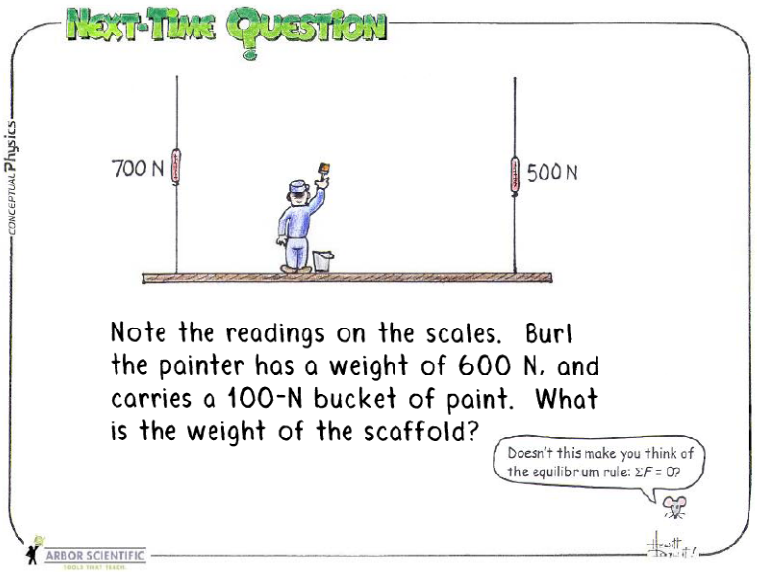
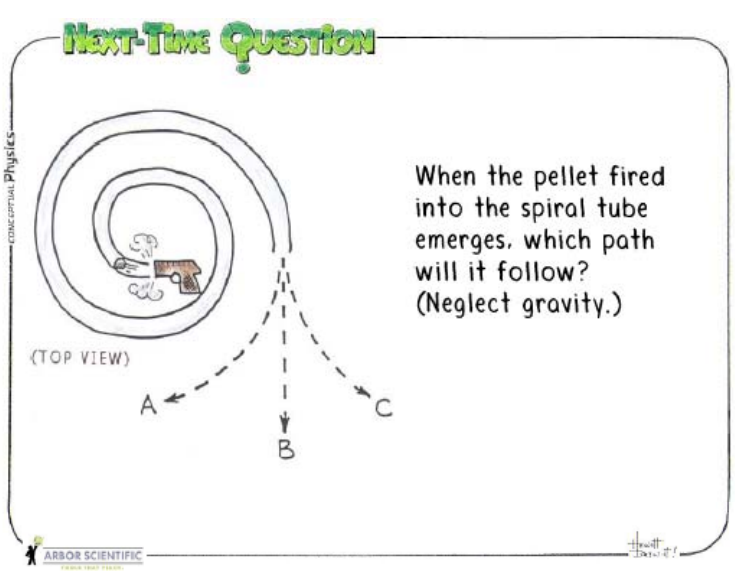
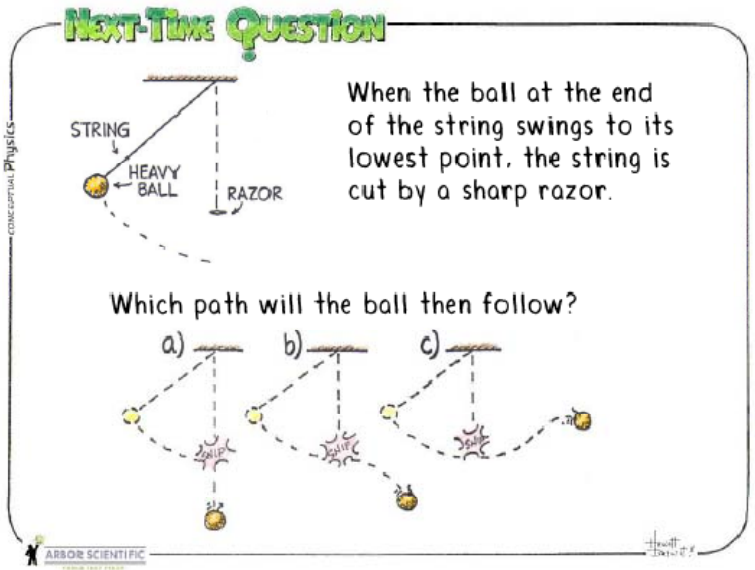
1.


