unit.

## **LINKS TO THE AUSTRALIAN CURRICULUM (V8.3)**

### **Mathematics**

#### **Year 1**

##### **Number and algebra**

Money and financial mathematics

- Recognise, describe and order Australian coins according to their value (ACMNA017)  
Number and place value
- Develop confidence with number sequences to and from 100 by ones from any starting point.  
Skip count by twos, fives and tens starting from zero (ACMNA012)
- Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015)

## **Year 2**

### **Number and algebra**

Money and financial mathematics

- Count and order small collections of Australian coins and notes according to their value (ACMNA034)

Number and place value

- Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)

### **Assessment**

There are multiple opportunities for formative assessment during the lessons. Students will record their learning in their maths books and teachers are encouraged to work with small groups and take photographs to document learning. Contributions to the '**Coin KWL chart**' can also be used to assess learning.

At the end of the final lesson, a quiz is provided as a summative assessment option.

### **Create a class shop**

The extent to which children achieve successful learning outcomes is augmented by being immersed in the topic and given ample opportunity for play. This unit provides an excellent opportunity to create a shop area in your class where students can label items with price tags and practise using a cash register. This area can also be used to support learning in many of the lessons in this unit.

## LESSON 1: AUSTRALIAN COINS

### Learning outcomes

At the end of this lesson students will be able to:

- describe each of the Australian coins – focusing on colour, size, shape and images
- correctly use the terms 'heads', 'tails', and possibly 'obverse' and 'reverse'.

### Resources

- maths books to record learning
- several collections of Australian coins (if possible, use a set of real coins for the whole class introductory activity)
- 'Coin KWL chart' activity sheet
- 'Australian coins' activity sheet
- '\$ and c' activity sheet
- 'Look, cover, draw, check' activity sheet
- cloths to cover collections of coins

## LESSON STEPS

### Whole class introduction

Using the 'think, pair, share' strategy, ask students to brainstorm what they know about Australian coins. Record ideas on an enlarged copy of the 'Coin KWL chart' activity sheet. This sheet will be added to and reviewed at the end of each lesson during the unit of work.

Provide pairs or small groups of students with collections of Australian coins (make sure all coin denominations are included). Ideally, real coins should be used for this activity, but plastic replicas can be used. Ask students to touch and look at the coins. Describe them to their partner / group. How do they feel? What colour are they? What is on the coins? After a few minutes ask students to share what they have been discussing.

Explain that coins have two sides: heads (obverse) and tails (reverse). The obverse side always has an image of the reigning monarch while the reverse side varies. Ask students to describe what else is on the coins. Are there things that are common to all coins (e.g. does the word 'Australia' appear on all coins)?

## Small group activities

Organise students into small groups to undertake the following activities (these can also be completed as a whole class if you wish). Activities can be rotated throughout the lesson.

Activity 1: Students complete the '**Australian coins**' activity sheet.

Activity 2: Students complete the '**\$ and c**' activity sheet. When they finish, students can look for \$ symbols in catalogues and create a collage (individual or whole class). They could also practice drawing the symbols on a large piece of butcher's paper.

Activity 3: Students to complete the '**Look, cover, draw, check**' activity sheet.

## Whole class conclusion

Discuss what students have learnt about the coins. Return to the '**Coin KWL chart**' and record this information in the last column. What else would students like to learn about coins? Record this in the middle column.

Finish the lesson with a game of 'heads or tails' or 'which coin is missing?' using the instructions below.

Heads and tails – You will flip a coin. Students will make a prediction about whether the coin will land with the heads side facing up or the tails side facing up. If they think heads, they put both hands on their head. If they think tails, they put both hands on their bottom. The students that guess incorrectly are eliminated and the game continues until you have one winner.

Which coin is missing? – Place a set of coins on a table with the heads sides facing up and cover with a cloth. Secretly remove one coin from under the cloth. Remove the cloth and then have students identify which one is missing. Alternate each game with the tails side facing up and a combination of both heads and tails side up. This can be played as a whole class or in smaller groups.

## LESSON 2: LOWEST TO HIGHEST

### Learning outcomes

At the end of this lesson students will be able to:

- order the Australian coins from lowest to highest value.

