**Research Worksheet Answer Key**

**Research the following aspects of prosthetic limbs:**

1. **Materials:** How have prosthetic materials changed over the years? What materials are most commonly used now? What are the advantages and disadvantages of the most commonly used materials?

*Modern materials* make prosthetics stronger, lighter and more realistic in appearance and use

* + Advanced plastics
  + Carbon fiber composites
  + Electronic components as control methods

*Advantages*: lighter, more durable, able to mimic more realistic appearance and movement

*Disadvantages*: cost, availability of materials

1. **Controlling the prosthesis:** What are the pros and cons of current prosthetic control/movement methods?

Research answers will vary.

1. **Research old-style prostheses (prior to 1940):** What kinds of materials were successfully used and how? What designs were effective for lower-leg prostheses? **Your goal** is to get information that will help you design your own lower-leg prosthesis starting tomorrow.

Research answers will vary.

1. **Research current prostheses:** Which prosthesis design and materials would you choose for a below-the-knee prosthesis regardless of price? Which prosthesis design and materials would you choose if you had a limited budget?

Research answers will vary.