

4. Select any motor activity which you perform rather frequently. Study your actions from the standpoint of waste motions and apparent causes of fatigue if continued. If you perform it efficiently, how do you think you achieved this? If you perform it inefficiently, how could you go about improving your efforts?

Answer: (as varied as are the individuals answer the question.)

5. Discuss briefly why the articulations of the body are the hinges upon which the study of kinesiology swing.

Answer: Movement takes place in the body articulations. They are the loci of motion - just as the hinges of a door or the axle of a wheel are the points of motion for their respective services. Various types of door hinges result in different uses for doors. So it is with body articulations: the structure of the articulation will primarily determine its type and range of movement.

6. In much the same way as in Question 5, discuss the relationship of the muscles of the body to the study of kinesiology.

Answer: The muscles of the body are the sources of body motion; just as the articulations are the places of motion. The articulations would be relatively useless without the muscular propelling power. Hence, the larger muscles are located where the greatest force is needed, and the lesser where the least resistance is needed.

The human body is a self-propelling machine, whose power comes from muscular contraction. And it must be remembered that a muscle can only pull; it never pushes.

Gravity is a constant force pulling vertically downward on all objects, at all times. The muscles are always combating the downward pull of gravity. Likewise, if and when gravity can produce the desired movement, in the interests of muscular economy we soon learn to let the muscles relax and let gravity do the work.