

# SCIENCE OF THE SNOWY SCHEME

## with Kirsten Banks

### GOING UNDERGROUND

#### Multiple choice questions

1

Where are Kirsten and Cameron?

CIRCLE ANSWER

- Guthega Power Station
- Blue Mountains Power Station
- Tumut 1 Power Station

2

How far underground is this power station?

CIRCLE ANSWER

- 3,000 metres
- 366 metres
- 30 metres

3

How much power is generated at Tumut 1 Power Station?

CIRCLE ANSWER

- 3,030 megawatts approx
- 330 megawatts approx
- 30 megawatts approx

#### Why build underground?

Use the word bank below to complete the description

two | low | Tumut 1 | energy | surface | tunnel | stable | water

\_\_\_\_\_ Power Station is situated between \_\_\_\_\_ dams in the Snowy Mountains. To generate as much \_\_\_\_\_ as possible out of the \_\_\_\_\_, the power station was positioned as \_\_\_\_\_ as it could be. The \_\_\_\_\_ rock was loose and unstable. This geological fact contributed to the decision to \_\_\_\_\_ in and construct the power station on \_\_\_\_\_ bed rock.



Tumut 1 Power Station

## Multiple choice questions | Tumut 1 Power Station

1

How many generators?

CIRCLE ANSWER

45

4

14

2

Situated near which town?

CIRCLE ANSWER

Cabramurra

Canberra

Tumut

3

Generates enough power for approximately how many homes?

CIRCLE ANSWER

300

30

30,000

5

How is Tumut 1 Power Station connected to the surface?

CIRCLE ANSWER

Tunnel

Tubes

Track

6

Tumut 1 Power Station is situated between how many dams?

CIRCLE ANSWER

Three

Two

Four

7

What colour are the generators?

CIRCLE ANSWER

Blue

Green

Orange

### Did you know?

#### Rock bolting

During construction of the Snowy Scheme, Snowy workers of the time further developed the technique of rock bolting. This provided a safer and cheaper alternative to concrete-lining for supporting rock in tunnel walls. Rock drill designs and drilling techniques also influenced the design of the modern-day masonry drill bit.



Rockbolts

## Design your own interconnected tunnel system

**Hint** - label your map either side view or top view

### Use the symbols in the legend to create your map

— RIVER

— TUNNELS

■ WATER STORAGE

⚡ UNDERGROUND POWER STATION

↑ POWER OR PUMPING STATION

**Top view (TV)** The top view is projected on the horizontal plane - a birds eye view

**Side view (SV)** The side view is projected on the profile plane

### My map of an interconnected tunnel system