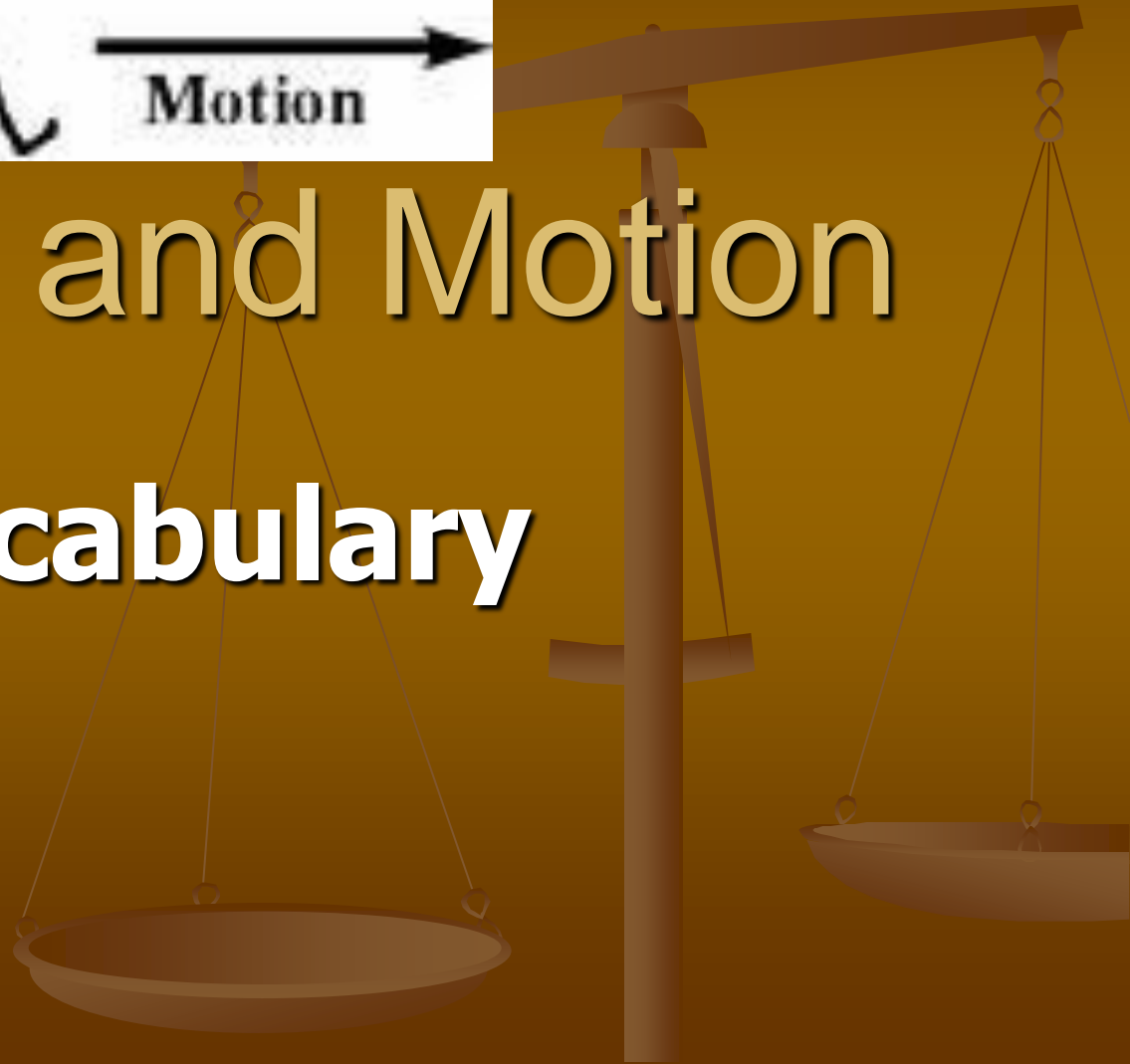


Forces and Motion

Vocabulary



VELOCITY

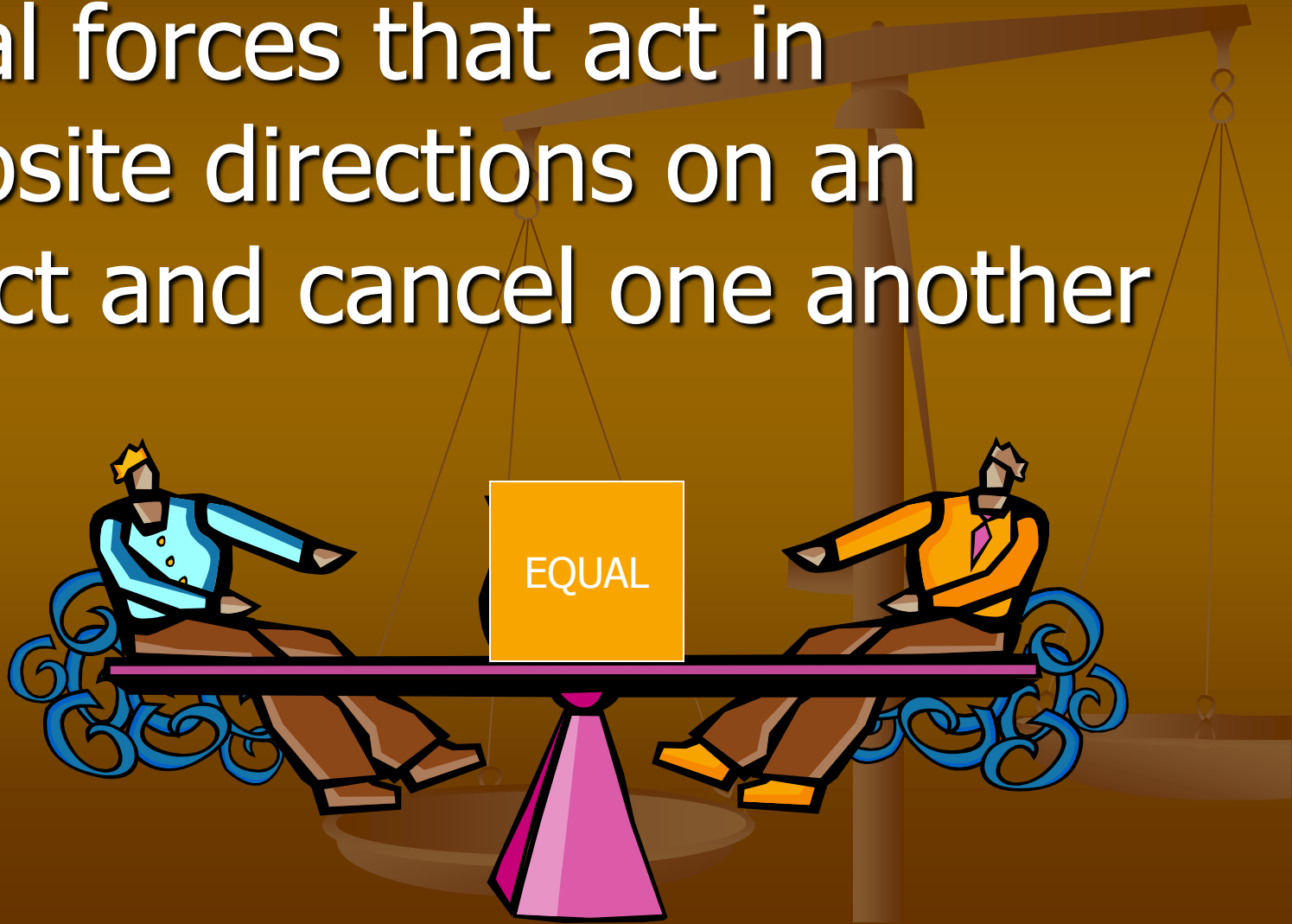


- The speed and direction of a moving object
- **Example:** A bird moving east at 15 mi/hr



