Graph journal: What is a mine worth?

Screens 1 to 8

Name _____ Class _____ Date _____

My slow reveal graphs

Each graph starts as bare shapes. Write what you notice and what you wonder before anything is revealed. Write your prediction before the last part is revealed. When you can see the whole graph, write a headline of ten words or fewer that says what it shows.

	What I notice and what I wonder	The prediction question, and my prediction	My headline
1		One bar is far longer than the rest. Which resource do you think it is?	
2		The dark part of each bar is the share bought by one country. For the top two bars it is the same country. Which one?	
3		Only one line ends higher than it starts. Which resource do you think it is?	
4		Seven dots of one colour are bunched together in the north-west. What do you think is mined there?	
5		Both dots answer the question “How many years will it last?” Why do you think there are two answers?	
6		The three bars are an ore, the powder refined from it and the finished metal. Which metal do you think it is?	
7		The long bar is about 47,000 years. The mark at the right-hand end is a second length of time, too short to draw. How long do you think it is?	
8		How many of the 84 applications do you think were refused?	

What Australia sells

Screens 1 and 2

Mining’s share

Out of 100	My guess	The figure
Of every $100 Australia earns from exports, how much comes from resources?		
Of every $100 of goods and services Australia produces, how much comes from mining?		
Of every 100 people with a job in Australia, how many work in resources and energy?		

Tonnes and dollars

Copy the figures from the model on screen 2. Dollars a tonne = what it earned ÷ the tonnes exported.

Export in 2025–26	Earned ($ billion)	Tonnes exported	Dollars a tonne	Biggest buyer and its share
Iron ore				
Thermal coal				not given
Metallurgical coal				
Natural gas (LNG)				not given
Bauxite				not given
Alumina				
Crude oil and condensate				not given
Aluminium				
Copper				

Compare iron ore with copper. Use their tonnes, their dollars a tonne, their earnings and their buyers.

The next five years

What the six resources are expected to earn

Read the figures off slow reveal graph 3, in billions of 2026–27 dollars. Then work out each change as a percentage of the 2025–26 figure.

Resource	2025–26	2026–27	2027–28	2030–31	Change, 2025–26 to 2030–31 (%)
Iron ore					
Coal					
Natural gas (LNG)					
Copper					
Alumina and aluminium					
Crude oil					

Price times volume

In the model, set the report's projection for each export and copy the changes.

Export	Change in price (%)	Change in volume (%)	Earnings as a share of 2025–26 (%)
Iron ore			
Copper			
Thermal coal			
Natural gas (LNG)			
Crude oil			

Explain why iron ore is predicted to earn less by 2030–31 and copper is predicted to earn more. Use the graph and the model.

Deposits and reserves

Screens 4 and 5

My survey

Choose five resources in the model on screen 4. Record what the secondary source says about each one.

Resource	Where its deposits are	Reserves: how much, and how long	Uses

Reserve life

Reserve life = what is in the ground ÷ what is mined in a year.

Resource	Economic demonstrated resources	Mined in 2024	Years at that rate
Iron ore	58,522 million tonnes	954 million tonnes	
Copper	108.02 million tonnes	0.75 million tonnes	
Bauxite	3,969 million tonnes	100.5 million tonnes	

Assess the reserves of one resource. Say how much there is, how long it would last at today's rate, and what could make that answer wrong.

From ore to metal, and two cases

Bauxite to aluminium

One tonne of aluminium takes about five tonnes of bauxite or two tonnes of alumina. Work out what each would earn.

Stage	Tonnes for 1 tonne of metal	Dollars a tonne	What that amount earns ($)
Bauxite	5	67	
Alumina	2	486	
Aluminium	1	4,606	

Australia exports most of its bauxite and alumina before they are made into metal. Give one argument for making more aluminium in Australia and one argument against.

Juukan Gorge, Calga or both?

Statement	Juukan Gorge, Calga or both?	My evidence
A government minister or commission approved the project.		
Only the company could ask for the decision to be reviewed.		
A land council appealed, and a court heard all the evidence again.		
The decision treated the place as part of a connected cultural landscape.		
The place was destroyed.		
The place is now on a State Heritage Register.		

My assessment

Assess the impact of the Brockman 4 mine on the Aboriginal Cultural sites at Juukan Gorge. Say what was lost, who made the decision and what has changed since.

Assess the impact of quarrying on the Calga Aboriginal Cultural Landscape, and compare what happened at Calga with what happened at Juukan Gorge.

What is a mine worth? Write your assessment for the committee. Use evidence from at least four of your graphs and from both cases.