Sample Performance Tasks

Prepared for

Los Angeles Unified School District
Division of Instructional Services

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PART A: READING: PIONEERS TO CALIFORNIA

As you read the passages and study the other materials, think about what you know about the pioneers who moved to California. You may underline or take notes to help you understand what you read or see.

You will have 20 minutes to spend on Part A. If you finish before the time is up, go on to Part B.
P ASSAGE 1

Sally Hester*

The passage below was written by Sallie Hester in 1849.

Sunday, June 3. . . . The cholera is raging. A great many deaths; graves everywhere . . . . Game is scarce; a few antelope in sight. Roads bad.

June 21. Left camp and started over the Black Hills, sixty miles over the worst road in the world. Have again struck the Platte and followed it until we came to the ferry. Here we had a great deal of trouble swimming our cattle across, taking our wagon to pieces, unloading and replacing our traps. A number of accidents happened here. A lady and four children were drowned through the carelessness of those in charge of the ferry.

Lee Springs,
July 4. At this point saw lots of dead cattle left by the emigrants to starve and die. Took a cutoff; had neither wood nor water for fifty-two miles.

Humboldt River,
August 20. We are now 348 miles from the mines. We expect to travel that distance in three weeks and a half. Water and grass scarce.

*Source: America’s Children: Voices From the Past, Matthew Downey, editor (1986).
Ada Millington*

The passage below was written by Ada Millington in 1862 during her trip to California.

Tuesday, September 16, 1862 . . . . We think we shall make our home in this valley for the coming year at least, so we consider ourselves at our journey’s end. Perhaps when Pa looks around over the State, we may like some other place better, but he is very well pleased so far with appearances here. He has heard Los Angeles highly spoken of . . . . Tonight is the one hundred and forty-first day of our journey. Twenty weeks ago we got into our wagons and left our Iowa home. We are in excellent health, our journey has been prosperous, with as little trouble as could have been expected . . . .

We are indeed blessed.

*Source: America’s Children: Voices From the Past, Matthew Downey, editor (1986).
Map

Study the map below and think about the trails to California

Overland Routes to the West

Source: Mining, Auburn Ravine, American River, 1852. Courtesy of California State Library, Sacramento
Look at the graph below and think about the movement of people during this time period.

**Graph**

Population Growth in California
From 1848 to 1852

Source: United States Bureau of Census
**PART B: WRITING**

In this part of the test you will answer some questions about the pioneers who moved to California. Write your answers on the lines below each question.

When you answer each question, be sure to explain your ideas. You should include information you learned in class and information from the materials you just studied. Remember, you can look back at the materials in Part A.

Try to write as neatly as you can. If you want to change a word, cross it out and write a new word above it.

You may begin.
1. What are all of the important reasons why people came to California during the pioneer days?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Explain what people experienced along the trail to California.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
3. Did all the people who traveled to California have the same experiences? Explain your answer.

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

4. What were some of the difficulties people faced on the journey west?

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________
5. Once the pioneers were settled, were they glad they made the trip to California? Explain your answer.

6. What other important ideas do you know about the pioneers who came to California?
PART A: READING: THE ROMAN EMPIRE

In this part of the test, you will read two passages about life during the Roman Empire and study a set of visual materials related to the topic. As you read and study the materials, you should think about what you have learned about the rise and fall of the Roman Empire. You may underline or take notes on information that will help you understand the readings.

You should spend about 20 minutes reading and studying these materials. When you have finished, continue to Part B of the booklet.
**Tacitus: An Official View of Pax Romana***

_Tacitus, a historian during the first century A.D., tells of a speech made by a Roman Commander in Gaul to defeated German tribes._

There were always kings and wars throughout Gaul until you submitted to our laws. Although often provoked by you, the only use we have made of our rights as victors has been to impose on you the necessary costs of maintaining peace. For you cannot secure peace among nations without armies, nor maintain armies without pay, nor provide pay without taxes. On everything else we are in agreement. You often enlist in our legions; you rule these and other provinces; we claim no privileged stature, you suffer no discrimination. You enjoy the advantage of the good Emperors equally with us, although you dwell far from the capital: the cruel Emperors assail those nearest them . . . . If the Romans are driven out—which Heaven forbid—what will follow except universal war among all peoples? The good fortune and order of eight hundred years since the founding of the Roman Republic have built up this mighty fabric which cannot be destroyed without overwhelming its destroyers.

