

Unit 2: Human Performance and Biomechanics  
**Chapter 11: Biomechanical Theory and Concepts**

Section 11.1: The Study of Biomechanics:

- Know what biomechanics is
- Know the role of internal and external forces (table 11.1 and 11.2 are good examples)

Section 11.2: Newton's Three Laws of Motion

- Know the first law of motion and examples in sports where it applies
- Know the second law of motion and examples in sports where it applies
- Know how to use and answer questions using  $F = ma$
- Know the third law of motion and examples in sports where it applies

Biomechanics in Focus (pages 326 – 327)

- Know the 3 classes of levers and examples in the body

Section 11.3: The Laws of Physics and Types of Motion

- Know what linear or translational motion is and examples in sports
- Know what Angular (rotational) motion is and examples of human physical activities that involve it.
- Understand what determines which type of motion is occurring
- Know what torque is

Section 11.4: Applying Knowledge of Biomechanics

- Understand the role of ergonomics
- Be able to explain the role of biomechanics in injury prevention and rehabilitation

Review Questions: 1 – 7, 9,10 pg. 335