### Resources

- maths books to record learning
- collections of coins
- 'Lowest to highest' activity sheet
- 'Coin mobile' sheet
- scissors
- glue
- string (you may wish to pre-cut this for students – see 'Coin mobile' sheet)
- masking tape
- 'Coin relay instructions' sheet
- 'Coin KWL chart' activity sheet (started in Lesson 1)

## LESSON STEPS

### Whole class introduction

Explore the numbers on the coins. Ask students to read them out while you write them on the board. Ask students how they could order the coins? They might suggest size or value. Explore all options, but finish by focusing on the value order. Students may argue that the one and two dollar coin are worth less than the five cent coin (as one and two are less than five) so you may need to explain to students that the one and two dollar coin are worth 100 cents and 200 cents.

Using coins, have pairs of students order the coins from lowest to highest value on the floor in front of them.

### Small group activities

Organise students into small groups to undertake the following activities (these can also be completed as a whole class if you wish). Activities can be rotated throughout the lesson.

Activity 1: Students complete the 'Lowest to highest' activity sheet.

Activity 2: Students use the 'Coin mobile' activity sheet to make a coin order hanging mobile. Instructions are found on the sheet.

Activity 3: Students to sort collections of coins in as many different ways as they can think of. Consider size, shape, colour, images etc., and then have them record their thinking in their maths book.

## Whole class conclusion

To finish the session, take the students outside for a game of coin relay (this can be played inside if required). Instructions for this game are provided on the 'Coin relay instructions' sheet.

As a class, add any new information or questions to the 'Coin KWL chart' started in Lesson 1.

## LESSON 3: WHICH IS WORTH MORE?

### Learning outcomes

At the end of this lesson students will be able to:

- recognise that coin value is not related to size
- indicate which coin is worth the most when two or more coins are selected.

### Resources

- maths books to record learning
- 'Which is worth more?' activity sheet
- 'Coin cards' you will need one or more sets, printed, laminated and cut out. A set has 36 cards (i.e. six of each coin), so you will need to photocopy six copies of this sheet per set.
- 'Card game ideas' sheet
- laminator
- scissors
- collections of coins
- bag or container to hold the coins
- 'Coin KWL chart' activity sheet (started in Lesson 1)

## LESSON STEPS

### Whole class introduction

Recap what was discussed in Lesson 2 (the value of each coin and how to order them from lowest to highest value). Reinforce the concept that \$1 = 100 cents and \$2 = 200 cents and discuss how the size and shape does not indicate value.

Allow students time to practice ordering the coins. Explain that the value links to what students already know about numbers (e.g. ten is more than five, 50 is more than 20 etc.).

Ask the class questions about the coins such as:

- Which coin has the highest value?
- Which coin has the lowest value?
- Which is worth more? Provide several examples for this one.

## Small group activities

Organise students into small groups to undertake the following activities (these can also be completed as a whole class if you wish). Activities can be rotated throughout the lesson.

Activity 1: Students complete the **'Which is worth more?'** activity sheet.

Activity 2: Students use the **'Coin cards'** to play one of the games on the **'Card game ideas'** sheet. Ideally, they should begin with **'Higher and lower'** or **'Up and down'**. Students will need extra support for this activity until they are comfortable with the rules of the games.

Activity 3: Using coins placed in a bag / container, students, in pairs, close their eyes and each pull a coin out. The person with the highest value coin wins a point with the first player to reach a score of seven the winner of the game.

## Whole class conclusion

For this activity, you will require an enlarged card of each coin (these can be made from the coin card sheets and then laminated).

Select two coin cards, hold them up and ask students to decide which one they think is worth more. Students can move to a designated side of the classroom to express their answer, or simply point to the coin they think is worth more. Give students the opportunity to come out the front and select two new cards.

As a class, add any new information or questions to the **'Coin KWL chart'** started in Lesson 1.

## LESSON 4: HOW MUCH DO I HAVE?

### Learning outcomes:

At the end of this lesson students will be able to:

- add collections of coins using skip counting strategies and addition skills
- use coins to make a specific total
- recognise that there is often more than one way to make a total.

### Resources

- maths books to record learning
- coins (including bags of single denomination and mixed denominations)
- bags or containers to hold coins
- 'How much do I have?' activity sheet
- 'Money box – level 1' activity sheet
- 'Money box – level 2' activity sheet
- 'Coin KWL chart' activity sheet (started in Lesson 1)

## LESSON STEPS

### Whole class introduction

Begin by having the whole class skip count by 5 or 10, clapping as you count. Count to 100. Do this again but this time, drop a coin into a bag each time you count. For example, if you are skip counting by 5, drop a five cent coin into a bag each time you count. Explain to students that this demonstrates how we can use our skip counting skills to help us count collections of coins. Try it with another number (e.g. if you have done 5, try 10 or 20).

