Kinesiology: Core Concepts
Task Sheet for Learning about Force

Definitions:
Force may be increased by:
   a. Increasing the range of movement of the body segments imparting force
   b. Utilizing sequential movement of the muscles of the body
   c. Utilizing a follow-through
   d. Increasing the distance through which the force is applied
   e. Using the strongest muscles and all possible muscles available for a task
   f. Maintaining firm contact with the base of support.

Learning Activities:
1. Throw a softball in each of the following ways and note how far it goes:
   a. With only wrist action, no arm or body action
   b. From a sitting position with your legs in a stride position, no trunk twist
   c. From a kneeling position with a good twist of the trunk
   d. Standing still, face the direction of the throw
   e. Step forward on the right foot and throw the ball
   f. With the body weight on the right foot to begin with, shift to the left foot as the ball is thrown (right-handed throw)
   g. Stand with the left side toward the direction of the throw, with feet apart; step into the throw, using a full arm swing and body twist and a follow-through
   h. Jump and throw the ball.

Question: Which throw went the farthest? Why?

2. Stand still and kick a soccer ball. Note how far it goes.
3. Kick the soccer ball by stepping into the kick. Note how far it goes.

Question: Which ball went farther? Why?

4. Do a standing broad jump without using the arms. Note the distance of the jump.
5. Do a standing broad jump using the arms. Note the distance of the jump.

Question: Which jump was farther? Why?

6. Jump as high as possible with both hands held above the head. Note the height of the jump.
7. Stand next to a wall. Jump as high as possible holding both hands against the chest and then reach with one hand. Note how high the one hand was able to reach.
8. Jump throwing both arms upward with the jump. Note the height achieved.
9. Step into the jump and simultaneously throw the hands upward. Note the height.

Question: Which method resulted in the highest jump? Why?