

# Build a Better Ramp

## Student Information Page Activity 4B Part 4

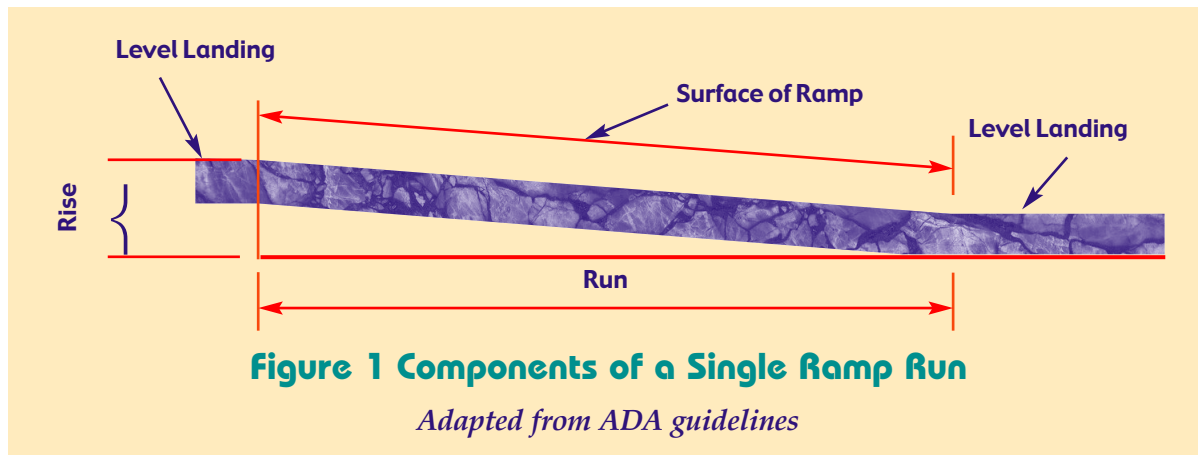


### Activity Materials:

- Cardboard Ramp from Part 1
- 1 Stopwatch
- 1 Ruler
- Books of same thickness to make ramps
- Class set of *Student Information Pages*
- 1 copy of *Student Data Pages* (per student)

**Background:** The following is from the provided guidelines from *ADA*:

**4. 8. 2 Slope and Rise.** The least possible slope shall be used for any ramp. The *maximum slope* of a ramp in new construction shall be 1:12 . The maximum rise for any run shall be 30 in (760 mm) (see Fig. 1). **Note that 1:12 = 1 to 12 = 1/12.**



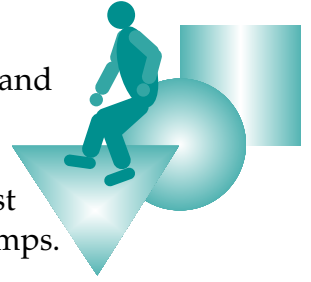
**4. 8. 3 Clear Width.** The minimum *clear width* of a ramp shall be 36 in (915 mm).

**4. 8. 4 Landings.** Ramps shall have level landings at bottom and top of each ramp and each ramp run. Landings shall have the following features:

- (1) The landing shall be at least as wide as the ramp run leading to it.
- (2) The landing length shall be a minimum of 60 in (1525 mm) clear.
- (3) If ramps change direction at landings, the minimum landing size shall be 60 in by 60 in (1525 mm by 1525 mm).

## Procedure:

1. Measure the *rise* and *run* of the drawings on your *Student Data Pages* and determine if each *does* or *does NOT* meet ADA guidelines for ramps.
2. For each ramp that does *NOT* meet *ADA* guidelines, explain what must be done to make the ramp compliant with the requirements for safe ramps.
3. Using the pizza box and books, construct a ramp that meets the *ADA* guidelines for safe ramps. On your *Student Data Page*, make a drawing of your ramp and label the *ramp length, rise, run*, and clear landings. Calculate the slope of your ramp to be sure it meets *ADA* requirements.