NEXT-TIME QUESTION
CONCEPTUAL Physics
700 N
500 N
Note the readings on the scales. Burl the painter has a weight of 600 N, and carries a 100-N bucket of paint. What is the weight of the scaffold?
Doesn't this make you think of the equilibrium rule: ΣF = 0?
ARBOR SCIENTIFIC

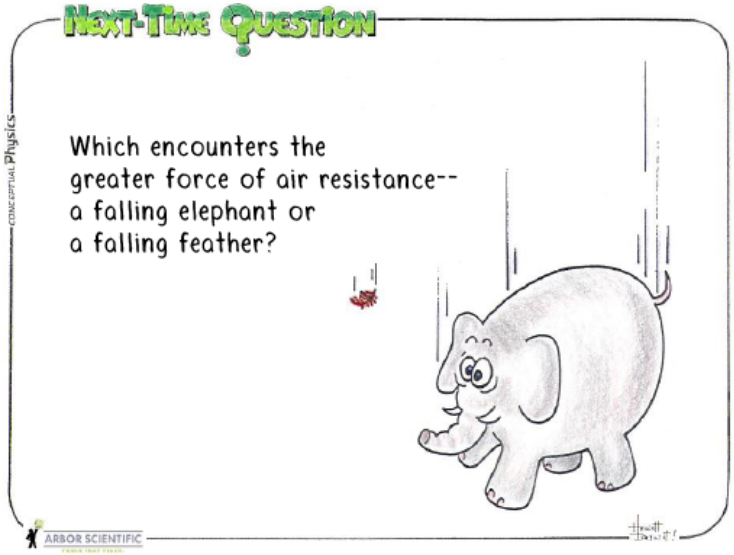
2.


NEXT-TIME QUESTION
CONCEPTUAL Physics
(TOP VIEW)
A
B
C
When the pellet fired into the spiral tube emerges, which path will it follow? (Neglect gravity.)
ARBOR SCIENTIFIC

3.


NEXT-TIME QUESTION
CONCEPTUAL Physics
STRING
HEAVY BALL
RAZOR
When the ball at the end of the string swings to its lowest point, the string is cut by a sharp razor.
Which path will the ball then follow?
a)
b)
c)
ARBOR SCIENTIFIC

4.


NEXT-TIME QUESTION
CONCEPTUAL Physics
Which encounters the greater force of air resistance-- a falling elephant or a falling feather?
ARBOR SCIENTIFIC

5.

NEXT-TIME QUESTION

Two smooth balls of exactly the same size, one made of wood and the other of iron, are dropped from a high building to the ground below. The ball to encounter the greater force of resistance on the way down is the

a) wooden ball.
b) iron ball.
c) ... both the same.

CONCEPTUAL Physics

ARBOR SCIENTIFIC

6.

NEXT-TIME QUESTION

As she falls faster and faster through the air, her acceleration

a) increases.
b) decreases.
c) remains the same.

CONCEPTUAL Physics

ARBOR SCIENTIFIC

7.

NEXT-TIME QUESTION

Toss a ball straight upward and the time it spends going up equals the time it takes to return to its starting level

a) only when air resistance is absent or negligible.

b) whether or not air resistance is present.

The ball encounters just as much air when ascending as when descending!

CONCEPTUAL Physics

ARBOR SCIENTIFIC

8.

NEXT-TIME QUESTION

Little Larry slides down an icy grass slope in a cardboard box and skids to a stop across the flat ground. If Larry's friend were also in the box, giving it twice the mass and starting from the same height, the skidding distance would be

a) less.
b) the same.
c) twice as far.
d) four times as far.
e) none of the above.

CONCEPTUAL Physics

ARBOR SCIENTIFIC

9.

## NEXT-TIME QUESTION


The brakes are slammed on a speeding truck and it skids to a stop. If the truck were heavily loaded so it had twice the total mass, the skidding distance would be

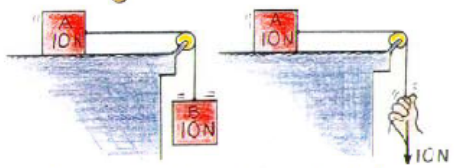
a) the same.
b) 1½ times as far.
c) four times as far.

CONCEPTUAL Physics

ARBOR SCIENTIFIC

10.

## NEXT-TIME QUESTION




In both systems an applied force of 10 N causes Block A to accelerate. The acceleration of Block A is

a) the same in both systems.
b) greater in the one-block system.
c) greater in the two-block system.

