**Physical Impairment**

Physical disabilities relate to individuals with limits on physical abilities and medical conditions such as strength and stamina. The involvement may affect any muscle or nerve in any part of the body. The person may require a wheelchair, crutches, walker, braces, or a cane. Some physical disabilities are genetic. Others result from being born premature, birth complications, accidents or diseases.

**Diseases**

* Rheumatoid arthritis: The joints (where bones join together) become hard to move. Movement becomes painful.
* Multiple Sclerosis (MS): The nerves are damaged so that messages from the brain do not travel to the muscles to produce movements.
* Muscular Dystrophy (MD): A genetic disease that gradually weakens the body’s muscles that control movement.
* Cerebral Palsy (CP): This is not an illness, but occurs when the brain becomes injured before, during, or shortly after birth.
* Paralysis: This occurs due to nerve or spinal cord injury. Common causes are automobile collisions and accidents involving serious falls.
* Paraplegia: This is nerve destruction affecting the muscles below the waist.
* Hemiplegia: This is nerve destruction affecting one vertical half of the body.
* Quadriplegia: This is nerve destruction affecting the muscles below the neck.
* Birth defects: Normal development of the body did not occur before birth.
* Amputation: The removal of an arm or a leg in surgery, in an accident, or as a result of a congenital defect.
* Spina Bifida: A birth defect in which the bones of the spine do not close during development of the fetus and injury occurs to the spinal cord and nerves.
* Stroke: Blood circulation is impaired to a certain area of the brain, which causes the brain cells to stop working correctly.

**Activities for the Physical Impairment Stations**

**Adaptive Equipment and Wheelchair Course – Station #10**

1. Wheelchair course: Set the brake on the wheelchair before the student gets on or off the chair. Remember to release the brake before the student begins to move the chair. The student should assume that their legs are immobile. Each student must travel along the gym floor, through various obstacles that have been predetermined by the coordinator, and then back to the starting point. If possible, do not assist the students while they travel the course. Monitor them for safety related struggles such as door pinch points. **WARNING: A volunteer must spot every student while on a ramp. Students often panic. Occasionally a student will start to flip backwards or roll forward out of control. Students are not allowed on a ramp without a one-on-one adult volunteer.** The best wheelchair course layouts include real life obstacles. The following are a few examples:
   * open the gym door and travel through it unassisted. Always watch the student's fingers to be sure they do not get pinched.
   * travel on sidewalk, carpeting or the rugs
   * get a drink of water from a non-accessible fountain
   * wheel into a desk that is brought to the gym
   * wheel into a storage room or bathroom stall and out
   * wheel around items that were dropped on the floor
   * pick up items left on the floor with a reacher or try to hang clothing on a hook
   * try to use a nearby public telephone
   * wheel up or down a ramp nearby with one-on-one adult supervision

The course must be short because of time constraints, but it can be packed with real life experiences. Be conscious of time because all of the students need to participate in this activity. **There will be NO RACING or using the chair recklessly.** **The student must immediately get out of the chair if this occurs.**

1. While waiting for a turn in the wheelchair, manipulate all of the splints and braces. Manipulate the various types of adaptive equipment used for eating, dressing, and other daily living activities.
2. While waiting for a turn in the wheelchair, visit the display from the Wright-Filippis Company on prosthetics. Students will be able to handle most of the display items. Do not let them try on the prosthetics.