

## WAYFINDER Air All Around

The following North Carolina State Science Standards are relevant to this Wayfinder:

Grade 2	2.01
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### Introduction

Although air is invisible to our eyes, we can still feel it and see its effects on the world around us. You can manipulate exhibits in the Museum's outdoor park, *Catch the Wind*, to investigate how air interacts with our lives and in nature.

### Before your visit

Discuss and investigate air in the classroom. Conduct experiments that answer questions such as:

- How can I use a plastic bag to prove air is there?
- Can I move things with air?
- Is a blown up balloon heavier than a deflated one? Why?
- Does a crumpled piece of paper fall faster than a flat piece of paper? Why?
- How do humans use air in their daily lives?

### During your visit

Visit *Catch the Wind*. At each indicated station try the following:

All around *Catch the Wind*

- 1) Observe the blue flags on the tall poles around the park. What do you think they are for?
- 2) When it feels like the wind is not blowing, watch the flags. Are any moving even though you don't feel the wind? If so, why do you think they are moving? *Unlike a solid object, air does not have to move to a location all at the same time. There are tiny air currents that are moving around at all times. It is the same for liquids – as water flows down a stream you can still see small ripples and currents in a single location. Here, the flags may seem to be blowing even though you may not feel the wind because they are catching those small air currents.*
- 3) When you feel the wind blowing, watch the flags. What do you observe? Are they all pointing in the same direction? Are there some moving more than others? Can you explain what you observe? *You might observe two flags near each other doing very different things. They are reacting to small air currents as well as the larger one that you feel.*

### *Floating Rings*

- 1) Hit an air cannon without pointing at anything. What do you observe?
- 2) Point the air cannon at a friend and hit it. Do you see anything come out of the cannon? Does your friend see anything? Does your friend feel anything? What does your friend feel?
- 3) Point the air cannon at a mirrored wall. Wait for a moment and observe what happens. What moved the shiny discs? What shape did the air seem to make on the wall?
- 4) Have a friend make a shape with their hands around the opening of the air cannon like a triangle or a square. Shoot the air at the wall again. What shape did the air make?
- 5) Continue to try different shapes with your hands or hit the cannon with a different force each time? Does the pattern on the mirrored wall change or stay the same?

### *Mist Garden*

- 1) At *Build a Block City*, build a tall tower next to a short one. How does the mist move around the tall tower? How does it move around the short tower? Is there a difference?
- 2) Lay a block down on its side. Does the mist move through the hole? Lay another block down to make a tunnel. How long can you make a tunnel that still allows air to flow?
- 3) At the plant table, observe the mist moving through the plants. Do you see mist swirling outside of the plant? Do you see mist swirling deep within the plant? Does it surprise you that there is air deep within the leaves?

### **After your visit**

Make your own flags like the ones found in *Catch the Wind* by taping streamers or ribbon on skewers. Place the flags around the schoolyard in different locations. Try to vary the height of the flags. Make sure to place them within a large enough area so they are affected by the different air currents, but in a small enough area to be able to observe many all at once. Take a few days to observe the flags several times a day and record what you see. Do you see flags near each other behaving differently? Are there some spots that seem windier than others? Does there seem to be more wind up high or down low?