

## Worksheet B: Design Specifications for the Sneaker

It is important to have design criteria in mind when you work on building or creating things. The way things are made and the materials that are used depend upon the desired final design. Work with the students in your group to complete the following exercise.

1. What sport do you want to design a sneaker for?

2. What motions do you think you use in this sport?

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3. Have one student in your group actually go through a few of the motions involved in the sport while the other students observe.

5. What are the motions that were used; how did you feet move?

Fast start \_\_\_\_\_

Fast stop \_\_\_\_\_

Upward motion \_\_\_\_\_

Turning motion \_\_\_\_\_

Jumping up \_\_\_\_\_

Jumping forward \_\_\_\_\_

Other motions used \_\_\_\_\_

6. What types of properties should the sneakers have for this sport?

Flexible \_\_\_\_\_ or Stiff \_\_\_\_\_

Slippery \_\_\_\_\_ or Sticky \_\_\_\_\_

Bouncy \_\_\_\_\_ or Firm \_\_\_\_\_

Other \_\_\_\_\_

6. What qualities would be needed for a sneaker to make it most effective for this sport?

7. Review the materials list you have and based on the properties for each of those materials, design a sneaker that will be effective for the sport you have selected.