

Climate Data Jam Answer Key

Goal - Examine data on predicted future temperature and precipitation data from several New Mexico counties, and then design a creative project that explains one part of these data to a non-scientist audience. A good Data Jam project is:

Clear: Represent the data accurately and in a way that is understandable to non-scientists. Make sure to include a legend explaining how you represent the data (e.g., one water droplet picture represents 1 millimeter of precipitation) or make reference to specific data.

Creative: Use your imagination! Whether you choose to make an infographic or to write a poem, try to make your data presentation as creative as possible!

Concise: Keep it short and to the point. Focus on one important trend in the data.

Project Directions

1. Decide if you would like to work alone or with one or two other students to complete your Climate Data Jam project.
2. Fill out the Planning and Brainstorming Notes section below.
3. Create your project (infographic or poem) and prepare it for the gallery walk.

Planning and Brainstorming Notes

1. Look at the datasets carefully and list trends you might like to explain to your audience. What are some things you notice about the data?

Possible trends include (but are not limited to):

- ***All counties are predicted to have warmer annual temperatures with the greatest increases in spring in three of the four counties.***
- ***Some counties are predicted to get more precipitation and some are predicted to get less. However, all counties should expect a drier spring, an important season for crops and native plants.***
- ***While Doña Ana and Otero Counties have the exact same temperature predictions, Doña Ana County is predicted to get drier than Otero County.***

2. Choose the type of creative project you will make (circle one): Infographic Poem

Student responses will vary.

Data: Predicted Temperature and Precipitation Changes in New Mexico Counties

These data were acquired from the USDA Southwest Regional Climate Hub’s “Precipitation By County” and “Temperature by County” maps. The change in the temperature and precipitation values were calculated by subtracting the historic (1971-2000) data values from the predicted values for 2040-2069. Historic data were derived from PRISM data generalized to the county level. The predicted future values are based on the mean of 20 Coupled Model Intercomparison Project general circulation models.

Table 1: New Mexico Predicted Temperature Changes By County

Temperature Category	Bernalillo County (includes Albuquerque)	Doña Ana County (includes Las Cruces)	Otero County (includes Alamogordo)	Union County (includes Clayton)
Annual Total	3.5 °C warmer	3.3 °C warmer	3.3 °C warmer	3.3 °C warmer
Winter Total	3.3 °C warmer	3.1 °C warmer	3.1 °C warmer	2.9 °C warmer
Spring Total	3.6 °C warmer	3.4 °C warmer	3.4 °C warmer	3.3 °C warmer
Summer Total	3.5 °C warmer	3.2 °C warmer	3.2 °C warmer	3.5 °C warmer
Fall Total	3.5 °C warmer	3.4 °C warmer	3.4 °C warmer	3.5 °C warmer

Table 2: New Mexico Predicted Precipitation Changes By County

Precipitation Category	Bernalillo County (includes Albuquerque)	Doña Ana County (includes Las Cruces)	Otero County (includes Alamogordo)	Union County (includes Clayton)
Annual Total	0.2 mm wetter	3.3 mm drier	1.0 mm drier	11.5 mm drier
Winter Total	1.2 mm wetter	3.8 mm drier	3.9 mm drier	3.4 mm wetter
Spring Total	4.7 mm drier	2.2 mm drier	2.7 mm drier	0.8 mm drier
Summer Total	1.1 mm wetter	6.5 mm wetter	2.7 mm wetter	14.9 mm drier
Fall Total	2.6 mm wetter	2.8 mm drier	3.0 mm wetter	0.5 mm wetter

Climate Data Jam Presentation Summary

Each group will display their Climate Data Jam project to the rest of the class during a gallery walk. To be sure that your classmates understand your creative project, include the following on your creative project or on a separate piece of paper near your creative project while it is on display.

3. Names of all of the students who worked on the project.

Student answers will vary.

4. The title of your project. Make sure it is descriptive.

Titles should relate to the creative project and the data trend chosen.

5. List the data trend you are trying to communicate through your project.

See list of possible data trends on page 1.

6. After the class discussion, write the larger trend found in the Climate Data Jam. This is the phenomenon we will make sense of throughout this unit.

In New Mexico, temperatures are expected to rise, and precipitation patterns are expected to increase in variability.