NON-CONTACT FORCES
What is a force?

A force is a push or pull.
FORCE: A PUSH OR PULL

CONTACT

NON-CONTACT
FORCE: A PUSH OR PULL

CONTACT

NON-CONTACT
FORCE: A PUSH OR PULL

CONTACT

NON-CONTACT

No touchy. No touch.
FORCE: A PUSH OR PULL

CONTACT
- APPLIED
- FRICTION
- NORMAL

NON-CONTACT
- GRAVITY
- ELECTRIC
- MAGNETIC
FORCE: A PUSH OR PULL

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FORCE: A PUSH OR PULL

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NON-CONTACT
- GRAVITY
- ELECTRIC
- MAGNETIC
NON-CONTACT FORCES → GRAVITY

- Attraction force that pulls objects towards each other
NON-CONTACT FORCES → GRAVITY

- Attraction force that pulls objects (that have mass) towards each other.
NON-CONTACT FORCES → GRAVITY

- Any two objects that have mass attract each other.

Mass = 120kg
Weight = 120 x 10
     = 1200N

Mass = 120kg
Weight = 200N
NON-CONTACT FORCES → GRAVITY

- **MORE MASS** = **MORE FORCE**
- **GREATER ATTRACTION** = **MORE GRAVITY**
NON-CONTACT FORCES → GRAVITY

- MORE MASS = MORE FORCE
- GREATER ATTRACTION = MORE GRAVITY
Weight vs. Mass

Weight:
- Can change based on where you are in the universe
- Indicates how heavy something is
- Measured in Kg
- Equal valued on Earth

Mass:
- Stays the same unless something is added or taken away
NON-CONTACT FORCES → GRAVITY

- MORE DISTANCE IN-BETWEEN = LESS GRAVITY
NON-CONTACT FORCES → GRAVITY

- MORE DISTANCE IN-BETWEEN = LESS GRAVITY
Gravity + Falling Object
NON-CONTACT FORCES → GRAVITY

- ONLY EXPERIENCING GRAVITY
- NO AIR RESISTANCE
- FREE FALL
NON-CONTACT FORCES → GRAVITY

- Objects fall at the same rate in free fall
- Acceleration due to gravity = 9.8 m/s²
ACCELERATION DUE TO GRAVITY = 9.8 m/s²

If an object is falling on Earth, what will its velocity be after 3 seconds?