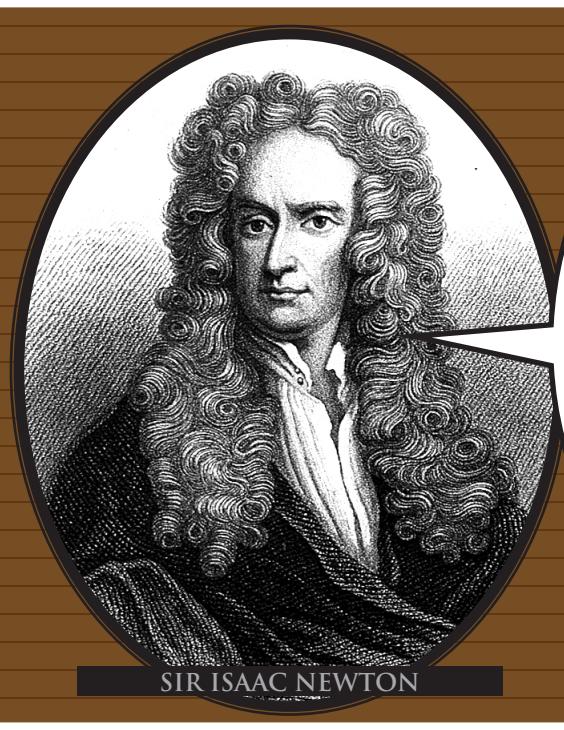
3.14 FACTS ABOUT

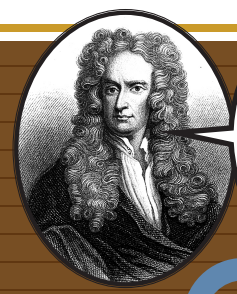
NEWTON'S LAWS AND HIGHWAY SAFETY



You can change speed laws, but you can't change the laws of physics.

NEWTON'S FIRST LAW:

AN OBJECT IN MOTION CONTINUES IN MOTION WITH THE SAME SPEED AND IN THE SAME DIRECTION UNLESS ACTED UPON.

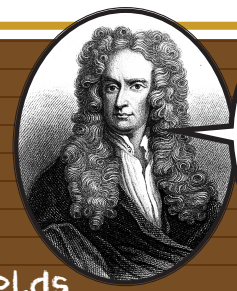


You don't save as much time as you think!

Hours it takes to travel 100 miles

NEWTON'S SECOND LAW:

ACCELERATION IS PRODUCED WHEN A FORCE ACTS ON A MASS. THE GREATER THE MASS THE GREATER THE AMOUNT OF FORCE NEEDED.



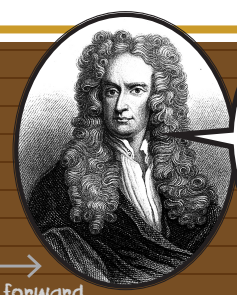
With greater speed comes greater responsibility.

Braking distance at selected speeds

	Distance in feet	Distance in Football Fields
SPEED LIMIT 60	272 feet	From your goal line to your opponent's 10 yard line
SPEED LIMIT 65	311 feet	From your goal line to deep in your opponent's end zone
SPEED LIMIT 70	354 feet	From your goal line through your opponent's end zone and into the bleachers

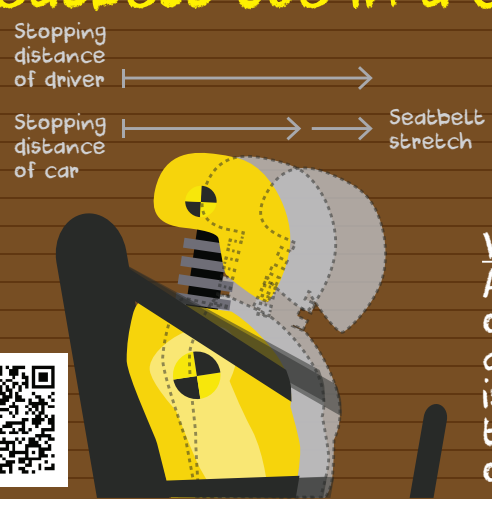
NEWTON'S THIRD LAW:

FOR EVERY ACTION THERE IS AN EQUAL AND OPPOSITE REACTION.

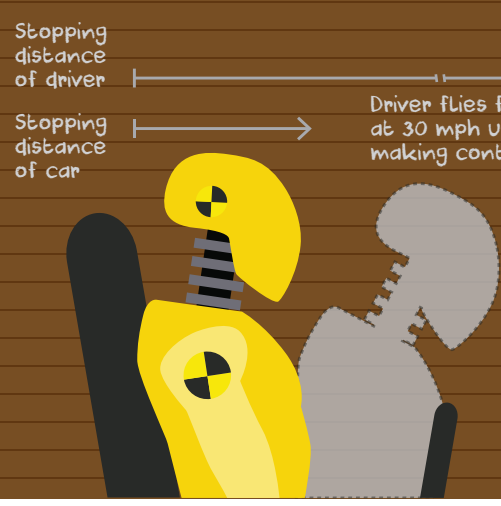


You can go faster, but your body can't stop faster.

Seatbelt use in a collision



With a seatbelt
At 30 mph, the force of a collision on a 160 lb person is 3,200 pounds — the equivalent of 20 Gs



Without a seatbelt
At 30 mph, the force of a collision on a 160 lb person is 24,000 pounds — the equivalent of 150 Gs