The tension in the string is

d) the same in both systems.
e) greater in the one-block system.
f) greater in the two-block system.

CONCEPTUAL Physics

ARBOR SCIENTIFIC

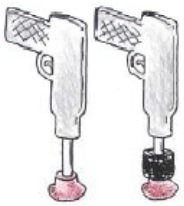
11.

## NEXT-TIME QUESTION

Two identical spring-loaded dart guns are simultaneously fired straight downward. One fires a regular dart; the other a weighted dart.

Which dart hits the ground first?

a) The regular dart
b) The weighted dart
c) It's a tie.



thanx to Dean Baird

CONCEPTUAL Physics

ARBOR SCIENTIFIC

12.

## NEXT-TIME QUESTION

Galileo is credited with being the first to identify the concept of inertia and the first to develop the concept of acceleration. And like others, he discussed forces. But he didn't connect these basic concepts. Which law of Newton makes the connection that Galileo missed?

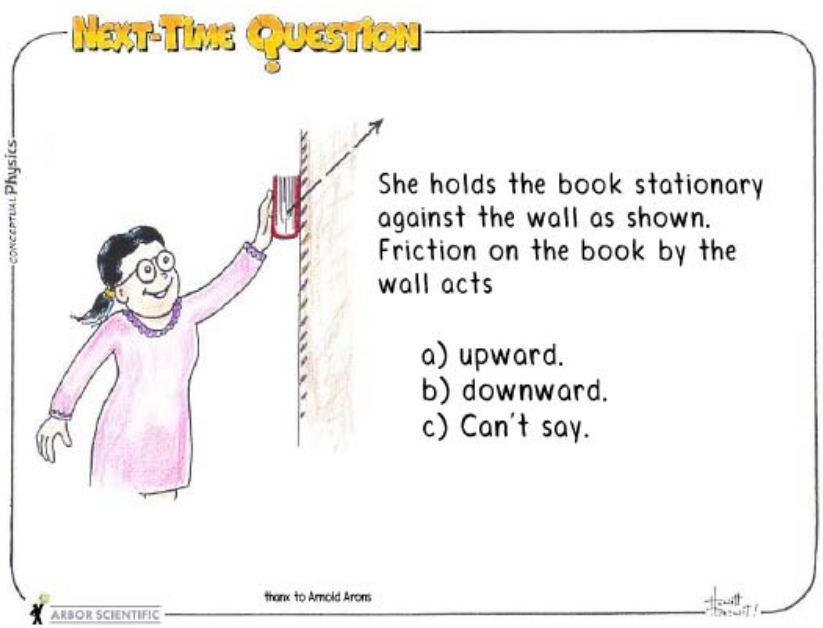
a) First law of motion
b) Second law of motion
c) Third law of motion
d) Law of universal gravitation

How does the law explain the fact that freely falling objects undergo the same gain in speed per second, regardless of mass?

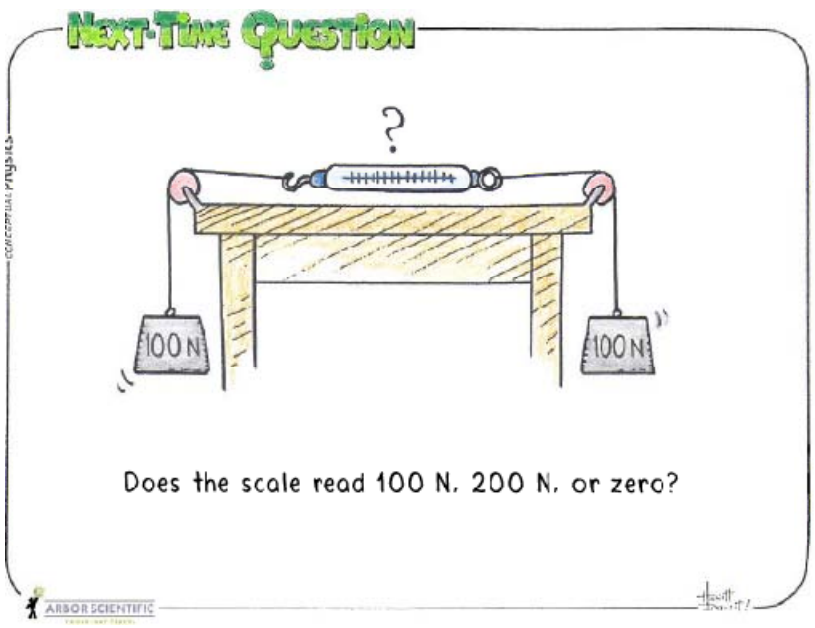
CONCEPTUAL Physics

ARBOR SCIENTIFIC

13.