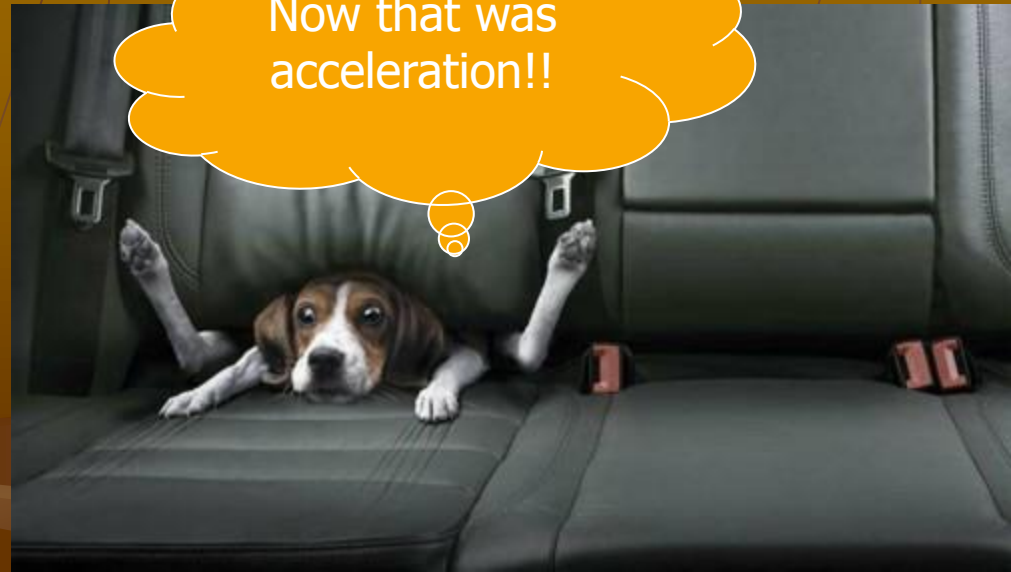
BALANCED FORCE

- Equal forces that act in opposite directions on an object and cancel one another out.



ACCELERATION

- An object's change in velocity divided by the time it takes for that change to occur



Now that was
acceleration!!



FRICTION

- A force that acts between any two surfaces in contact with one another and prevents or slows motion.



MASS

The amount of matter something has.



GRAVITATIONAL FORCE

- The force that acts between any two masses in the universe and pulls them toward one another.



INERTIA

- The tendency of matter to resist a change in its state of motion.



Foto: Allianz-Zentrum für Technik, Institut Kraftfahrzeugtechnik, Ismaning

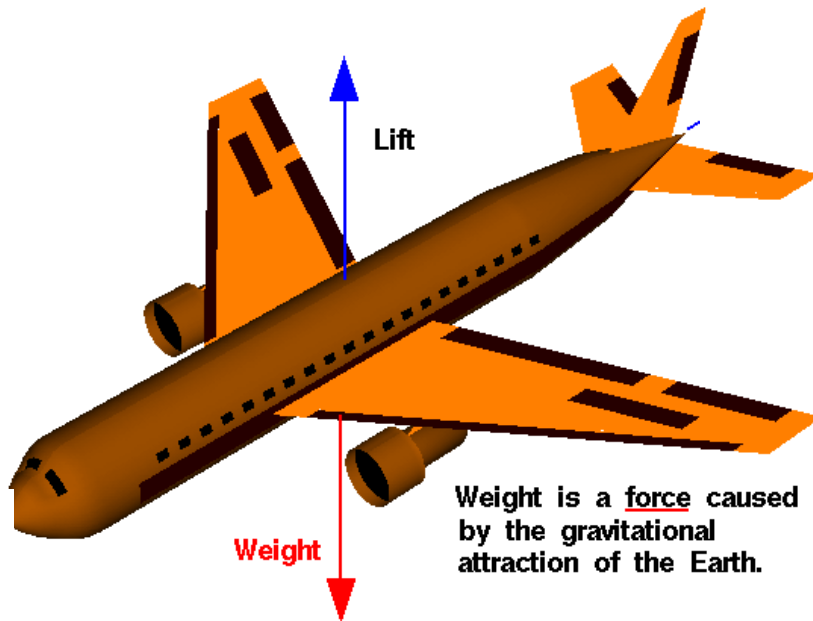
WEIGHT

- The measurement of the force of gravity on an object.



What is Weight?

Glenn
Research
Center



Weight is a force caused
by the gravitational
attraction of the Earth.



