

V.

p. 115, Chap. VII

(a) Equilibrium, in all activities, is an active muscular process to control the center of gravity of the body and of its parts with respect to the base of support.

(b) Newtonian Laws:

1. The laws of inertia:

1. A resting body remains at rest if no external force operates upon it.
2. A body moving with uniform motion retains this uniform motion so long as no external force operates upon it.

2. The laws of acceleration:

1. Acceleration is directly proportional to the force producing it.
  2. Acceleration is inversely proportional to the mass of the body.
  3. Acceleration is in the same direction as the force producing it.
3. The law of reaction: Every force which meets resistance has an equal and opposite counterforce.

p. 134, Chap. VIII

(c) Hip, knee and ankle. One's weight is lifted by extension at all three articulations. Extension cannot naturally take place at any one of these articulations without also occurring at the other two.

N.B. For class uses an exact description of this process would be advisable. See p. 134.

VI.

pp. ~~188-198~~

188-198, Chap. XIII.

(a) Pushing, pulling, throwing, striking, (or others, such as kicking, etc.)

(b) 1. Those in which performer keeps contact with the object. Ex: pushing, pulling.  
2. Those in which momentum is developed in an object and then released. Ex: All types of throwing.

3. Those skills in which momentum of a body part, or of a tool, is imparted to either a stationary or moving object and it is either moved or accelerated in movement thereby. Ex: serving a tennis ball, or a place kick in football, or striking a baseball, etc.

VII.

p. 203, Chap. XIV.

(a) In archery the momentum is developed in object and then released, as in throwing. Archery calls for precision of movement. Its successful achievement depends largely upon the kinesthetic perception of position and ability always to reproduce this desired position. While it belongs to the same class of skills as throwing, it involves the projection of the arrow by a mechanical device rather than by muscular force. This game demands static rather than dynamic precision.

pp. 207-209, Chap. XIV.

(b) In badminton, we have a type of the fundamental skill of striking, i.e., the type wherein the momentum of a tool or body part is imparted to either a stationary or a moving object by an external force, and the object is moved thereby.

Badminton involves many striking techniques. While the game is similar in some respects to tennis, it differs definitely. The equipment is largely responsible for this. The lighter racquet is largely responsible for this and thus lacks the potential force of the tennis racquet. The compensation for this lack of force must be made in the greater speed of the stroke and in a different timing. From the standpoint of mechanics these drives are classified as either underhand or overhand.