

Build a Better Ramp

Student Information Page Activity 4B (MS) Part 4

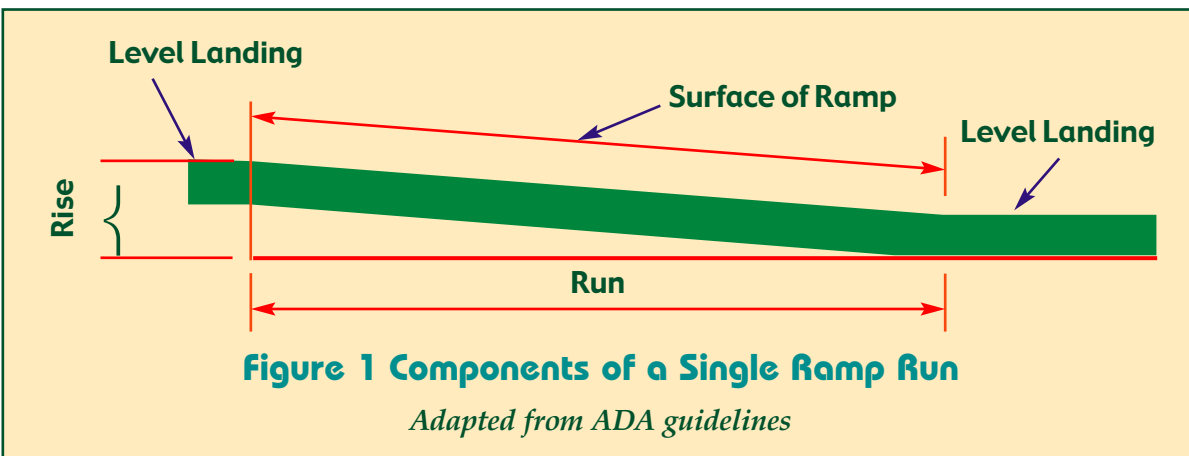


Activity Materials:

- 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).

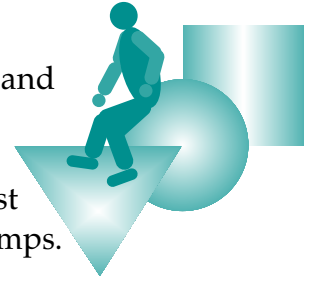


LESSON 4

ACTIVITY 4B, PART 4
MIDDLE SCHOOL

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.

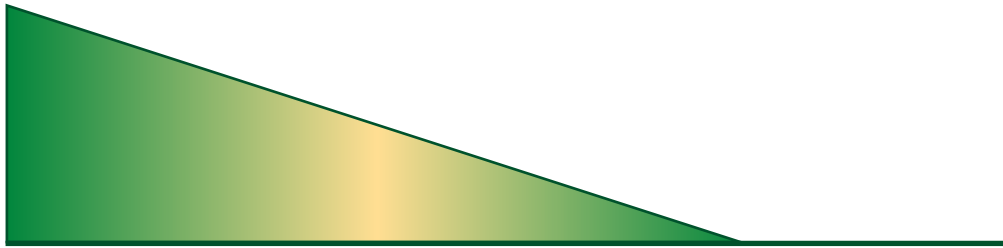


Build A Better Ramp

Student Data Page Activity 4B Part 4



Ramp 1



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

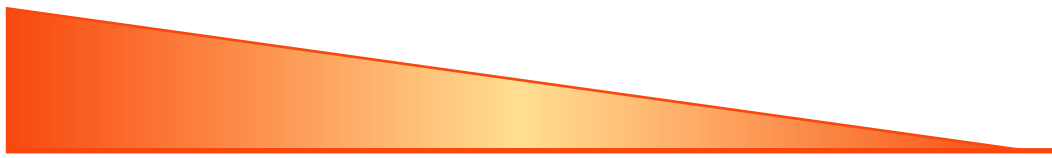
Explain your answer.

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



LESSON 4
ACTIVITY 4B, PART 4
MIDDLE SCHOOL

Ramp 2



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.

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



LESSON 4
ACTIVITY 4B, PART 4
MIDDLE SCHOOL

MO-BILITY

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.

