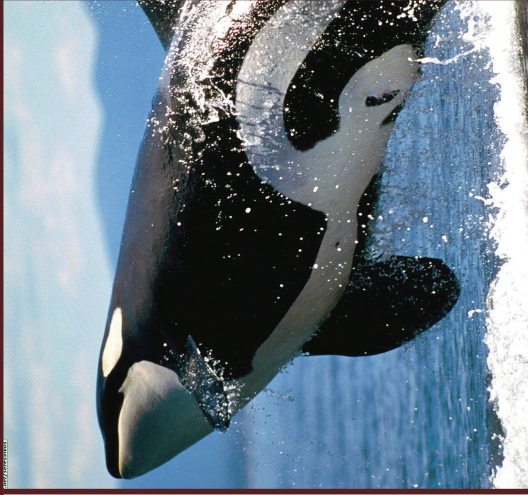


Animal Speeds



Killer Whale
34 mph



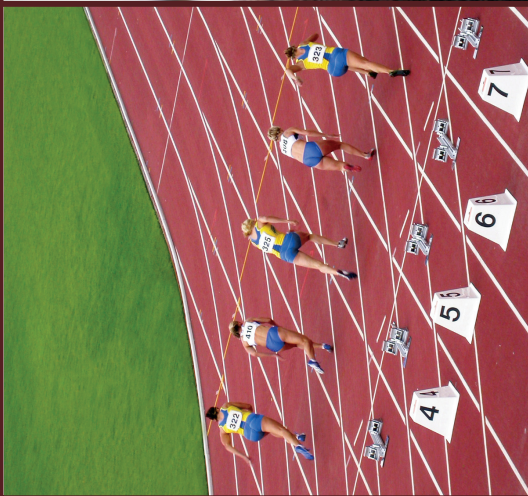
Cheetah
65 mph



Grizzly Bear
30 mph



Pronghorn Antelope
61 mph



Human
27 mph



Greyhound
39 mph

Acceleration of Machines and Animals



F16 Jet



Top Fuel Dragster



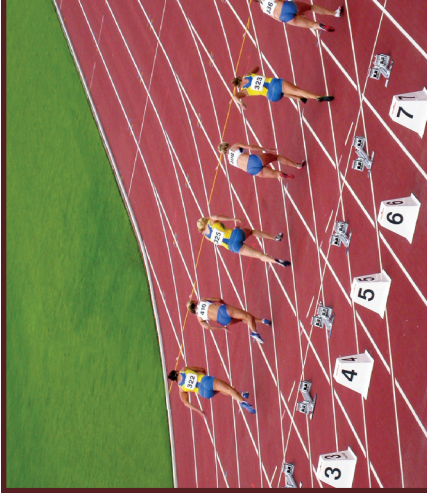
Formula 1 Race Car



Roller Coaster



Cheetah



Human

Type	Distance	Speed	Time	Acceleration Gs.
F16 Jet		1320 mph		9 G.
Top Fuel Dragster	1/4 mile	333 mph	4.4 Sec	3.3 G.
Formula 1 Race Car		60 mph	2.7 Sec	2.7 G.
Roller Coaster		120 mph		4 G.
Cheetah		50 mph	3 Sec	0.8 G.
Human	40 yds	27 mph	4.38 Sec	0.4 G.

