

James and the gold rush

Information sheet – James

It is 1849. James left the east coast of America months ago. He has finally arrived in California in search of his fortune.

He now needs to stake his claim to an area of land by clearly marking its corner boundaries with stakes. All gold found inside the area will be his.

Gold is found in its **native** state, which means it is not combined with other elements. So James will not need to use a complicated chemical method to extract it from an ore.

Unfortunately for James, the gold is likely to be in very small pieces, mixed with sand, gravel and rocks. So he will need to find a way to separate out the gold and collect or 'recover' as much as possible.

There are three types of claim:

- river channel and bank
- hill side (along the sides of the river valley)
- hard rock.

The type of equipment James needs to extract the gold is different for each type of claim:

- pans to shake the mixture of gold, sand and gravel with water – the heavy gold particles settle to the bottom, while lighter materials such as sand, mud and gravel are washed over the side, leaving the gold behind
- high-pressure hoses to wash material from the sides of the valley
- sluices (channels) with barriers along the bottom to trap the heavier gold particles as water washes the mixture of soil and other materials through
- picks, shovels and mallets, and timber to prop up mine shafts
- equipment to crush rocks
- rockers, which work in a similar way to a sluice – water carrying sediment flows through it, while it is rocked like a cradle to sift out the gold. The rocker can deal with larger amounts of material than a pan.

The more gold that James is able to recover, the more money he will make by selling it. But he will also need to spend money on equipment to help him separate out the gold, and perhaps even pay people to help him. The money he has left over after this is his **profit**. If James is to make his fortune, he needs his profit to be as large as possible.