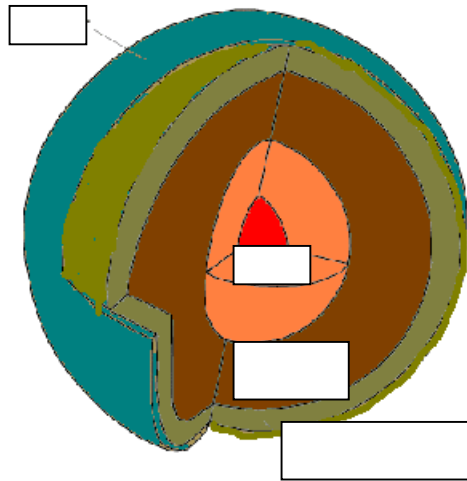


# Answer Sheets

## Volcanoes

Identify all four layers of the Earth:



1. What layer is the thickest? **Mantle**
2. What layer is the thinnest? **Crust**
4. What layer does the magma come from? **Mantle**
5. The crust is made of **Plates**.
6. What caused Capulin Volcano to erupt so far east from the Pacific Ring of Fire? **Rio Grande Rift**
7. Capulin Volcano is a **cinder** cone volcano.
8. Capulin is between **56** and **62** thousand years old.
9. How long did the eruption of Capulin last? **5-15 years**
10. Most cinder cones are 700 - 900 feet tall. How tall is Capulin? **1,200 feet tall**
11. Capulin Volcano sits in the **Raton-Clayton** Volcanic Field.

## **Bus Ride Activities**

No matter which direction you come from, there are a lot of interesting things to see on your way to Capulin Volcano. The questions below test your observation skills. Determine the route you are taking, find it listed below, and answer the questions that pertain to your trip.

### **From Clayton to Capulin (Hwy 64/87):**

How far is it to Capulin from Clayton, NM? **58 miles**

Just north of Clayton is a place called Clayton Lake. Name two things that make Clayton Lake special. **It is damned and it has dino tracks**

Between the towns of Clayton and Des Moines, there are two volcanoes that are visible from the highway. Can you name them? **Mt. Dora and Rabbit ears**

Des Moines sits at the base of what volcano? **Sierra Grande**

Is Capulin Volcano large or small, in comparison to the surrounding landscape? **Large**

How can you tell which volcano is Capulin? **The road going to the top, and it's somewhat perfect symmetry**

How far is it to Capulin from Des Moines, NM? **10 Miles**

What trail crosses the highway, near the town of Grenville? **Santa Fe trail**

### **Raton to Capulin (Hwy 64/87):**

How far is it from Raton to Capulin? **32 miles**

How many volcanoes do you see from the road?

What is the name of the ranch along the highway? What color are the roofs? **TO, Red**

How many signs are there along the road say Capulin?

Name three different types of animals you are most likely to see along this road. **Antelope, Cows, Elk**

### **Las Vegas to Capulin (Hwy 25 & 64/87):**

How far is it from Las Vegas to Capulin? **139 miles**

How far is it from Raton to Capulin? **32 miles**

How many volcanoes do you see from the road?

What is the name of the ranch along highway 64/87? What color are the roofs? **TO, red**

How many signs are there along the road say Capulin?

Name three different types of animals you are most likely to see along this road. **Antelope, Cows, Elk**

How many towns do you pass along the highway?

Just north of the town of Maxwell, the highway cuts through a fissure. What is the name of the town where this fissure is cut through? **Tinaja**

How many billboards do you see along the road?

There are remnants of volcanoes in Wagon Mound. How many do you see? **Two** Why is the town called Wagon Mound? **It is named after the remnant of a volcano in the town** Why was Wagon Mound an important place along the Santa Fe Trail? **Six days by wagon to Santa Fe!**

How many National Monuments do you pass on the way? **One, Fort Union**

What river do you cross on Hwy 25? **Canadian River**

### **Cimarron to Capulin:**

How many highways do you have to travel to get to the volcano? **Three: 64, 25, & 64/87**

How many miles is it from Cimarron to Capulin? **73**

How far is it from Raton to Capulin? **32**

How many volcanoes do you see from the road?

What is the name of the ranch along the highway? What color are the roofs? **TO, Red**

How many signs are there along the road say Capulin?

Name three different types of animals you are most likely to see along this road. **Antelope, Cows, Buffalo, Elk**

What river do you cross on Hwy 25? **Canadian River**

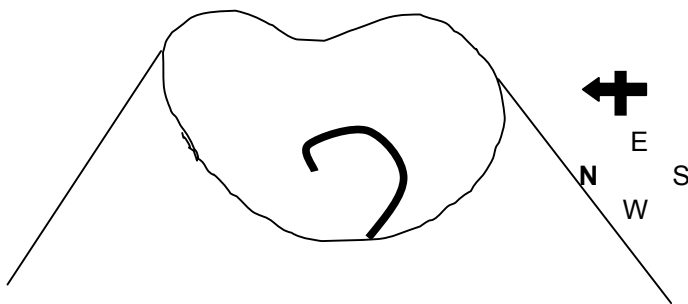
Directions: Listen to the ranger talk and fill in the blanks with the appropriate answer.