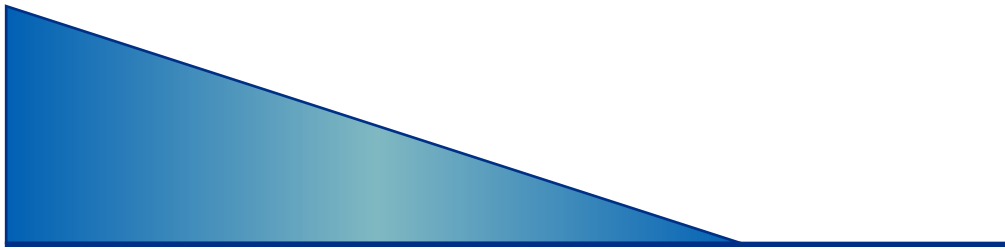


# Build A Better Ramp

## Student Data Page Activity 4B Part 4



Ramp 1



1. Rise \_\_\_\_\_
2. Run \_\_\_\_\_
3. Ramp length \_\_\_\_\_
4. Slope \_\_\_\_\_
5. Clear width \_\_\_\_\_ 915 mm \_\_\_\_\_
6. Landing length \_\_\_\_\_
7. Does the ramp meet ADA guidelines? \_\_\_\_\_

Explain your answer.

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If this ramp does **NOT** meet ADA guidelines, explain how it needs to be changed so it will meet ADA guidelines.

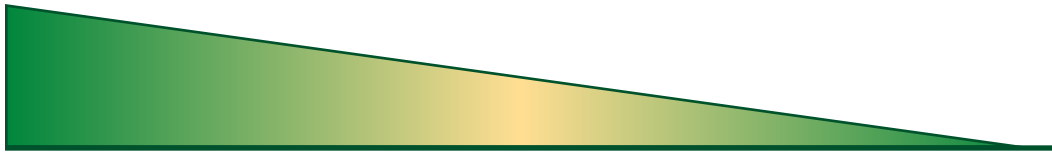
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Ramp 2



- 1. Rise \_\_\_\_\_
- 2. Run \_\_\_\_\_
- 3. Ramp length \_\_\_\_\_
- 4. Slope \_\_\_\_\_
- 5. Clear width \_\_\_\_\_ 915 mm \_\_\_\_\_
- 6. Landing length \_\_\_\_\_
- 7. Does the ramp meet ADA guidelines? \_\_\_\_\_

Explain your answer.

\_\_\_\_\_  
\_\_\_\_\_

If this ramp does **NOT** meet ADA guidelines, explain how it needs to be changed so it will meet ADA guidelines.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Ramp 3



1. Rise \_\_\_\_\_
2. Run \_\_\_\_\_
3. Ramp length \_\_\_\_\_
4. Slope \_\_\_\_\_
5. Clear width \_\_\_\_\_
6. Landing length \_\_\_\_\_
7. Does the ramp meet ADA guidelines? \_\_\_\_\_

Explain your answer.

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If this ramp does **NOT** meet ADA guidelines, explain how it needs to be changed so it will meet ADA guidelines.

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**Ramp 4** Using the activity materials, construct an *ADA* compliant ramp and draw it below. Be sure to label the features of your ramp that make it *ADA* compliant.



Draw  
and label  
ramp



What is the slope of your ramp?



LESSON 4

ACTIVITY 4B, PART 4

MO-BILITY

## Processing Out:

1. Why are ramp specifications so important to the safety of people with mobility issues?

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2. Consider what you have observed in this activity. Considering safety issues, do you think it is cost-effective to spend money to rebuild existing ramps so they meet *ADA* guidelines? Explain your answer.

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3. How could you use the information you gained from this investigation of ramps to convince leaders in your community to rebuild existing ramps to be compliant with *ADA* guidelines?

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