

Fort Davis

National Historic Site

National Park Service
U.S. Department of the Interior



Curriculum Materials Grades 6-8

Student Activity: Supplying the Soldiers at Fort Davis

SUPPLYING THE SOLDIERS AT FORT DAVIS



Hauling wood for Fort Davis

Supplying a frontier army post like Fort Davis was a huge task, and one of the army's biggest problems. In fact, the job was so complex that a number of departments were involved. The Subsistence Department was responsible for all the food supplies. The Medical Department furnished the medical equipment and drugs. The Ordnance Department was in charge of all weapons from cannons to small arms. The Quartermaster Department, which was the largest department, was in charge of all other supplies—including uniforms, furnishings, and equipment as well as the transportation of the men and supplies.

The following exercise on supplying the soldiers at Fort Davis challenges your math skills. Data for these math problems were taken from original Fort Davis documents such as army regulations, quartermaster records, and post returns. Yes, even the soldiers in the 1870s and 1880s needed math! A private may not have used math very much, but if he hoped to be promoted to corporal or sergeant, he needed to know his math. Remember, this was before the days of calculators or even adding machines.

Imagine that you are a government inspector who has come to Fort Davis to check up on the way things are running. Good luck, inspector!

1. The army built tall adobe walls to enclose the stables, where hundreds of cavalry horses stayed. Each horse was fed 14 pounds of hay and 12 pounds of grain each day. In November of 1879, the Fort Davis stables held 190 horses. **How much hay and grain did it take to feed that many horses for a week?**

Hay _____ pounds Corn _____ pounds

The army purchased hay and grain from civilians. The army asked for bids and then awarded contracts to the lowest bidders. If the U.S. Army at Fort Davis bought hay at \$18 a ton and grain at \$2.50 a bushel, **what was the cost of feeding the horses for a week?**

Hint:

1 ton = 2,000 pounds

1 bushel of grain = 50 pounds

Cost of Hay _____

Cost of Grain _____

Total Cost _____

2. The army issued contracts for the purchase of fresh beef and butchered the animals as needed. For such an animal that weighed 1,300 pounds or more, 55% was considered usable. If the animal was under that weight, 50% was considered usable. **If an animal's weight was 1,600 pounds, how many meat rations did this make?**

_____ rations

Hint: A meat ration was 1 pound 4 ounces. 1 pound = 16 ounces

3. Except for what the army could purchase locally, most of the supplies for Fort Davis came all the way from San Antonio along the San Antonio-El Paso Road. Along that road at the time, the distance to San Antonio from Fort Davis was 452 miles. Before the railroad came to western Texas in 1881, supplies were hauled in wagons pulled by either mules or oxen. A wagon pulled by mules averaged 14 miles a day. If oxen pulled the wagon, it only averaged 8 miles a day. **How much longer did it take the wagon pulled by oxen to reach Fort Davis from San Antonio than a mule-drawn wagon?** _____ days

4. The Post Commissary is where the army stored all the food for the fort and then issued it to the soldiers. A ration was the total amount of food one soldier was issued each day. Every week a sergeant and a detail of men from each troop would collect the rations for a week for the troop. In the 1880s, the ration at Fort Davis consisted of: 1 pound 4 ounces of fresh beef, and 1 pound 2 ounces of soft bread. In addition, for every 100 rations, the troop also received 15 pounds of dried beans or peas, 10 pounds of rice, 10 pounds of green coffee beans, 15 pounds of sugar, 4 quarts of vinegar, 1 pound 4 ounces of candles, 4 pounds of soap, 4 pounds of salt, and 4 ounces of pepper. **How much of the following items did the troop receive for a week if the troop had 70 men?**

Hint: 1 pound (lb.) = 16 ounces (oz.)

Beef	_____ lb.	Bread	_____ lb.
Candles	_____ lb.	Coffee	_____ lb.

5. Each month the U.S. Army at Fort Davis sent many reports to army offices in San Antonio and Washington, D.C. In 1884, the Commanding Officer of Fort Davis asked for fifty 15¢ stamps, three hundred 6¢ stamps, and eight hundred 3¢ stamps. **How much money did this cost the U. S. Army?** \$_____.

6. Wives of soldiers sometimes worked as laundresses washing clothes for enlisted men. Laundresses had official recognition by the U.S. Army and they were provided a ration of food, fuel, medical care, and housing. **If a troop of 78 Fort Davis soldiers had 4 laundresses and each soldier paid \$1.25 a month for his laundry, how much more did a laundress make than a private?** \$_____ Hint: A private earned \$13.00 a month.