Tacitus: The Other Side of the Pax Romana*

Here, Tacitus recounts a Caledonian commander’s address to his troops as they prepare to fight against the Romans.

Whenever I consider why we are fighting and how we have reached this crisis, I have a strong sense that this day of your splendid rally may mean the dawn of liberty for the whole of Britain . . . . Today the boundary of Britain is exposed; beyond us lies no nation, nothing but waves and rocks and the Romans, more deadly still than they, for you find in them an arrogance. Brigands of the world, they have exhausted the land by their indiscriminate plunder, and now they ransack the sea . . . . Robbery, butchery, the liars call Empire; they create a desert and call it peace.

. . . Our goods and fortunes they collect to pay tribute, our land and its harvest to supply grain, our bodies and hands to build roads through woods and swamps—all under blows and insults . . . . Can you seriously think that those Gauls or Germans—and, to our bitter shame, many Britons too—are bound to Rome by loyalty or love? They may be spilling their life-blood to support foreign tyrants, but remember that they were enemies of Rome much longer than they have been her slaves. Fear and terror are weak bonds binding them to the Romans; remove these bonds, and they will begin to hate their oppressors. All the incentives to victory are on our side.

Study the picture below and think about Roman engineering and architecture.

Roman Aqueduct, Pont du Gard at Nîmes, France

Source: T. Lipscomb—Scala/Editorial Photocolor Archives, Italy.
Study the map below and compare the size of the Roman Empire between 44 B.C. and 117 A.D.

PART B: WRITING

In this part of the test you will write an essay about the Roman Empire. You will have 25 minutes to write your essay. You will be told when 5 minutes are left in the period. At that time, you should quickly finish writing and use the rest of the period to read through what you have written. Make any changes you think will improve your work.

Write as neatly as you can. If you want to change a word, cross it out and write a new word above it. You will not be scored on your handwriting, but it is important that the people who score your paper be able to read what you have written.

You may begin.

ESSAY

Your class has been studying the Roman Empire. One of your friends has been absent and a test on the Roman Empire will be given tomorrow. Your teacher has asked you to explain to your friend all the important information about the Roman Empire that you’ve learned to help your friend review for the test.

Write an essay about the Roman Empire in which you:

1. Explain the most important ideas about the Roman Empire.

2. Make connections between the Roman Empire and other events and issues in world history.

3. Incorporate information that you learned in class and from the materials in Part A to support these important ideas and connections.

After you have finished writing, you may want to re-read your essay and make corrections.
**PART A: READING: THE GREAT DEPRESSION**

In this part of the test, you will read two passages written during the Great Depression Era and study a set of visual materials related to the topic. As you read and study the materials, you should think about what you have learned about the Great Depression. You may underline or take notes on information that will help you understand the readings.

You should spend about 20 minutes reading and studying these materials. When you have finished, continue to Part B of the booklet.
The following is a speech by Franklin D. Roosevelt expressing his view on the state of the nation and his plans for its future.

A glance at the situation today only too clearly indicates that equality of opportunity as we have known it no longer exists. Our industrial plant is built; the problem just now is whether under existing conditions it is not overbuilt. Our last frontier has long since been reached, and there is practically no more free land. More than half of our people do not live on the farms or on lands and cannot deriv a living by cultivating their own property. There is no safety valve in the form of a Western prairie to which those thrown out of work by the Eastern economic machines can go for a new start. We are not able to invite the immigration from Europe to share our endless plenty. We are now providing a drab living for our own people.

