

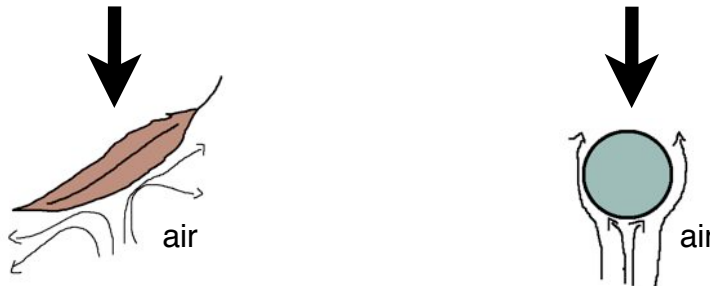
Name: \_\_\_\_\_

# Gravity

**Gravity** is a force that attracts one mass to another. The bigger the mass, the stronger the attraction. We feel the force of the Earth's gravity because the Earth is so much bigger than us.

When an object falls it is falling because of the gravitational pull of the Earth. The Earth's gravitational pull accelerates (speeds up) objects when they fall. Two objects, such as an acorn and a piano, even though they are different sizes, should hit the ground at the same time. {This is due to the heavier object having more gravitational force, and the lighter object having a higher acceleration speed.}

But what about when it looks like one object does fall faster? What about a feather vs a rock? Do you think both will hit the ground at the same time? Well, they won't. You can try it. This is because something other than gravity and acceleration has been introduced...resistance. In this case, air resistance. The air surrounding the flat feather is in the way, and causes the feather to move slowly as it descends. If you were to put both objects in a vacuum--a container with all the air taken out--you'd see the feather fall just as quickly as the rock.



**Directions:** Thinking about gravity's force, acceleration, and resistance, circle what object you think will hit the ground first. If you think both objects will arrive together, circle both. Explain your choices.

