



FACTivity

In this FACTivity, you will answer the question: “How might a changing climate affect the projection of backcountry and wilderness participation by the year 2060?”

Methods

In the Discussion section of the article, you read that when climate change was included in the mathematical models, the scientists’ projections were different. The projected rate of increase in activity participation was lower than was projected without climate change. The next section includes two tables. These tables come directly from the scientists’ mathematical models. Table 3 shows the projected percentage increase or decrease in backcountry and wilderness activities when climate change was not included in the models. Table 4 shows the projected percentage increase or decrease in backcountry and wilderness activities when climate change was included in the models.

In groups of three to four students, examine the tables. First, examine table 3. What do the numbers in parentheses indicate? Now examine both tables, comparing the data in each table for each activity.

- What pattern do you notice overall?
- Why do you think you see this pattern?
- Where do you see a **deviation** from this pattern?

Discuss your observations and thoughts in your small group. Your teacher may also lead a class discussion about the tables’ data. In your discussion, think carefully about how a changing climate might affect outdoor recreation participation in the future. What do you know about climate change that might affect participation?

Using the data in the first and third columns of tables 3 and 4, construct two bar graphs with the following x and y axes. You will construct one bar graph for the first column of tables 3 and 4, and one bar graph for the third column of tables 3 and 4.

- Y axis: Percentage from -10 to 100 in **increments** of 5.
- X axis: For each of the four activities, two bars will be created. One bar will represent 2060 with no climate

change, and a second bar will represent 2060 with climate change included. Give each bar graph a title and label both axes.

Table 3

No Climate Change By the Year 2060	Percent Increase (Decrease) in Adult Participants (in millions)	Percent Increase (Decrease) in Days Per Participants	Percent Increase (Decrease) in Total Days (in millions)
Challenge activities	85	(1)	82
Horseback riding on trails	87	3	92
Hiking	72	6	82
Visiting primitive areas	56	(1)	55

Table 4

Climate Change Occurring to the Year 2060	Percent Increase (Decrease) in Adult Participants (in millions)	Percent Increase (Decrease) in Days Per Participants	Percent Increase (Decrease) in Total Days (in millions)
Challenge activities	81	0	81
Horseback riding on trails	92	(4)	83
Hiking	69	7	81
Visiting primitive areas	54	(3)	50

After you create the bar graphs, carefully observe the graphs.

- Consider what you have learned from examining the tables. Do you have any additional **insight** into how climate change might affect these four activities in the future?
- Is it easier for you to understand the data when they are in tables or in bar graphs?
- Name one advantage of examining the data in tables.
- Name one advantage of examining the data in bar graphs.

Now answer the question posed at the beginning of this FACTivity.