

Pathway A

Name(s) _____

Organise your time in the exhibition:

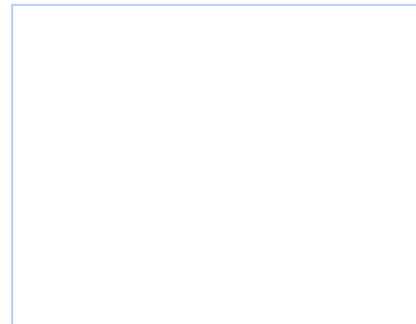
- Spend the first 20 minutes of your time having a good look at all the exhibits.
- Spend the next 30 minutes visiting the exhibits and answering the questions below.
- Spend the last 10 minutes checking out any exhibits that you missed.

Please note:

- It's best to work in small groups.
- Visit the exhibits and answer the questions below in any order.
- Try to avoid crowding – if an exhibit already has a group visiting it, go to another one!
- Note: teachers may divide questions between groups, with answers shared back at school—eg. Group 1 does Questions 1-5, Group 2 does Questions 6-10, etc.

1. Find and operate the **Hover Table**.

Draw the disc that has the 'bounciest' collisions:

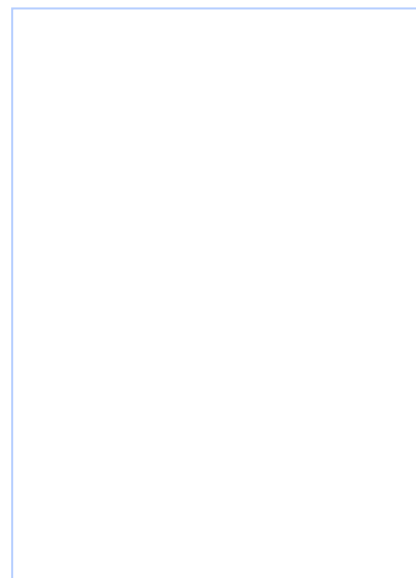


2. Find and operate the **Whisper Dishes** with a friend.

You are able to hear a person's voice when they speak

into a Whisper Dish because:

- They have a very loud voice
- You have very big ears
- The Whisper Dishes are shaped so that sound bounces from one dish to the other.



3. Find and operate the **Bernoulli Blower**.

Draw a picture of what is happening in this exhibit.

Draw arrows to show the direction of the air.

4. Find and operate the **Cycloid**.

Tick which track is fastest, and fill in the missing letters.

- The short, straight-line path is too S _ _ _ . (SWLO)
- The steep path is too L _ _ _ . (LGON)
- The in-between path (the cycloid shape) is F _ _ _ _ _ (TSETSAF)

5. Find and operate the **Tubular Resonance** exhibit.

The beads in the tube move about and make patterns because:

- They are sticky
- Changing the sound in the speakers causes the beads to move.
- There is wind blowing them about.

6. Visit the **Vortex** info-pod and find and operate the **Whirlpool Vortex**.

What happens to the water when you open the drain hole at the bottom of the tank? _____

7. Find and operate the **Eddy Currents**.

Eddies formed mainly near: the centre the edge of the container.
Eddies formed when I spun the container quickly slowly.

8. Find and operate the **Gravity Well**.

Watch the ball carefully.

Where does the ball move slowest?

Where does the ball move fastest?



9. Go to the **Collection Cases**.

Write down the name of your favourite model: _____

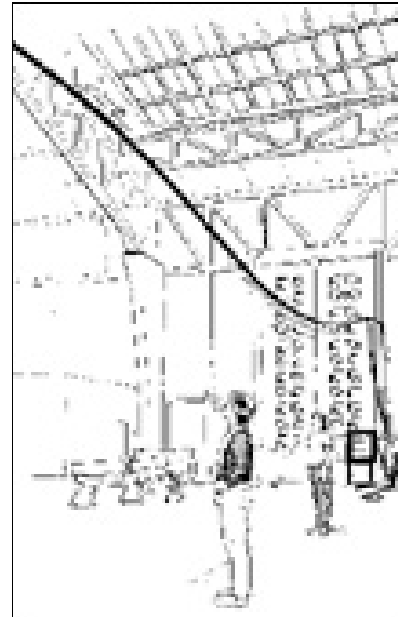
When was it made? _____

10. Go to the **School Robot Display**.

Spend a few minutes checking out the robots and animatronic models produced by local schools.

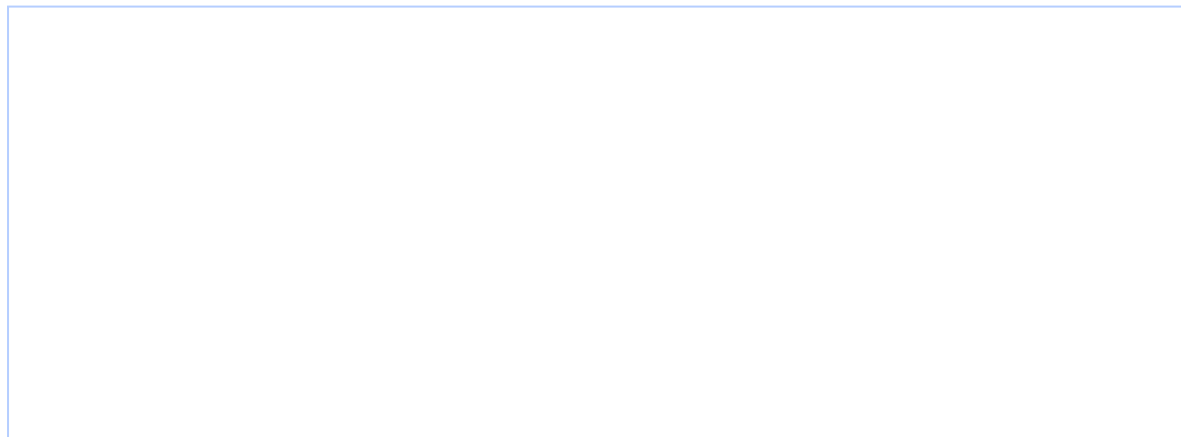
11. Find and operate the giant **Guitar String**.

How many waves can you make in the rope?



12. Find and operate the **Lissajou Figures**.

Draw one of the patterns it makes.



13. Find **Mission Control**.

Spend some time in this area watching DVDs about the launch of the Space Shuttle and views of the Earth from space.

14. Find and operate the **EX-1 Rocket** exhibit.

Tick the correct box.

When the high pressure air shoots up down out of the rocket,
it causes the rocket to shoot up down.

15. Find and operate the **Lightning Tube**.

The Lightning Tube works when electricity
is passed through the tube.

This makes the g _ _ _ _ [sesga]
in the tube glow.



16. Find and operate the **Pulse Rocket**.

This rocket works because a magnet in the rocket and a magnet on the launch pad
 push away from each other pull towards each other.

17. Find the **Chaotic Pendulum**.

Chaotic means full of chaos or confusion.

Why is this exhibit called the Chaotic Pendulum? _____

18. Find the **Honda Hybrid Car**.

This car has two motors – a small petrol motor and an electric motor that runs off a big
battery. How does the big battery get its electricity?

The big battery has to be plugged into a power point.

The brakes generate electricity for the battery when the car slows down.

19. Find and operate the **Robot BUZZ**.

Give yourself a tick when you make Buzz:

go straight ahead

turn left

turn right

make noises