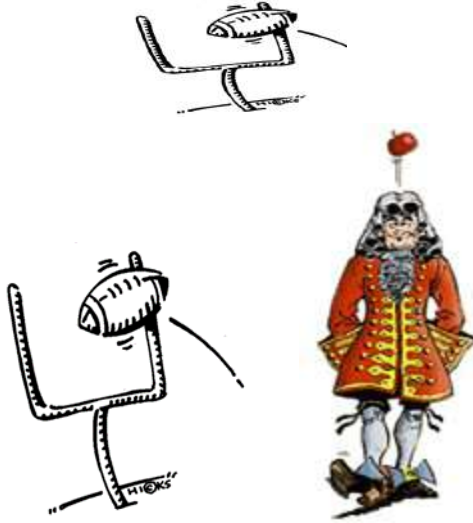


Newton's Laws and Football



Main Website:

<http://science360.gov/series/science-nfl-football/75c4deca-05f2-40f8-89ed-6756341d204f>

Newton's First Law

<https://science360.gov/obj/video/70fadaa8-c3d4-4132-ba1f-c98be5caeb14/science-nfl-football-newtons-first-law-motion>

1. Correctly state Newton's First Law of Motion in your own words.
2. Explain how inertia is used when playing football.
3. Explain how mass affects inertia.
4. How would you explain the difference in mass and gravity?
5. Explain ways a quarterback in football could use mass to his advantage to win the game?

Newton's Second Law

<https://science360.gov/obj/video/58e62534-e38d-430b-bfb1-c505e628a2d4/science-nfl-football-newtons-second-law-motion>

1. Correctly state Newton's Second law of Motion in your own words.
2. What is the purpose of this law?
3. Explain how a kicker would use the second law to land a successful kick.
4. What is Impulse (Force x Time) and how does it affect the speed of a kick?

Newton's Third Law

<https://science360.gov/obj/video/d0e16d27-05d4-4511-9394-2758aa066981/science-nfl-football-newtons-third-law-motion>

1. Correctly state Newton's Third law of Motion in your own words.
2. What is the goal of an NFL Defender, and how would he use Newton's Third Law to reach that goal?
3. How is momentum determined in football? Give the equation used, and explain it.
4. Explain the Law of Conservation of Momentum.
5. How does Newton's Cradle explain momentum and how is this depicted by players in the game?

Create and Label an illustration that shows football players using Newton's Three Laws of Motion.