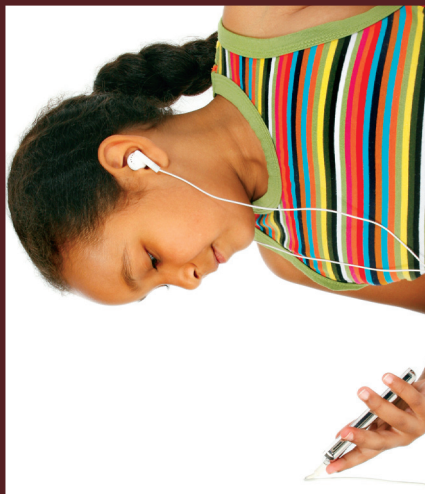
Ranges of Hearing



Mouse



Dog



Human



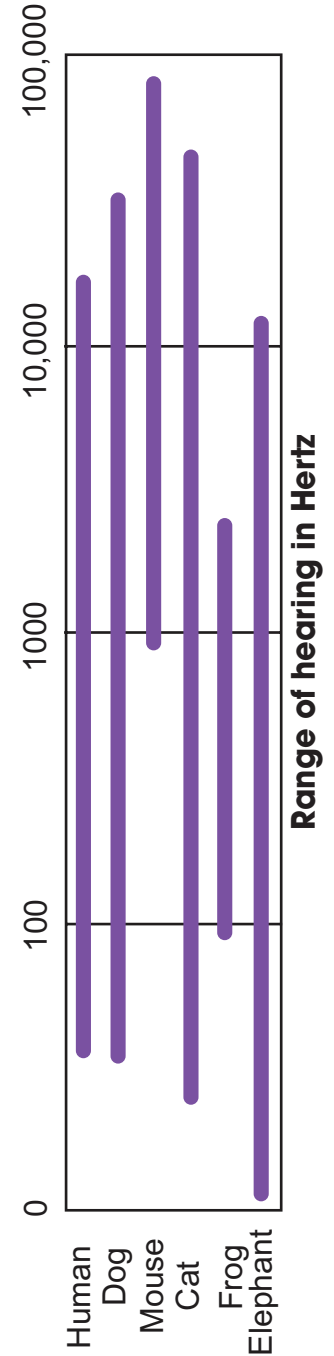
Elephant



Frog



Cat



Vibrating and Oscillating Motions



Harp
25-400
Vibrations
Per Second



Bee
Over 200
Wing-Beats
Per Second

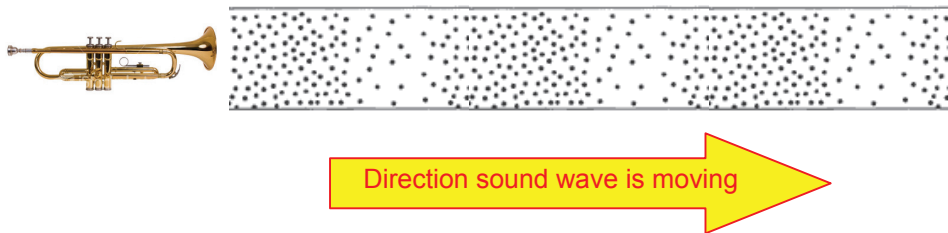
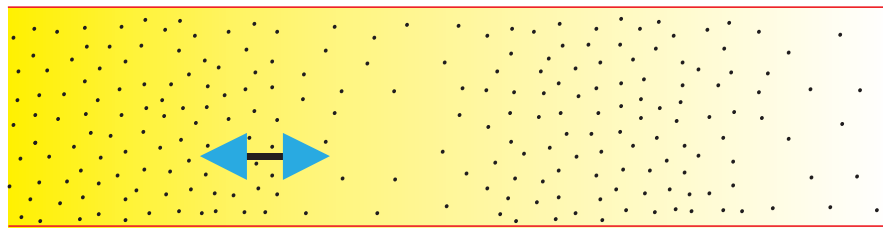
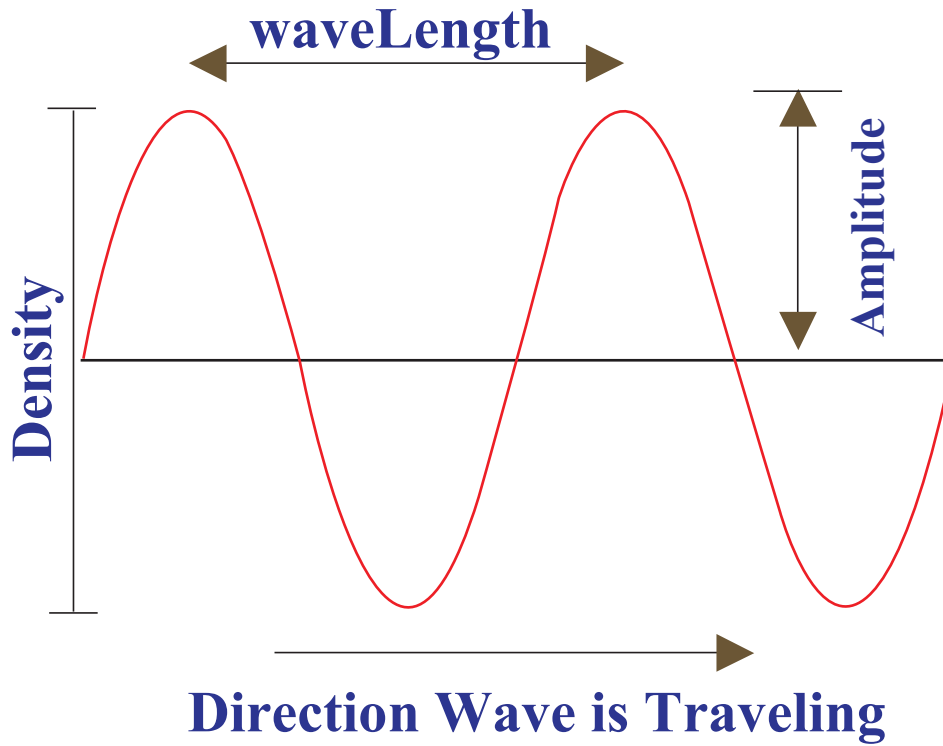