7. Even though buildings at the fort had adobe walls or stone exteriors, it took a lot of lumber to construct buildings such as the barracks and the large hospital at Fort Davis. The fort also needed great quantities of wood as fuel for heating and cooking and for warming water for laundry or bathing. The army cut some of the lumber for Fort Davis in the mountains near the post, but much of the lumber was shipped in from San Antonio or El Paso. From San Antonio, the shipping cost was \$164 per 1,000 board feet, plus the cost of the lumber at \$28 per 1,000 board feet. From

El Paso, the shipping cost was \$68 per 1,000 board feet and the lumber cost \$32 per 1,000 board feet.

If the Fort needed 150,000 feet of lumber for its building needs, how much could the U. S. Army save by buying from El Paso? \$_____.

8. Water was an absolute necessity at any frontier army fort. The main source of water for Fort Davis was nearby Limpia Creek. Soldiers on water detail regularly hauled water in barrels on wagons from the creek to the fort, and then delivered water to each house or building. Army records show that in July of 1880, the fort used the following amounts per day:

Number	Each used	Total
28 Officers	160 gal.	_____ gal.
414 Enlisted men	10 gal.	_____ gal.
6 Enlisted men's kitchens	160 gal.	_____ gal.
178 horses	15 gal.	_____ gal.
58 mules	10 gal.	_____ gal.
Hospital		_____ 200 gal.
Bakery		_____ 300 gal.
Laundresses		_____ 200 gal.
Post trader		_____ 160 gal.
	Total water used each day	_____ gal.

If a water wagon held 2,500 pounds of water, how many loads per day did it take to supply the Fort with water? _____ wagon loads Hint: 1 gal. = 8.3 pounds

(Note: Water became a problem when Fort Davis was crowded. In the winter of 1883-1884, the army drilled a well on Limpia Creek and pumped the water to tanks on the side of the hill, and then the water ran in pipes downhill to the post.)

9. In 1882, Colonel Benjamin Grierson was transferred with his family to Fort Davis as Commanding Officer. Grierson probably bought the Eastlake-style parlor furniture (chairs and couch) in Chicago and had it shipped to Fort Davis. Let's say the cost of the Eastlake furniture was \$125. The freight rates for that time were 1.7 ¢ per pound per 100 miles. The distance from Chicago to Dallas was 930 miles and from Dallas to Fort Davis 310 miles. **If the furniture weighed 450 pounds, what was the total cost of the furniture plus the freight cost? \$_____.**

10. In enlisted men's barracks at Fort Davis, there were four large stoves used to heat the two squad rooms for the troops. In addition there was a stove for cooking in the kitchen. If each troop was given ½ cord of wood per month for the 4 heating stoves and 2 cords a month for the one kitchen stove from September 1st through April 30th, **how many cords of wood would the barracks building need for the winter? _____ cords**

In 1876, Mr. Otis Keesey supplied Fort Davis with wood. The army paid Mr. Keesey \$3.59 for each cord of wood. **Based on this figure, what was the total cost of for furnishing wood for the barracks during the period from September 1st through April 30th? \$_____.**

11. There were usually two Gatling Guns at Fort Davis. Each gun could fire 350 bullets per minute. The guns were rarely fired because the officers were worried that the army would make them pay for the ammunition. **If an officer let the soldiers practice with the guns for 15 minutes and each bullet cost 6¢, how much did it cost? \$_____.**

12. The Butterfield Overland Mail Stage Line ran twice a week from St Louis, Missouri through Fort Davis to San Francisco, California — a distance of 2,700 miles. The stage ran day and night and only stopped for food and to change its team of six mules. **If the travel time was 26 days, what was the average speed of the stage? _____miles per hour**

On average, the line needed a stage stop every 30 miles. **If each stage stop needed to have 12 mules on hand, and each mule cost \$150, how much did it cost to buy mules for the entire line? \$_____.**

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Discussion Questions

Today we take for granted going to mega-stores and large grocery stores. At western forts in the 19th century, things were completely different. Before the railroad came through west Texas in the early 1880s, Fort Davis was a 4-to-6 weeks' trip from its supply source in San Antonio, and refrigeration was out of the question. Even after the railroad came, many things were still in short supply. The following questions will give you an opportunity to put your hard-earned knowledge to work. (Teacher: you can use the questions for class discussion or as a writing assignment for individuals or groups.)

- A. Where did the Fort get all the hay and corn it needed?
- B. When the railroad reached this area in the early 1880s, how do you think it changed the life of the people at the Fort?
- C. In math question #4 above, study the types of food that the army supplied the men. What is missing from the diet of the soldiers at the Fort? How do you think they solved this problem?
- D. How did the Fort's existence affect the ecology of the area?
- E. How would you have improved the water supply for the Fort?
- F. If you lived in the 1850s and were planning a trip from St. Louis, Missouri to Oregon with your family, how much food would you take? Use question #4 about rations to answer this question. Your average speed will be 15 miles per day and the distance from St. Louis to Oregon is 2,400 miles.