Memorial Park Video Questions

Wednesday 20 November

1. Challenges in the Ground
Get your safety gear on and join Emma Beech, a Geotechnical Engineer in the trench to find out about some of the construction challenges.
1. Why is it important to know about the soil types under the ground?
2. How do engineers know about different soil layers?
3. How does ground water affect construction?

Next step learning: How do you think modern technology helps to overcome construction challenges and can you give any examples?

2. Designing Retaining Walls
Look up at the trench walls and see how they have been designed to stay strong and support the trench.
1. What two main things needed to be considered when designing the retaining walls?
2. What happens if the ground water level drops?
3. What are the two designs and why are they needed?

Next step learning: Find a retaining wall near you and see how it has been built.

3. Shifting Services
Meet Site Engineer Tom Knight and see how services are shifted out of the way to make way for construction.
1. What services need to be moved?
2. How are these services moved?
3. Are there any services that have not been moved?

Next step learning: How do you think the engineers know where the services are under the ground?

4. Building a Strong Wall
Walk down to the other end of the trench and see how the retaining wall has been built.
1. Where did the excavation start?
2. Why is this temporary wall needed?
3. How will the tunnel be anchored down?

Next step learning: Make a model of the underpass and Memorial Park.

5. Digging the Trench
Watch the excavating of the trench and find out more about how much material has been removed from the area.
1. What was done before the excavating started?
2. How many truck and trailer loads of earth were removed and how long has this taken?
3. How will water be drained from the tunnel?

Next step learning: Find out where else cut and cover tunnels have been constructed in New Zealand.