Our system of constantly rising tariffs has at last reacted against us to the point of closing our Canadian frontier on the north, our European markets on the east, many of our Latin American markets to the south, and a goodly proportion of our Pacific markets on the west, through the retaliatory tariffs of those countries. It has forced many of our great industrial institutions who exported their surplus production to such countries, to establish plants in such countries, within the tariff walls. This has resulted in the reduction of the operation of their American plants, and opportunity for employment.

Just as freedom to farm has ceased, so also the opportunity in business has narrowed. It still is true that men can start small enterprises, trusting to native shrewdness and ability to keep abreast of competitors; but area after area has been pre-empted altogether by the great corporations, and even in the fields which still have no great concerns, the small man starts under a handicap. The unfeeling statistics of the past three decades show that the independent business man is running a losing race. Perhaps he is forced to the wall; perhaps he cannot command credit; perhaps he is “squeezed out,” in Mr. Wilson’s words, by highly organized corporate competitors, as your corner grocery man can tell you. Recently a careful study was made of the concentration of business in the United States. It showed that our economic life was dominated by some six hundred odd corporations who controlled two-thirds of American industry. Ten million small business men divided the other third. More striking still, it appeared that if the process of concentration goes on at the same rate, at the end of another century we shall have all American industry controlled by a dozen corporations, and run by perhaps a hundred men. But plainly, we are steering a steady course toward economic oligarchy, if we are not there already.

Clearly, all this calls for a re-appraisal of values. A mere builder of more industrial plants, a creator of more railroad systems, an organizer of more corporations, is as likely to be a danger as a help. The day of the great promoter or the financial Titan, to whom we granted everything if

only he would build, or develop, is over. Our task now is not discovery or exploitation of natural resources, or necessarily producing more goods. It is the soberer, less dramatic business of administering resources and plants already in hand, of seeking to reestablish foreign markets for our surplus production, of meeting the problem of underconsumption, of adjusting production to consumption, of distributing wealth and products more equitably, of adapting existing economic organizations to the service of the people. The day of enlightened administration has come.

As I see it, the task of government in its relation to business is to assist the development of an economic constitutional order. This is the common task of statesman and business man. It is the minimum requirement of a more permanently safe order of things.

Every man has a right to life; and this means that he has also a right to make a comfortable living. He may by sloth or crime decline to exercise that right; but it may not be denied him. We have no actual famine or dearth; our industrial and agricultural mechanism can produce enough and to spare. Our government formal and informal, political and economic, owes to every one an avenue to possess himself of a portion of that plenty sufficient for his needs, through his own work.

Every man has a right to his own property; which means a right to be assured, to the fullest extent attainable, in the safety of his savings. By no other means can men carry the burdens of those parts of life which, in the nature of things, afford no chance of labor; childhood, sickness, old age. In all thought of property, this right is paramount (most important); all other property rights must yield to it. If, in accord (agreement) with this principle, we must restrict the operation of the speculator, the manipulator, even the financier, I believe we must accept the restriction as needful, not to hamper individualism but to protect it.

... The government should assume the function of economic regulation only as a last resort, to be tried only when private initiative, inspired by high responsibility, with such assistance and balance as government can give, has finally failed. As yet there has been no final failure, because there has been no attempt; and I decline to assume that this nation is unable to meet the situation.
In the following passage, Huey P. Long presents an alternate view of the state of the nation and his plans for its future.

Ladies and gentlemen, there is a verse which says that the
“Saddest words of tongue or pen
Are these: ‘It might have been.’”

I must tell you good people of our beloved United States that the saddest words I have to say are:

“I told you so!”

. . . How I wish tonight that I might say to you that all my fears and beliefs of last year proved untrue! But here are the facts—

1. We have 1,000,000 more men out of work now than 1 year ago.
2. We have had to put 5,000,000 more families on the dole than we had there a year ago.
3. The newspapers report from the Government statistics that this past year we had an increase in the money made by the big men, but a decrease in the money made by the people of average and small means. In other words, still “the rich getting richer and the poor getting poorer.”
4. The United States Government’s Federal Deposit Insurance Corporation reports that it has investigated to see who owns the money in the banks, and they wind up by showing that two-thirds of 1 percent of the people own 67 percent of all the money in the banks. . .

