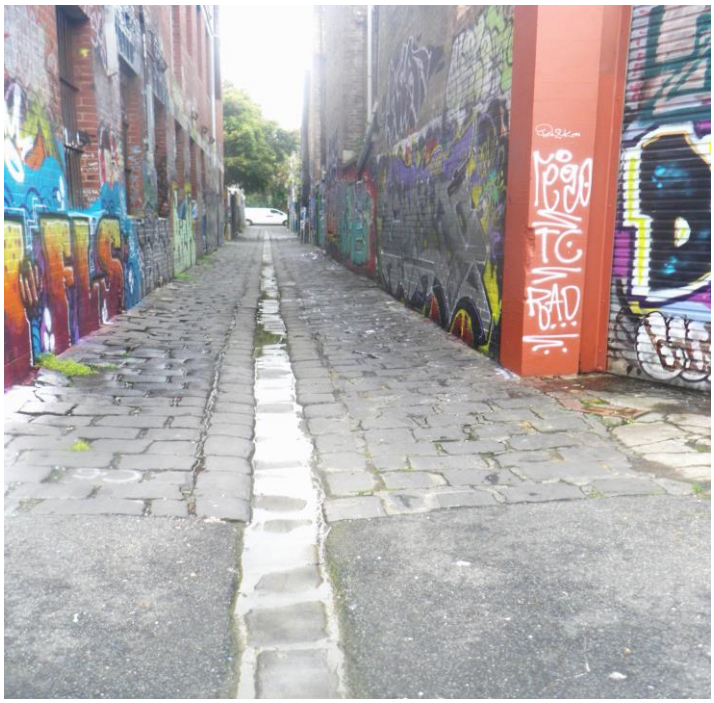
City Lanes - Teacher's Notes

City Lanes



These tall warehouse buildings were built about in 1840 in Melbourne. Their huge slate roofs collect lots of rain and channel it into a few downpipes. These pour fast flowing water into little lanes like this one. Eventually the water is channeled into drains under the pavement
The lanes were also used to gain access to the back of the buildings for people, horses and carts.

1. What is a warehouse? A warehouse is where things are stored before they are sold. These warehouses were used to store things for the original Coles shops before there were "Coles supermarkets". Things would have been moved about in wheelbarrows and also by horses and carts.

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2. Do you think that rainwater channeled into downpipes would have more or less power to erode? More because instead of individual raindrops, all the water is channeled together.
3. Why did they have to cover the original dirt lanes with hard cobblestones? Water from the downpipes would have eroded any loose soil in the lanes and carried it away. The lanes would have become waterlogged and carts and wheelbarrows could not have moved through them easily. These stones are hard and mostly waterproof and they would have moved the rainwater onwards downhill. Gaps between the cobblestones would allow some water to seep into the soil
4. Why is there a low line of cobbles down the middle of the lane? This is to collect rainwater and lead it away into major drains.
5. At the end of the lane, just before it meets the main street, the water is directed through a bed of broken rocks and boulders before it enters small patches of garden with grass, flowers and reeds. Why?
   The rocks slow the water flow and reduce its power to erode away the soil in the garden beds.

Storm water sumps and sinkholes

You may find some students and their parents are confused between sink holes and storm water drains. In Australia we often have storms which drop more water than our soils can absorb and our drainage systems can handle. Councils fence off and reduce vegetation in deeply excavated hollows near suburban roads and laneways. Storm water running into the road drains is directed into these holding areas to reduce the erosive force of running water. The drains allow water to seep into soil slowly.
Sink holes are caused by subsidence due to the collapse of underground caves or mines. In permafrost areas they can be caused by melting of frozen methane gas naturally trapped in soil.