

Exploring the Water Pavilion

The Water Pavilion contains exhibits about water properties, water and humans, and water power. This document is one of five making up a teacher's guide to the Water Pavilion. The exhibit list contains key questions which can be answered, investigated, or discussed. The education pack also contains a simplified plan with questions, 'Water Pavilion Quiz', for teachers who wish to provide pupils with a directed, written task whilst visiting the pavilion. Material for reflective learning can also be collected by camera, sound recording and downloaded from Magna's website.

Type Key: h = Hands-on interactive, a = Audio-visual display, t = Touchscreen interactive

Exhibit	Type	Question
1 Water World	a	Look, listen and touch. What patterns can you see? What happens when it rains?
2 Water Cycle	a	How does the water change as it travels around the cycle?
3 Cool Air	h	Why don't the balls fall off?
4 Keep it Flowing	h	When is the demand for water greatest?
5 It All Adds Up	h	How much water do you use everyday? How could you reduce this amount?
6 Your Weight in Water	h	How much water is contained in your body? Where do you think it is?
7 Fishy Tales	h	What conditions help the salmon to survive? How has the river changed over the years?
8 Fountains of Knowledge	h	How much water is used to make everyday things?
9 Down the Pan	h	How many times the toilet get flushed everyday at home / school / Magna?
10 Ps and Qs	h	Why does your body need water?
11 Nessie	h	How does the world look to a fish?
12 Ice Handrail	h	What happens as you move your hand along the rail? How does the ice form?
13 Water Power	a	What were the machines used for?

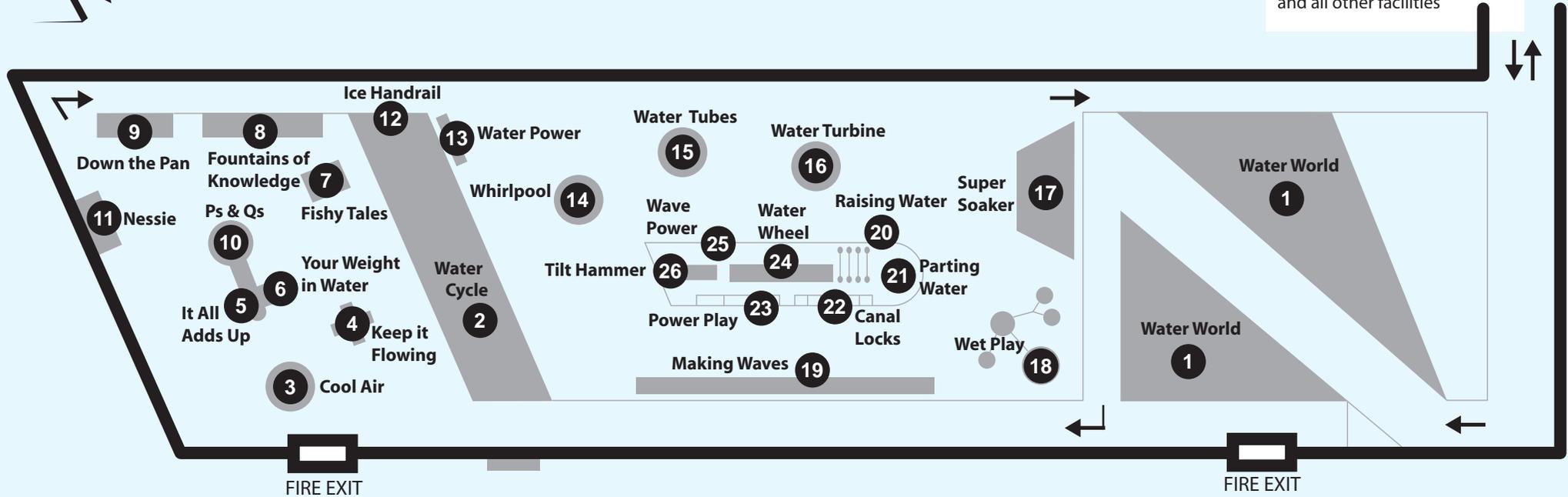
Exhibit	Type	Question
14 Whirlpool	a	In which direction will the water turn?
15 Water Tubes	h	What happens as the first tube empties?
16 Water Turbine	h	What happens to the turbine when the water flow changes?
17 Super Soaker	h	How can you make the targets spin faster? Where is it useful to use pressurised water?
18 Wet Play	h	What happens as you move the pumps and paddles? What patterns can you make?
19 Making Waves	h	What happens to the waves as they move along the tank to the beach?
20 Raising Water	h	Which machines are the most efficient? Can you explain why?
21 Parting Water	h	What do you notice when you alter the water flow?
22 Canal Locks	h	How do you move a boat from one level to the next?
23 Power Play	h	Which type of wheel is the most powerful? Why do you think that is?
24 Water Wheel	a	How does a water wheel join up to other machines to make them work?
25 Wave Power	h	What happens to the floats when the waves reach them? What shape are the floats?
26 Tilt Hammer	h	How does the water wheel make the tilt hammer work?