I begged, I pleaded and did everything else under the sun for over two years to try to get Mr. Roosevelt to keep his word that he gave to us; I hoped against hope that sooner or later he would see the light and come back to his promises on which he was made President. . .

All the time we have pointed to the rising cloud of debt, the increases in unemployment, the gradual slipping away of what money the middle man and the poor man have into the hands of the big masters, all the time we have prayed and shouted, begged and pleaded, and now we hear the message once again from Roosevelt that he cannot touch the big fortunes . . .

. . . We ran Mr. Roosevelt for the Presidency of the United States because he promised to us by word of mouth and in writing:

1. That the size of the big man’s fortune would be reduced so as to give the masses at the bottom enough to wipe out all poverty; and
2. That the hours of labor would be so reduced that all would share in the work to be done and in consuming the abundance mankind produced.

Hundreds of words were used by Mr. Roosevelt to make these promises to the people, but they were made over and over again. He reiterated these pledges even after he took his oath as President. Summed up, what these promises meant was: “Share our wealth . . .”

So therefore I call upon the men and women of America to immediately join in our work and movement to share our wealth.

There are thousands of share-our-wealth societies organized in the United States now . . .
We have nothing more for which we should ask the Lord. He has allowed this land to have too much of everything that Humanity needs.
So in this land of God’s abundance we propose laws, namely:

1. The fortunes of the multimillionaires and billionaires shall be reduced so that no one person shall own more than a few million dollars to the person. We would do this by a capital levy tax . . . we would not levy any capital levy tax on the first million one owned. But on the second million a man owns we would tax that 1 per cent, so that every year the man owned the second million dollars he would be taxed $10,000. On the third million we would impose a tax of 2 percent. On the fourth million we would impose a tax of 8 percent. On the sixth million we would impose a tax of 32 percent. On the eighth million we would impose a tax of 64 percent; and on all over the eighth million we would impose a tax of 100 percent.

2. We propose to limit the amount any one man can earn in 1 year or inherit to $1,000,000 to the person.

3. Now, by limiting the size of the fortunes and incomes of the big men we will throw into the Government Treasury the money and property from which we will care for the millions of people who have nothing, and with this money we will provide a home and the comforts of home, with such common conveniences as radio and automobile, for every family in America, free of debt.

4. We guarantee food and clothing and employment for everyone who should work by shortening the hours of labor to 30 hours per week, maybe less, and to 11 months per year, maybe less. We would have the hours shortened just so much as would give work to everybody to produce enough for everybody; and if we were to get them down to where they were too short, then we would lengthen them again. As long as all the people working can produce enough of automobiles, radios, homes, schools, and theaters for everyone to have that kind of comfort and convenience, then let us all have work to do and have that much of heaven on earth.

5. We would provide education at the expense of the States and the United States for every child, not only through grammar school and high school but through to a college and vocational education. Yes; we would have to build thousands of more colleges and employ a hundred thousand more teachers; but we have materials, men, and women who are ready and available for the work. Why have the right to a college education depend upon whether the father or mother is so well to do as to send a boy or girl to college? We would give every child the right to education and a living at birth.

6. We would give a pension to all persons above 60 years of age in an amount sufficient to support them in comfortable circumstances, excepting those who earn $1,000 per year or who are worth $10,000.

7. Until we could straighten things out—and we can straighten things out in 2 months under our program—we would grant a moratorium on all debts which people owe that they cannot pay.

And now you have our program, none too big, none too little, but every man a king. . . 

Our plan would injure no one. It would not stop us from having millionaires—it would increase them tenfold, because so many more people could make a million dollars if they had the chance our plan gives them. Our plan would not break up big concerns. The only difference would be that maybe 10,000 people would own a concern instead of 10 people owning it.
Graphs

Look at the graphs below and think about the economic conditions in the United States between 1929 and 1941.