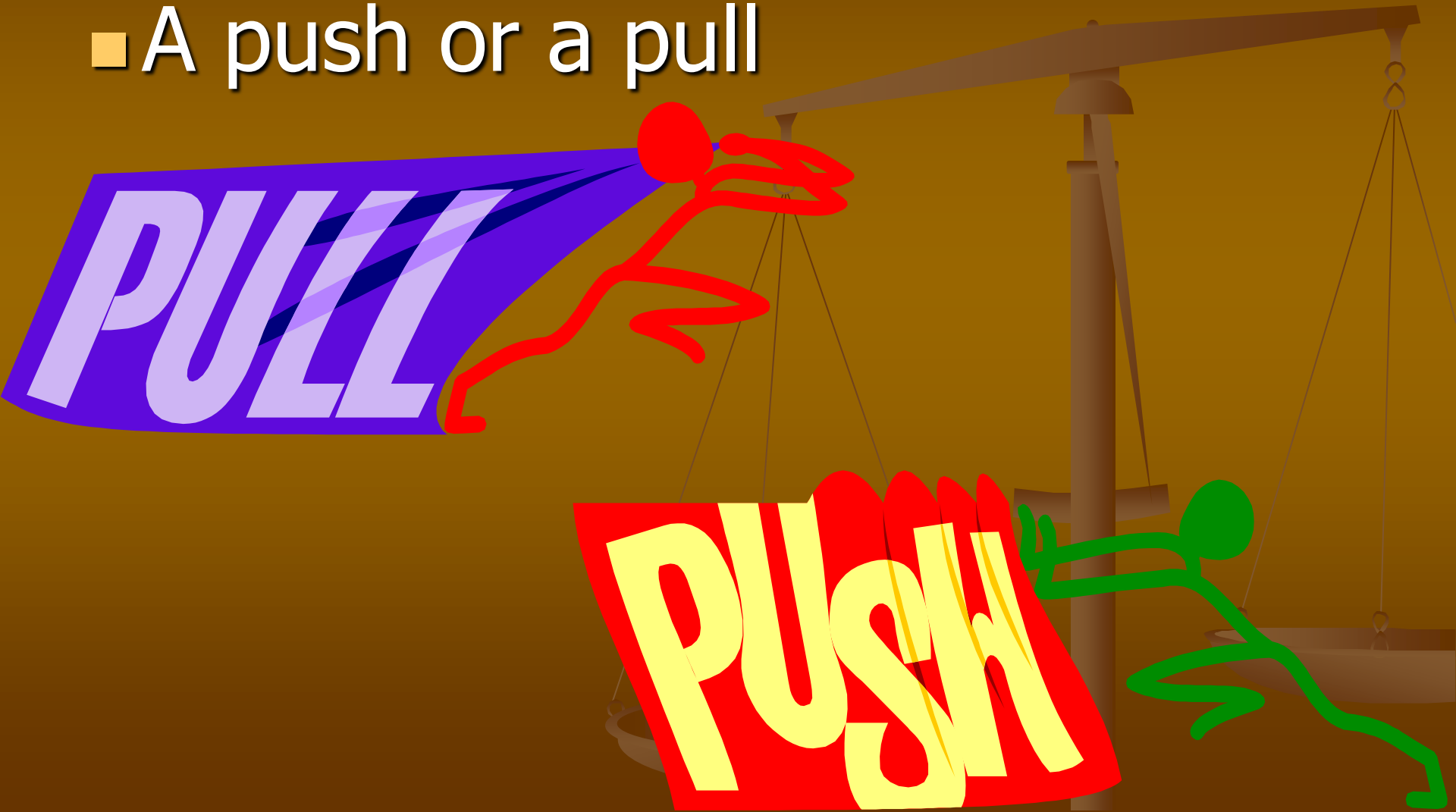
UNBALANCED FORCES

- Forces that do not cancel one another out



FORCE

- A push or a pull



MOMENTUM

- The product of an objects' mass and velocity.
- $P = m \times v$
- A car's mass is 120 kg and moving at 10m/s going North. What is the momentum?

$$120 \times 10 = 1200$$