Water Pavilion Plan

Way out to toilets, lifts, stairs and all other facilities



- 1 Water World - stop, look and listen.
- 2 Water Cycle - from the mountains to the sea.
- 3 Cool Air - balance the balls in the air flow.
- 4 Keep it Flowing - the water supply needs to flow.
- 5 It All Adds Up - work out how much water you use.
- 6 Your Weight in Water - find out how much of your body is made of water.
- 7 Fishy Tales - swim upstream like a salmon.
- 8 Fountains of Knowledge - turn the taps and find out how much water it takes....
- 9 Down the Pan - that's more water flushed away.
- 10 Ps & Qs - test your water facts with a quiz.
- 11 Nessie - see the world through fish eyes.
- 12 Ice Handrail - run your fingers along the rail and over the casing of ice.
- 13 Water Power - steel heritage and water.
- 14 Whirlpool - watch the whirlpool form and fade.
- 15 Water Tubes - storing and pumping water.
- 16 Water Turbine - make the blades spin as fast as possible.
- 17 Super Soaker - grab the water cannons and get squirting..
- 18 Wet Play - showers, jets, channels and drains.
- 19 Making Waves - set the waves rippling.
- 20 Raising Water - race your friends to fill the buckets.
- 21 Parting Water - play with the dome of water and release the mist.
- 22 Canal Locks - navigate the boat through the locks.
- 23 Power Play - try turning the water wheels.
- 24 Water Wheel - watch the big wheel spin.
- 25 Wave Power - make waves and generate electricity.
- 26 Tilt Hammer - use the water to power the hammer.



Curriculum Links in the Water Pavilion

This document is one of five making up a teacher's guide to the Water Pavilion. 'Exploring the Water Pavilion' provides a list of questions to focus exploration and promote discussion about what is happening at each exhibit. Questions are open-ended to enable all ages to interact at an appropriate level. There is a quiz and answer sheet which can be used with pupils, 'Water Pavilion Quiz', focusing on water state, humans and power. The 'Water Pavilion Plan' contains a comprehensive exhibit list, the numbering is not intended to provide a guided route around the pavilion.

The Water Pavilion contains exhibits about water properties, water and humans and water power. Many of the exhibits also convey ideas about art, design and the use of materials. Your visit to Water has these potential links to the National Curriculum:

KS1 and KS2 Science

Life Processes:
Humans and Environment
Materials:
Changing materials
Physical Processes:
Forces and Motion

KS1 and KS2 Art and Design

Breadth of Study:
Investigating art, craft
and design

KS1 and KS2 Learning Across the Curriculum

Creativity and Skills

KS3 Science

Forces
The environment and
human activity

KS3 Design and Technology

Understand and Evaluate:
Reflect and evaluate on
others' design work

KS3 Skills

Encouraging creative thinkers

Check the Water Pavilion exhibits to see which will have most relevance to your curriculum theme. The numbers in brackets refer to the location on the Water Pavilion plan:

Water States

- Water World(1)
- Water Cycle(2)
- Ice Handrail(12)
- Wet Play(18)
- Parting Water(21)

Water Power and Machines

- Water Power(13)
- Water Turbine(16)
- Super Soaker(17)
- Making Waves(19)
- Raising Water(20)
- Canal Locks(22)
- Power Play(23)
- Wave Power(25)
- Tilt Hammer(26)

Humans and Water Resources

- Keep it Flowing(4)
- It All Adds Up(5)
- Your Weight in Water(6)
- Fishy Tales(7)
- Fountains of Knowledge(8)
- Down the Pan(9)
- Ps and Qs(10)

Local History and Steelmaking

- Fishy Tales(7)
- Water Power(13)
- Water Wheel(24)
- Tilt Hammer(26)

Design and Aesthetics

- Water World(1)
- Wet Play(18)
- Parting Water(21)

