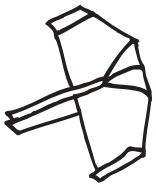
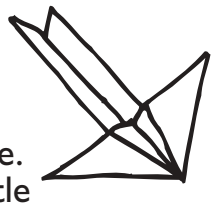
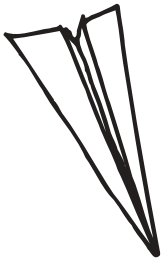
Name: _____ Class: _____

Why Do Paper Aeroplanes Fly?



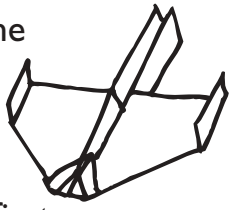
Aerodynamics is the scientific term that describes the relative ease with which an object moves through the air. Aerodynamics is the most important factor in designing a plane to fly for a long distance.





Drag and Gravity are two forces that must be overcome in flight. Objects that push a lot of air are said to have a lot of drag or resistance. If you want a plane to fly as far as possible, you want a plane with as little drag as possible. To help fight against gravity's pull to the ground, a plane's weight should be kept to a minimum.

Thrust and Lift are two forces that help a plane to fly. Thrust is the forward movement of the plane, and comes from the muscles of the 'pilot' as the paper plane is launched. Lift comes when the air below the plane's wings is pushing up harder than the air above is pushing down. When aeroplane wings are curved, the air moves more quickly over the top of the wings, resulting in an upward push.



Long flights come when these four forces—drag, gravity, thrust and lift—are balanced. Can you fold a paper aeroplane that can fly a long distance? How about one that can stay in the air for a long time? The first might be very streamlined to avoid drag, but require a lot of thrust—or a really hard throw. The second might also be streamlined to avoid drag, but have beautifully curved wings for perfect lift.

On the back of this page, draw your design for the perfect paper aeroplane!