**Annual Growth Rate of Gross National Product**
1929-1940

![Graph of Annual Growth Rate of Gross National Product](image)

Source: United States Office of Management and Budget

**Unemployment in the United States**
1929-1941

![Graph of Unemployment](image)

Source: United States Bureau of Census
Map

Look at the map below and think about the impact of the Dust Bowl on migration patterns.

Dust Bowl Migration
1930-1939

Source: Mapping Specialists, Ltd., Madison, WI.
**PART B: WRITING**

In this part of the test you will write an essay about the Great Depression. You will have 25 minutes to write your essay. You will be told when 5 minutes are left in the period. At that time, you should quickly finish writing and use the rest of the period to read through what you have written. Make any changes you think will improve your work.

Write as neatly as you can. If you want to change a word, cross it out and write a new word above it. You will not be scored on your handwriting, but it is important that the people who score your paper be able to read what you have written.

You may begin.

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**ESSAY**

Your class has been studying the Great Depression. One of your friends has been absent and a test on the Great Depression will be given tomorrow. Your teacher has asked you to explain to your friend all the important information about the Great Depression that you’ve learned to help your friend review for the test.

Write an essay about the Great Depression in which you:

1. **Explain the most important ideas** about the Great Depression.

2. **Make connections** between the Great Depression and other events and issues in United States history.

3. **Incorporate information** that you learned in class and from the materials in Part A to support these important ideas and connections.

After you have finished writing, you may want to re-read your essay and make corrections.
Dear Wise One,

My sister is popular, good at sports, and makes everyone laugh. I don’t have many friends, and I am not very good at sports. I try to make everyone laugh, but no one does. How can I be more like my sister?

Yours truly,
Sad
Advice from Wise One

Dear Sad,

Why not try being more like yourself? You are focusing so much on what is great about your sister that you are blind to what is great about you. Take your eyes off her and look inside yourself. You may find you like science or art better than sports anyway. Maybe you are better at quiet talks with friends than cracking jokes with a crowd. Develop your own talents, and you will soon see the truth: there is more than one star in the sky, and more than one way to shine.

Sincerely,

Wise One
Dear Wise One,

I really need help. The other day my friend got a new bicycle. It is just like the one I have wanted for a long time.

I am angry that my friend got that bicycle. What can I do to stop feeling so upset?

Yours truly,
Upset
Pretend you are Wise One and you need to respond to Upset’s letter. What advice would you give Upset? To help you respond, answer the questions below.

1. Why is Upset asking for help?

________________________________________________________

________________________________________________________

________________________________________________________

2. List some things Upset could do to feel better.

Write your ideas here:
Write your letter to Upset here.

Dear Upset:

__________________________________________________________________________

__________________________________________________________________________

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__________________________________________________________________________
Keiko is an orca that has been in captivity most of its life. Some people think Keiko should be released, and others think he should remain in captivity. The notes below present facts about Keiko and give reasons for and against Keiko’s release. Study the notes carefully.
Imagine your teacher asked you to write a report about Keiko that explains both sides of the Keiko debate. Below is your first draft. Read the draft carefully. While you are reading, think about whether the draft does a good job of explaining why Keiko should be released and why he should not.

**Should Keiko Be Free?**

Keiko is a famous whale. Because he was in the movie “Free Willy.” He was captured in 1979. He was two years old when he was captured. Keiko lives at the Oregon Coast Aquarium. Keiko is fed and trained at the aquarium. He is visited by lots of people. The Oregon Coast Aquarium is in Newport, Oregon. So all these people visit him because they love him. There is a lot of debate going on right now. About Keiko’s future. People really think Keiko should go back to the ocean. They want all animals to be free. They think that Keiko will be okay in the ocean. Some people think that Keiko should stay at the aquarium. Keiko is not ready for the wild. And he’s happy around humans. And so he should stay at the aquarium. Everybody knows and loves Keiko. Everyone wants to do what is best for Keiko. But people don’t agree. And we can’t ask Keiko.