Explain to students that we can also add collections of coins, of varying value, using our addition skills. Demonstrate a few simple examples of this to the class (e.g. 10 cents and 20 cents is the same as  $10+20$  which equals 30 cents). In pairs, provide students with a variety of coins and ask them to calculate how much their value adds up to. This is an opportunity to differentiate learning by providing larger collections for those students who can be challenged or smaller collections for students who require support.

### Small group activities

Organise students into small groups to undertake the following activities (these can also be completed as a whole class if you wish). Activities can be rotated throughout the lesson.

Activity 1: Students to complete the 'How much do I have?' activity sheet. This sheet provides practice at writing the value of a coin in words and numbers. Once they are finished, students can randomly select coins from a bag and record what they have selected.

Activity 2: Provide students with a bag of coins of single denominations (e.g. all 5c pieces or all 10c pieces). Ask students to use skip counting to work out the total value of the coins in the bag. They should record this in their maths book. This activity can be extended by providing mixed bags of coins.

Activity 3: Students to complete one or both levels of the 'Money box' activity sheet. Students will be asked to add the total value of the coins in each money box or to draw coins that total the value written underneath it.

### **Whole class conclusion**

Play a whole class game of 'Who can make it?' To do this write a money amount on the board then ask students (individually or in pairs) to use coins to make it. This can be a game of speed or you can extend students by asking 'who can make this total using the least number of coins?' or 'who can make this total using exactly four coins?' or 'who can make this total in three different ways?'

As a class, add any new information or questions to the '**Coin KWL chart**' started in Lesson 1.

## **LESSON 5: USING MONEY**

**Please note:** This lesson is slightly different in that all students will essentially be undertaking the same task in the 'small group' activity. However, there are three levels to choose from to ensure that students can be grouped according to learning needs. Alternatively, students can work through each level progressively.

### **Learning outcomes**

At the end of this lesson students will be able to:

- use addition skills to add the cost of multiple items
- identify the coins needed to make a total.

### **Resources**

- maths books
- coins
- catalogues
- items from the class shop (optional)
- '**Make the total**' activity sheet
- digital camera, phone or tablet to take photographs (optional)
- '**What's for lunch?**' activity sheet
- scissors
- glue
- '**Coin KWL chart**' activity sheet (started in Lesson 1)
- '**What did I learn?**' activity sheet

## LESSON STEPS

### Whole class introduction

Discuss how we use money in our lives. Students to share ideas. Provide students with copies of catalogues, allowing them to select an item that they would like to buy and costs less than \$5. Ask them to make the required total using coins. This can be done individually or in pairs.

This activity could also be undertaken using items from the class shop if one has been created.

### Small group activities

- Level 1: Students will make simple money totals using multiple coins. This can be done on the **'Make the total'** activity sheet or items could be selected from the class shop (in which case students should record their learning in their maths books or by taking photographs).
- Level 2: Students will complete the **'What's for lunch?'** activity sheet. They will answer the questions relating to the fictional canteen price list.
- Level 3: Students will use catalogues to cut out items, glue them into their books and record which coins they could use to pay for them. They should provide several ways of making each total. Have students add several items and show how they could make the combined total. This level may involve the rounding of totals.

### Whole class conclusion

As a class, complete the 'What we have learnt' column of the **'Coin KWL chart'** started in Lesson 1. Discuss any unanswered questions from the middle column.

Students then complete the **'What did I learn?'** activity sheet as a summative assessment task. This could also be completed in a subsequent lesson.

## FAST FINISHING / EXTENSION IDEAS

- Make a class mural of coin rubbings on a large sheet of butcher's paper.
- Make a class shop – students write price tags or make catalogues to promote items.
- Use the animal mask templates (with the activity sheets) to make a kangaroo, platypus or echidna mask.
- In pairs or small groups play:
  - Heads or tails
  - What coin am I? Describe the qualities / features of a coin to each other.
  - Higher or lower – in pairs, students take turns thinking of a coin or a total amount of money which their partner has to guess.
  - Card games using the coin cards.