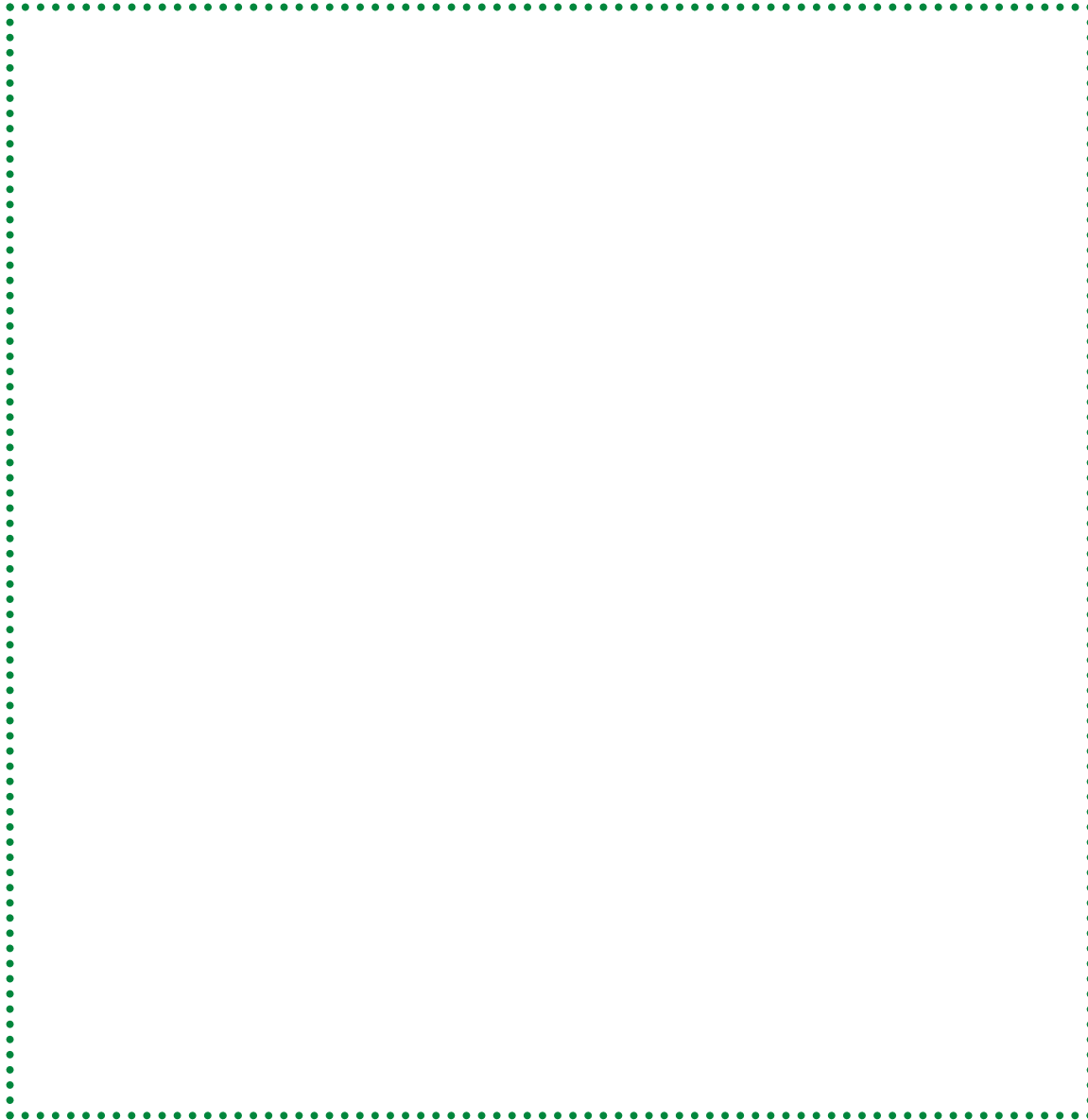
If this ramp does **NOT** meet ADA guidelines, explain how it needs to be changed so it will meet ADA guidelines.



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
MIDDLE SCHOOL

MO-BILITY

Processing Out:

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



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.

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?

