

Cambridge Lower Secondary Checkpoint

ENGLISH

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Paper 1 Non-fiction

April 2021

INSERT

1 hour 10 minutes

INFORMATION

- This insert contains the reading passages.
- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.



This document has **4** pages. Any blank pages are indicated.

Text A

Lechuguilla

Tim Cahill is an experienced caver. Here, he is exploring Lechuguilla, an underground cave.

I loved this little room, 305 metres below the surface of the earth. It had been my home for four days, and these last black seven or eight hours would be my final chance to savour the wonder. Alone.

The passage itself was tubular, about 2.4 metres in diameter, and it was perfectly white, very crystalline, so that the walls and ceiling all shone glittery bright in the light from my helmet. The heat from my body loosened a few of the crystals from the ceiling so it looked as if it were snowing in Lechuguilla Cave. 5

Lechuguilla is a hot cave. The temperature is a constant 20 degrees Celsius, and the humidity is over 99 per cent. The smallest effort causes a caver to burst into a sweat, and I had found, over the past few days of strenuous exploration, that the sweating process continued for about forty-five minutes after I stopped moving. 10

Because almost nothing lives in the cave, Lechuguilla was devoid of the familiar odours of life that permeate the outside world. The air smelled clean, wet, and sterile, like freshly washed laundry, and it had a weight and feel to it, like the gentle caress of damp black velvet. I liked camping alone in the cave. I never had any trouble sleeping in the silence and absolute darkness of Lechuguilla, probably because I was always so exhausted at the end of each day. 15

I have been caving, on and off, for about ten years. Still, Lechuguilla had been a surprise. It was so big, so hot, so intimidating, that it had taken me several days to come to something close to full comprehension of its marvels: crystals the size of small trees, huge-domed pits, rooms as high as a thirty-storey building. That so many wonders existed in such profusion in one cave 20 boggled the mind. When I made my first descent, 77.4 kilometres of it had already been mapped, and explorers map out more passages with each expedition.

Lechuguilla was discovered only four years ago, and it was unique in its size, in its origin, and in the strange formations found in its immense caverns. It was as if someone had discovered the Grand Canyon in this day and age. It was a staggering idea. The entire surface of the earth has been mapped. Even the moon has been mapped. But here, under the surface of the American 25 desert, a new cave had recently been discovered.

Text B

THE BIG DIG**Why Hong Kong is going underground**

With the highest house prices in the world, and most of its land unsuitable for building, Hong Kong has found a new way to expand – by moving its facilities into caves in the mountains.

The city's government is encouraging a host of businesses to build new facilities deep inside the mountains. It is these mountains that have limited the land available for building on. This has resulted in Hong Kong becoming one of the world's most densely populated metropolises.

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Says a Hong Kong town planner, 'Only about 24% of the land can be developed in Hong Kong; everywhere else is so hilly that it isn't cost-effective to build on. So, we want to turn this constraint into an opportunity.'

Hong Kong already has several developments built inside hills, including a waste transfer station, a reservoir and train station, and a new project aims to relocate a sewage plant underground. 'If we can put suitable facilities inside caverns, then we can release precious surface land for other uses: for example, housing,' explains a government engineer.

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Critics argue that using caverns is technically difficult and very time-consuming. And only a few hectares will be released each time. Costs can also be a burden; construction underground is typically twice as expensive as building above ground. However, caverns can benefit from lower maintenance costs than conventional buildings, and never need to be torn down. Furthermore, residents are less likely to object to unsightly projects if they are buried in the ground.

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Energy consumption could also be reduced. Cooler, more consistent temperatures mean less need for air conditioning, especially during Hong Kong's hot summers, when the temperature rarely dips below 30°C during the day.

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