

# Episode 7: CARBON SOURCES – CEMENT

## QUESTION: Do we need concrete?

### Activity 1: Concrete

Interesting cement and concrete facts:

- In the video, you saw that cement production emits a lot CO<sub>2</sub> into the atmosphere. Cement is then mixed with water with aggregates like sand, gravel, or crushed stone to make concrete.
- Concrete is the second most used substance in the world, second only to water.
- The Pantheon in Rome, built about 120 BCE is the largest unsupported concrete structure in the world.
- China used 28 million m<sup>3</sup> (37 million yd<sup>3</sup>) of concrete to make the world's largest dam, completed in 2006.

Take a look around and find out what your community is building with concrete. Increase your visual and language vocabulary by drawing and labeling places here. You may want to visit <https://thenounproject.com/> to help you draw what you see.

Your Neighborhood	Places built to accommodate transportation	Health Services	Community Industry	Recreation

**Choose 3 items from your list above. Explain why concrete was used to build it.**

- 1.
- 2.
- 3.

What properties of cement make it so useful?

Watch these 3 videos. What are the pros and cons of each new method to make concrete. What are the pros and cons of each?

Method:	Pros	Cons
<a href="#">Using bacteria</a>		
<a href="#">Recycled materials</a>		
<a href="#">Carbon capture</a>		

Answer this question:

Which of these cement alternatives (or another you found by researching it) should we invest in?

Why?