1. Capulin erupted **60** thousand years ago.
2. The eruption lasted between **5** and **15** years.
3. When you shake a soda bottle and open it, it **explodes**, just like the eruption of Capulin.
4. The **boca**, or spanish word for mouth, is where three if the four lava flows flowed from.
5. The lava flowed like cool **honey**.
6. Capulin is an example of a **cinder cone** volcano.
7. Sierra Grande is a **shield** volcano.

### Special Journal

Directions: Think of a special place or event that happened during your trip to Capulin, and write about it using the remaining space of your field book.

Directions: Sketch trees in the diagram below as they appear in the real crater and answer the questions using the compass.

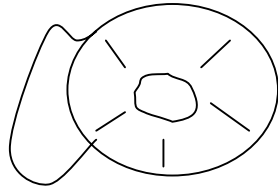


1. What side of the crater has the most vegetation? **North**
2. What side of the crater is the tallest? **North**
3. Which direction was the wind blowing from when Capulin erupted? **West**
4. How can you tell?  
**The wind blew the fountain of lava to the NE and SE so more lava piled up there making it higher.**

## Lava Flows

Directions: Using the map scale and compass draw in, to the best of your ability, all four lava flows and label them!

1. The first lava flow flowed to the south east one mile from the base of Capulin
2. The next lava flow came from the south end of the boca, and flowed south for about 2 and a half miles.
3. The third lava flow also came from the boca and flowed all over the west and has a width of about a mile.
4. The final lava flow went about four miles from the boca to the north.



## Observations

Directions: Look at some of the geology and biology of Capulin. Pick some rocks or plants and describe them in the next two pages of your field book, so that someone would be able to read this and get a clear picture of what you

saw. Some good methods to describe things are by size, shape, color, texture, and of course, to draw it.

## True or False

For this activity, you will have to determine if the statements below are true or false. Taking this sheet with you, walk around the visitor center. All of the answers can be found in the visitor center.

- F** Capulin Volcano National Monument was established on August 10, 1961.
- F** The American and New Mexico flag are located in the visitors center.
- T** According to the display, a rapid cover of plant stabilized Capulin's loose ash and cinders, preserving its steep slopes.
- T** The two pictures that show Capulin span over a seventy-six year period.
- F** There are four gold plates on the plaque on the wall next to the video room door.
- F** The spear points in the 'Capulin influences man' display are the original points that scientists found in 1926.
- T** The first accepted evidence of Ice Age man in North America was discovered near Folsom, New Mexico, in 1926.
- F** Food and drinks are allowed in the visitors center.
- T** Spindle bombs form as molten basalt twists in mid-air and hardens.
- T** Ribbon bombs form from fluid lava that stretches and twists.
- F** Geologists have extensive evidence indicating that the Earth's crust is made up of rigid rocks 'sinking' and drifting on hot, plastic layers below.
- T** Monopoly makes a National Parks Edition.
- T** You can touch the objects on the "Please Touch" table.
- T** The rangers at Capulin Volcano always have a smile on their faces.

**Challenge:** Using the information in the visitor center, make up your own true or false statements. Give them to a classmate and see if they can give the correct answer.

## Test Your Knowledge

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Multiple Choice

1) Which of the following animals is not found at Capulin Volcano

- A** Black Bear                      **C** Moose  
**B** Mule Deer                        **D** Turkey Vulture

2) The magma that formed Capulin flowed like

- A** Cool Honey                      **C** Olive Oil  
**B** Hot Syrup                         **D** Water

3) Capulin is a

- A** Shield Volcano                  **C** Composite Volcano  
**B** Cinder Cone                      **D** Mound

4) Capulin is the Spanish word for

- A** Gooseberry                      **C** Raspberry  
**B** Chokecherry                    **D** Blackberry

5) How many lava flows came out of the boca?

- A** 1                                      **C** 2  
**B** 3                                      **D** 4



## **Matching**

- |                                       |                         |
|---------------------------------------|-------------------------|
| <u>C</u> Boca                         | A. 60, 000 years old    |
| <u>F</u> Magma                        | B. 9 million years old  |
| <u>A</u> Capulin                      | C. Spanish for mouth    |
| <u>B</u> Raton Clayton Volcanic Field | D. Shield Volcano       |
| <u>E</u> Ladybugs                     | E. Swarm in the summer  |
| <u>H</u> Pinyon-Juniper Forest        | F. Came out of the boca |
| <u>D</u> Sierra Grande                | G. Volcano in Mexico    |
| <u>G</u> Paricutin Volcano            | H. Grows on Volcano     |

## **Short Essay**

Using the space below, answer the following questions.

1. Capulin had three phases of eruption. Name and explain these phases.

1. First lava flow was created. This was caused by a small amount of activity before the eruption. 2. Creation of the volcano. Could have taken a month or even years to create. 1200 feet tall. 3. Creation of the boca. Resulted in four lava flows. Could have lasted up to fifteen years.

2. How big of a problem is erosion on Capulin Volcano? What can be done to fix it?

Erosion is a major problem on the Volcano. If nothing is done to slow it down, people will no longer be able to access the rim and vent trails. Eventually there will be nothing left. We have to find a way to slow the erosion processes down. We are doing this through re-vegetation and preventing off trail activities.

## **Use your creativity**

Draw a picture of something you saw when you visited Capulin Volcano. Then, write a story about your picture.

