

Overview and Objectives

In this lesson, students have an opportunity to apply what they have learned in Lesson 3 about the importance of using beginning and ending points when matching. They build on this idea by exploring the use of a common starting line when comparing on a representational bar graph. Appreciating the need for a common starting line helps strengthen students' concept of making fair comparisons. In addition, students take the first step toward predicting by making a guess about the lengths of their arms and legs. Throughout the unit, students will gain more experience with using a common starting line and making predictions.

- Students guess which team member has the longest arm and longest leg.
- Students match the lengths of their arms and their legs and graph their results in serial order from shortest to longest.
- Students discuss why it is important to use a common starting line when making comparisons.
- Students compare the information on the arm and leg graphs with the information on the height graph from Lesson 3.

Background

When students match the lengths of their arms in this lesson, they will place the adding machine tape from the wrist to the end of the shoulder, as in Figure 4-1. When students match the lengths of their legs, they will place the tape from the outside of the ankle to the outside of the hip, as in Figure 4-2.

When students construct a graph in this lesson, they will begin to recognize the importance of a common starting line. You may want to explain that in a race, people need to begin, as well as end, at the same place. If everyone started from different places, they would be running different lengths, and the race would not be fair. Similarly, by placing the arm and leg tapes at a common starting line, the students will be able to make fair comparisons.

In **this** lesson, students also gain experience making guesses, the first step in learning to make predictions. You may want to mention to students that scientists often make predictions; for example, a meteorologist makes predictions about the coming weather.

Figure 4-1

Matching arms

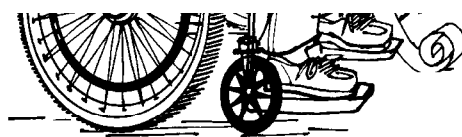


Figure 4-2

Matching legs