NEXT-TIME QUESTION
She holds the book stationary against the wall as shown. Friction on the book by the wall acts
a) upward.
b) downward.
c) Can't say.
thanx to Arnold Arons
ARBOR SCIENTIFIC

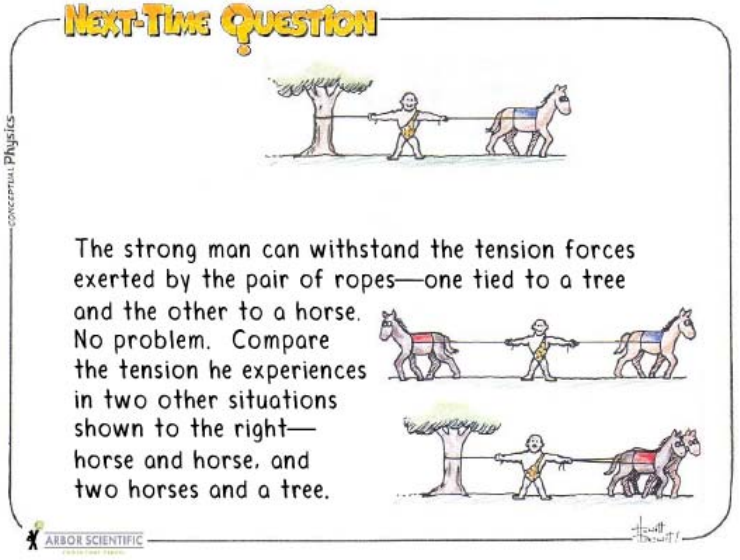
14.


NEXT-TIME QUESTION
?
100 N
100 N
Does the scale read 100 N, 200 N, or zero?
ARBOR SCIENTIFIC

15.


NEXT-TIME QUESTION
PISA
For every force there exists an equal and opposite force. Consider action and reaction forces in the case of a rock falling under the influence of gravity. If action is considered to be the force of gravity on the rock, can you clearly identify the reaction force?
ARBOR SCIENTIFIC

16.


NEXT-TIME QUESTION
The strong man can withstand the tension forces exerted by the pair of ropes—one tied to a tree and the other to a horse. No problem. Compare the tension he experiences in two other situations shown to the right—horse and horse, and two horses and a tree.
ARBOR SCIENTIFIC

17.

NEXT-TIME QUESTION

Arnold Strongman and Suzie Small pull on opposite ends of a rope in a tug of war. The greater force exerted on the rope is by

a) Arnold.
b) Suzie.
c)... Both the same.

CONCEPTUAL Physics

ARBOR SCIENTIFIC

18.

NEXT-TIME QUESTION

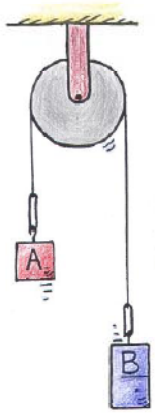
Two people of equal mass, 6 meters apart, attempt a tug of war on frictionless ice. If they pull on opposite ends of the rope with equal forces, each slides 3 meters to a point midway between them. Suppose instead that only one person pulls and the other fastens the rope around his or her waist. How far does each person slide?

CONCEPTUAL Physics

ARBOR SCIENTIFIC

19.

NEXT-TIME QUESTION




Two identical rubber bands connect masses A and B to a string over a frictionless pulley of negligible mass. The amount of stretch is greater in the rubber band that connects

a) mass A.
b) mass B.
c) Both the same.

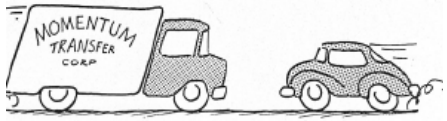
thanx to Pablo Robinson

CONCEPTUAL Physics

ARBOR SCIENTIFIC

20.

IF A MACK TRUCK AND A VOLKSWAGEN HAVE A HEAD-ON COLLISION, WHICH VEHICLE WILL EXPERIENCE THE GREATER IMPACT FORCE?




a) THE MACK TRUCK
b) THE VOLKSWAGEN
c) BOTH THE SAME
d) ... IT DEPENDS ON OTHER FACTORS