**Does the draft do a good job of:**

1. **describing Keiko?**  
   - yes  
   - no  

2. **explaining why Keiko should be released?**  
   - yes  
   - no  

3. **explaining why Keiko should not be released?**  
   - yes  
   - no
Write a second draft of the report. You should improve the content by adding important information from the notes and taking out information that is not needed. You should also improve the organization and the language of the draft. Remember, you can look back at the notes when making your revisions.
LANGUAGE ARTS

HIGH SCHOOL PERFORMANCE TASK

The following article is about an educational experiment at a middle school in New Jersey. The principal at this school has divided boys and girls into single-gender classes. While you are reading, think about the advantages and disadvantages of separating boys and girls.

Troubled New Jersey School Turns to Single-Gender Classes

At Myrtle Middle School in New Jersey, Joe Moore is an eighth grader who likes to talk to the girls. Sometimes, he admits, it gets in the way of his schoolwork. But these days, Joe is getting few opportunities to mingle. He spends most hours at this public school surrounded by boys. Every day, in math class, social studies, art, and science, he finds the same scene: a roomful of guys. The girls are in classes across the hall—out of sight and, Principal Anthony Pilone hopes, out of mind. Last fall, Mr. Pilone began an unusual experiment that he hopes will break the school’s long losing streak: He separated the boys and the girls, making every class single-sex.

Before he made the switch, boys and girls were constantly quarreling and pulling attention-grabbing stunts, which contributed to the school’s bad reputation. What made matters even worse was that test scores had plummeted. So Mr. Pilone decided to make a change. He made his decision after talking to parents and students, and combing through research on middle-level education and adolescent behavior.

Though he is not the first to test the concept of separating boys and girls in public schools, few educators have tried it on a schoolwide scale. Public schools in states such as California, Maine, and New Hampshire recently have set up same-sex classes, primarily for high school students.

Some experts say single-sex classes may help girls excel in traditionally male-dominated subjects such as mathematics and science. However, Mr. Pilone believes the changes could do more than that for his middle school students. Observing his students, he realized that many students were more interested in impressing each other than in getting down to schoolwork. He says the separation has curbed classroom distractions and discipline problems and is beginning to restore order to a school—and an age group—that desperately needed it.

No one has raised legal questions about separating students, though some educators question whether this violates laws barring sex discrimination in schools receiving federal aid. Nevertheless, most people seem intent on letting the experiment unfold. So far, the experiment is getting mixed reviews from the students. Some students don’t like having separate classes. They miss having both boys and girls in class, and some say that there is more trouble when you put boys together. In fact, a few boys said there have been more fights around school and more mischief like pulling fire alarms and soaping the boy’s bathroom since the separation.

Others like having single-sex classes. Some say boys concentrate more on their work when girls are not around. Some girls find it easier to participate in class. One girl remarked, “It’s better because you get to talk about things you wouldn’t talk about with boys in the room. Besides, we get to see each other in the halls and eat lunch together.”

In general, teachers seem positive about the arrangement, especially those who have the all-girl classes. Those teachers with all-boy classes, however, have encountered more difficulties in keeping the students under control.

The principal made the split with the boys in mind. They were the (continued on next page)
most likely to act up and least likely to apply themselves in class. Yet, almost everyone who works at the school says the changes have been most beneficial to the girls. “Lots of girls are doing better and trying harder. The number of girls on the honor roll is up, and reports of their discipline problems are down,” said Assistant Principal Isaacson.

Despite some continued problems at the school, most parents say the school was much worse before. “Separating boys and girls was the best thing they could have done,” said Kim Caine, the mother of an 8th grader. She said her daughter’s interest in school has grown since the change. Educators at other schools seem to like the idea, too. Next year, Irvington Middle School—which has shared some of the same frustrations as Myrtle Middle School—is going to split its classes.

Mr. Pilone is not claiming any miracles, but he does believe that his students are making strides — especially the girls. As for the boys, he’s hoping this spring’s test scores will give him a sense of whether the experiment is working for both boys and girls. At this point, he is willing to try anything to help his students through these difficult years.

adapted from http://www.edweek.org (3/15/95)

In the chart below, list the advantages and disadvantages of single-gender classes. Use information from the article as well as your own ideas to complete the chart.

