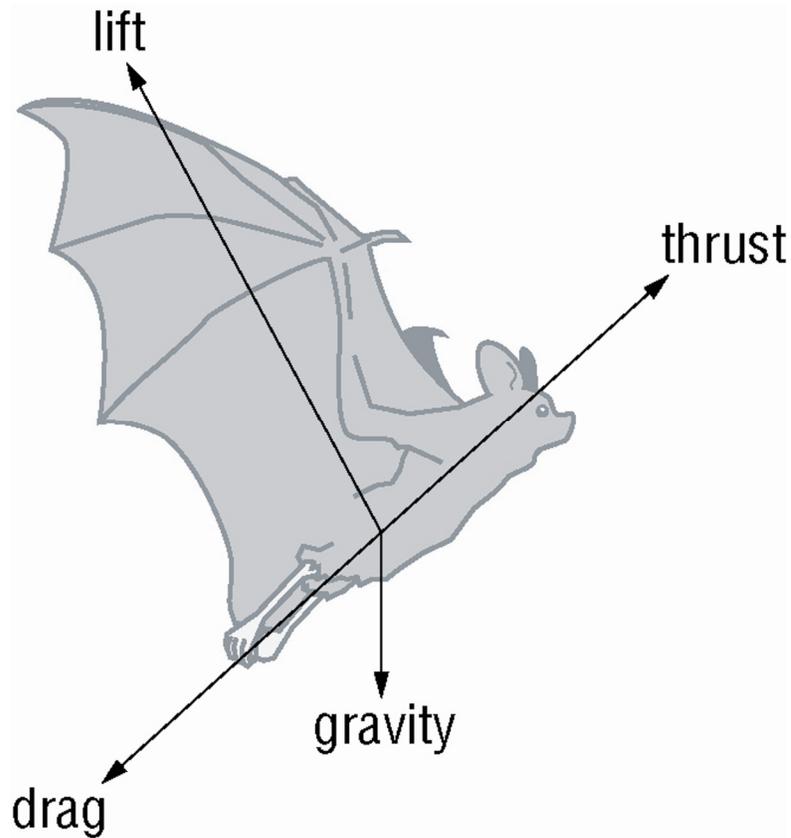


CHAPTER 3
OVERHEAD

Forces That Act on a Wing During Flight

BLM 3-9


Comparing the Forces That Act During Flight

Force	Direction	How it Works
gravity	downward	<ul style="list-style-type: none"> • Earth pulls all objects downward. • Only very large objects, such as Earth, have a noticeable gravitational pull.
buoyancy	upward	<ul style="list-style-type: none"> • An object displaces a liquid or gas (for example, a hot air balloon displaces air).
lift	upward	<ul style="list-style-type: none"> • Wings are curved. • Air passes over a curved wing more quickly than under it, as it must travel further. • Air pressure decreases as air speed increases. • Higher-pressure air flowing under the wing pushes it upward. • The wing is lifted up
drag	backward	<ul style="list-style-type: none"> • As the speed of an object increases, so does drag.
thrust	forward	<ul style="list-style-type: none"> • Forces is generated by wings, propellers, or other means. • If the forces overcomes drag, the plane moves forward through the air.