



Wonder Project

# Water Challenge

## Activity 4.3: First Flow

**Send some wai on its first journey through your pipe prototype.**

Does your pipe prototype have what it takes to solve your challenge scenario?

### Get ready to flow!

#### Step 1

Label your containers with your two hapori connection points and place them underneath your wai network.

#### You'll need:

- Your pipe prototype
- 500ml of wai (use some of the rainwater you collected in your rain gauge)
- 2 x containers that can each hold 500ml of wai
- Measuring jug

#### Step 2

Open the tap and double check all connections so your prototype won't spring a leak.

#### Step 3

Measure out 500ml of wai with a measuring jug.

#### Step 4

Slowly pour the wai into your water reservoir and watch it flow!

#### Step 5

Measure the amount of wai (ml) that ends up at each hapori connection point.

#### Step 6

Write your results in the test tracker.

### Test tracker

Quantitative data			Qualitative data	Improvements
Wai supply (% and ml)			What did you observe as the wai flowed?	
Hapori connection point 1	Hapori connection point 2	Total wai		
Fire station: 30% 150ml	Whare: 65% 325ml	95% 475ml	Water flowed too quickly to the fire station. Some got trapped at the start of the network.	Swap large internal diameter pipes for small internal diameter pipes leading to the fire station. Create a bigger slope at the start of the network.

## Analysis

What did you learn from your test?

What changes could you make to improve your prototype?

Don't waste the wai you send through your network! You can add the same wai to your network in later tests.