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Are you for or against single-gender classes? Write an essay that explains your position. Use specific examples from the article and the chart to support your ideas.
LEGS! LEGS! LEGS!

People have 2 legs. Chairs and lizards have 4 legs. Bees and crickets have 6 legs. Spiders have 8 legs. Centipedes have many, many legs, and snakes have no legs.

Tony likes to collect small animals and bugs. He brings a cage with 4 lizards, 4 bees, 4 crickets and 4 spiders to school to show the class.

1. What is the important information you need to find out how many legs Tony’s animals and bugs have altogether?
2. How many legs do Tony’s animals and bugs have altogether? Show all your work in the space provided.

b. How many legs do Tony’s animals and bugs have altogether? ______________
3. Mario says that he is going to draw pictures to find out how many legs Tony’s animals and bugs have altogether. Suzy says she will use addition, and Jeff says he will use multiplication. Use words to tell your friends the steps you took to solve the problem.

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4. The next day, two of Tony’s crickets are missing from the cage.

Now how many legs do Tony’s animals and bugs have altogether? ___________

Explain how you found your answer.

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To make a grocery store festive for the holidays, the management decided to string red, green and blue flags across the parking lot. The parking lot measures 2,000 square feet. There are 500 flags organized in the following pattern:

1. Describe the pattern shown in the flags.
2. Based on the pattern shown, what is the color of the 251st flag? Explain the steps you would take in solving the problem.

Describe your plan here.

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What is the color of the 251st flag?  
(Circle one)  
Red    Green    Blue
4. Flag 1, a green flag, fell off on a windy day.

a. How would the pattern change?

b. Now what is the color of the 251st flag? _________________

Explain how you found your answer.

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Area of the Sports Field

In the spring, grass seed will be spread on the football and track field at your school (i.e., the shaded part on the drawing below). This field is surrounded by a special 6-lane track made for running. The dimensions of the field and running track are given below.

(Note: The two side areas are equal semi-circles.)

Each bag of grass seed covers an area of 400 square feet and costs $9.99. The gardener needs to determine how many bags of grass seed to buy.

1. Make a list of all the important information the gardener needs to consider to determine how many bags of grass seed are needed.
2. Explain each of the steps you would take in solving this problem.

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3. Use the plan you described in Question 2 to determine how many bags of grass seed are needed. Show all your work in the space provided.

How many bags of grass seed should the gardener buy? __________
4. The school has a budget of $2,000 to buy grass seed. Is this enough money?

(Circle one) Yes No

Explain how you found your answer and how you know your answer is correct.

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Below is a picture of a mountain habitat. The weather in this habitat changes from season to season. In the winter, it gets cold and snows. In the summer, it is warm and sunny.
Information Sheet

Eagle
- long, wide wing—flies fast
- excellent eyesight
- sharp claws
- eats fish and other small animals

Rabbit
- long, muscular hind legs—hops fast
- long front teeth; flat grinding teeth in the back
- eats grass, roots and other vegetation

Bear
- thick fur
- sharp teeth and claws
- good sense of smell
- eats mostly fish and plants
- builds up fat for the winter

One Food Chain in the Mountain Habitat

Sun → Grass → Rabbit → Eagle
1. Why are grass, trees, and other plants important to this mountain habitat?

   

   

   

   

   

   

   

   

   

2. Explain how the bear is adapted to the mountain habitat. In your explanation, be sure to include how the different parts of the bear’s body help it stay alive.

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   

   
The image contains text formatted as a question and an explanation. The text is about the importance of grass, trees, and other plants in a mountain habitat and how the bear is adapted to live in that habitat.
3. Explain what a food chain shows. Make sure you discuss energy in your answer.
4. Explain what a habitat is. In your explanation, include how specific animals and plants are adapted to their habitats.
YELLOWSTONE’S CHANGING ECOSYSTEM

Scientists at Yellowstone National Park in Wyoming have observed many changes in the ecosystem of the northern range. What has caused these changes to occur has been the subject of great debate. While some scientists think that the changes are caused by too many elk grazing in the area, other scientists feel the changes in the park are due to natural events.