Humming Bird
15-80
Wing-Beats
Per Second



Wood Pecker
20-50
Pecks
Per Second










Wave Characteristics



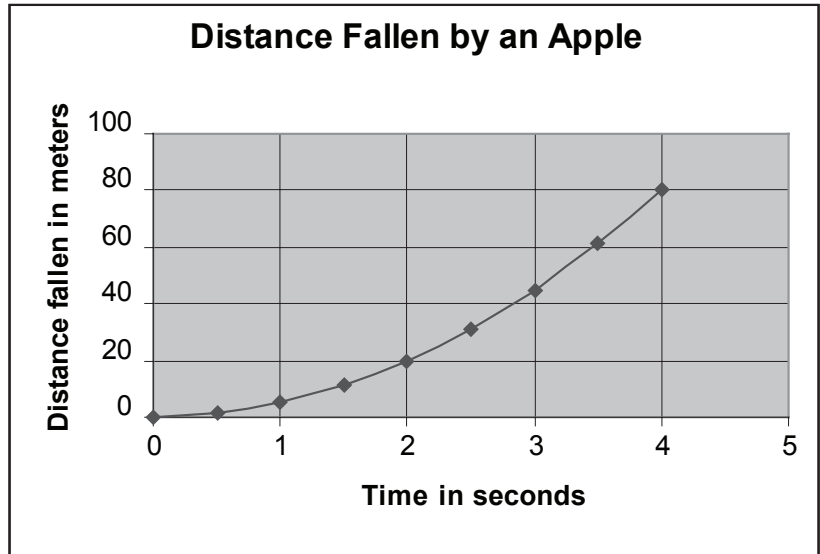
Acceleration of a Falling Apple

Speed
(m/sec)

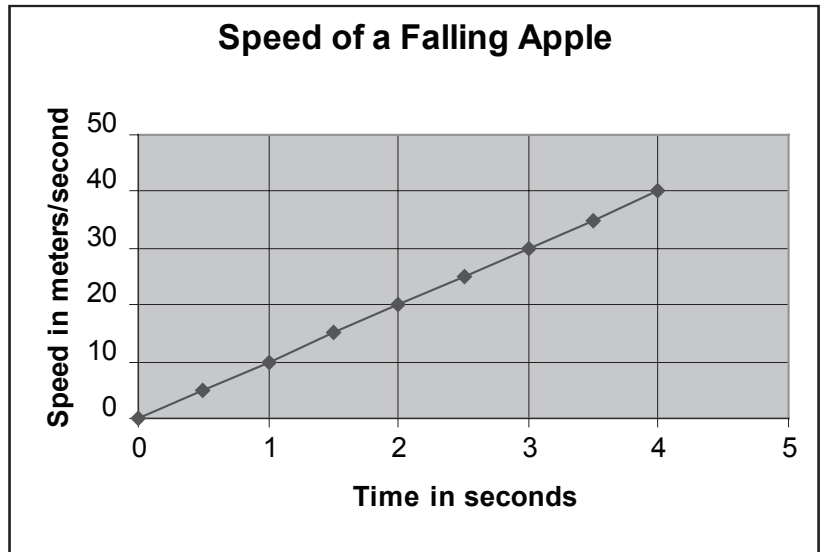
Half-Second
Interval(sec)

0 ←		→ 0
5 ←		→ 1.25
10 ←		→ 5
15 ←		→ 11.25
20 ←		→ 20
25 ←		→ 31.25
30 ←		→ 45
35 ←		→ 61.25
40 ←		→ 80

Distance vs. Time



Speed of a Falling Apple



Speed vs. Time