According to one group of scientists, the large number of elk is slowly destroying the northern section of Yellowstone. Elk feed on small plants and grasses found on the forest floor. When too many of the plants and grasses are consumed it is called overgrazing.

Overgrazing in the northern section of Yellowstone has led to many changes in the ecosystem. It has reduced the number of small plants, grasses, and trees found in the area. These plants and grasses are important because they provide food and habitat for mice, deer, and many other small mammals. Without them, these animals will have a hard time surviving.

These scientists also believe that overgrazing has reduced the number of aspen trees. Aspen trees reproduce by putting up new shoots. When elk eat the shoots, they make it more difficult for aspen trees to regenerate. Fewer aspen trees means less food for beavers. As beavers disappear, so do their dams and ponds which trap silt and slowly build up the streambed. Stream banks no longer held in place by trees such as aspens erode and collapse. As the channels lower, so do the water tables, making it very difficult for willows to survive along stream banks.

Another group of scientists does not believe that the large number of elk is a major threat to the ecosystem. Instead they argue that changes in the ecosystem are due primarily to natural events such as changes in climate, drought, floods, and fires.
This group of scientists believes that the smaller number of aspen trees is due to changes in climate, not overgrazing by elk. They point out that the number of aspen trees is decreasing in other places across the West where elk are not present. They also feel that the decrease in small plants and grasses is better explained by changes in the amount of rainfall than overgrazing of elk.

In addition, these scientists maintain that the number of elk in the ecosystem also depends on changes in climatic conditions and other natural events such as drying up of river beds and fires caused by lightning. Since 1968, the number of elk in the northern section of Yellowstone National Park has varied greatly, often increasing during milder winters and decreasing during harder winters. For example, the elk population dropped from 20,000 to 11,000 in 1988 after a summer drought, massive fires, and a severe winter.

The Yellowstone ecosystem, like all ecosystems, is complex because so many things affect it. Scientists on both sides of the debate will continue to study the changes in climate, animal population, and plant growth to help understand this ecosystem better.
Yellowstone Ecosystem

*NOTE: In real life, you would not see all the animals in this picture at the same time.*
1. According to the article, what are some possible explanations for changes in the Yellowstone ecosystem?

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2. Explain how living and non-living things interact in an ecosystem. Give specific examples from the Yellowstone ecosystem to support your ideas.

Remember to include relationships such as those found in food webs. You may use diagrams to illustrate your ideas.

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3. In 1988 there was a major fire that disrupted the ecosystem in Yellowstone National Park. Explain how an ecosystem can recover from natural disasters such as fires, floods, or volcanic eruptions.
**PROTECTING ANIMAL POPULATIONS**

*Lycaon pictus*, pictured below, is an important predator in parts of Africa. Its scientific name means painted wolf, which refers to the animal’s colorful coat. Scientists believe that *Lycaon pictus* contributes to the health of the gazelles, antelopes, and other herbivore herds in two important ways: They prey on the weak and diseased members of the herds and they keep the herds moving from one area to another so they are less susceptible to parasitic diseases.

![Image of Lycaon pictus](image)

Unfortunately, in some areas of Eastern Africa *Lycaon pictus* has become almost extinct. According to scientists, factors such as loss of habitat, disease, and hunting have contributed to the great decline of this species over the last 100 years. At one time, packs could number up to sixty animals. Today, packs of only from two to twenty members roam hundreds of square miles of grassland.

Recent genetic analysis of these animals showed high genetic variability; however, experts are concerned that inbreeding will become a problem if the population of these important predators continues to decline.

A population of *Lycaon pictus* is also found in Southern Africa. The eastern and southern populations have each acquired unique characteristics as a result of years of adapting to slightly different environments.
1. Use what you know about genetics to explain the possible consequences of inbreeding in *Lycaon pictus*.
2. Propose a plan for maintaining genetic variability in *Lycaon pictus*.
3. Explain the positive and negative outcomes of your plan.