The Lucky Bunch Travels South
A Travel Brochure for Wealthy Educators

To Exceed the Expectations of the Most Wild Traveling Dreams

Introduction

Newsflash: “Five dedicated, deserving elementary school teachers win a lottery pool and share a huge “SuperLotto Plus” $179 million jackpot!!”

The “Lucky Ones”, “Los Cinco Suertudos”, just won the California lottery. Sylvia Guapo, Sylvia Nunez, Noel Nunez, Christina Rodriguez, and Richard Shafer are all teachers in the Oxnard School District. On Friday they bought a bunch of lottery tickets and split the price. (Tickets were bought at a local liquor store……hmmmmm!!) They all went back to work as usual on Monday, unaware that their lucky stars had picked one of their ticket numbers as the winning number for the incredible jackpot amount of $179 million dollars!!! It was not until lunch time when the lucky five were reading the newspaper that they found out the winning ticket had been purchased at a local liquor store…they began to get a little excited but when they checked their numbers and found out they had the winning ticket…wow, they all went crazy jumping with joy, hugging each other, and thanking their lucky stars for showering them with such wonderful GOOD FORTUNE.
They all decide to take a year sabbatical and travel to Central and South America together. This opportunity will give them a chance to unwind and to expand their educational horizons. Sylvia “pan flute” Guapo has always been fascinated by Peru and the beautiful music, art, dance, and costume. Sylvia “the traveler” Nunez loves to travel and loves to study language. She wants to spend some time in Mexico. Christina “the calculator” Rodriguez, a math teacher, wants to visit Costa Rica. She’ll be formulating ways to play with math along the way. Noel “let’s do business” Nunez wants to spend more time traveling around California. He’s been so busy that he hasn’t had much time travel in his own state, He’ll be making business connections along the way so that he can find ways to re-invest his millions. Richard “nature boy” Shafer has always wanted to visit the Amazon Rain Forests of Brazil and other countries. Now that he’s go all that money under his belt he hopes that one day he’ll be able to “chum up” to people like Bell Gates and Warren Buffet to get them to break loose some money to help preserve the world’s rain forests!

Being generous teachers each one has decided to take along with them five of their top students. This adventure should take all summer and then some. All the students will travel together and spend about one month in each of the five countries. The students are from the 4th and 6th grades. The teachers have decided to put together this travel brochure to convince the parents to allow their children to go. The brochure describes the countries their children will be visiting and all the things they will be learning and places they will be exploring. The adventure starts in California, moves down through Central America, and then on to South America. The adventure will end in the capital of Rio de Janeiro, Brazil. The adventurers will fly home from there.

This brochure should convince the parents that the tour has been well planned, is very educational, and is safe for their children. The “Lucky Bunch” will be hiring local, personal, tour guides who are multilingual. These will be experts in their fields. Some of the parents may be allowed to accompany the group for additional safety assurances.

Each student will be given a personal laptop computer with all the latest software. They will be expected to keep an electronic journal about their experiences throughout the trip. They will also be given a cell phone with all the latest technology so that they can call home as frequently as they like. DON’T FORGET YOUR CAMERA!

Our Adventure Begins Here!
Itinerary

Noel: Our Tour Guide in California

Adventure #1
June 1 – 2
Parents will bring their children/students to the Mandalay Beach Resorts for checkin. (To see map to resort, click on link!)

Our first day of touring begins at Mission San Buenaventura, Father Junipero Serra’s “favorite mission”.

June 3 – 7
Drive to and tour Mission Santa Barbara, “the queen of the missions”, Mission San Ines, and Mission La Purisima.

We will begin our journey by visiting the local San Buenaventura Mission in downtown Ventura, California. Father Fermin Lopez will give us a brief tour of the Chapel and mission and briefly give a small lecture on its history. During the discussion we will concentrate on several key points.

- Key events
- Historical era
- Chronological sequence
- Population and Spanish Exploration
- Colonization
- Religious beliefs and customs
- Understand lives of natives living in Missions

During the following days we will be visiting two more local missions, Santa Barbara Mission and Santa Ynez. We will travel down historic Highway 101 which is also known as El Camino Real. We will stop at any given point to view historic landmarks. I will also like to pin point the geographic region of northern California. Transportation will be courtesy of Vista Bus Fairs.

**Adventure #2**

**June 8 – 15**

Students will be driven by rented van to Channel Islands National Park Headquarters. They will be transported to the Channel Islands by Island Packers.

Visiting the Channel Islands

During this whole week we will be discussing the importance of the coastline to early inhabitants. Two important Key points will be mentioned: transportation and natural resources. On the first day we will visit the coastline and walk around on the sand. Each student will try to create their own fishing tool using materials found in the beach. They will then try to
simulate fishing strategies with the rest of the group. Students will also be given a map, their job will be to use the map and global skills to determine the absolute location of places and interpret the information given by the scale, legend, and symbols. We will also be spending three days on a private yacht visiting the local Channel Islands. Our Goal is to visit each island and try mapping it out like an explorer. I will also like the students to describe sea routes, physical barriers, ocean currents, and wind currents. Furthermore we will be learning about the history of each island.

**Adventure #3**
**June 16 - 23**

*Santa Monica Mtns. History & Culture*  
*Junior Ranger Program*
For this whole week we will be visiting the beautiful Santa Monica Mountains. Reservations have been made for a one week stay at the Junior Ranger Program. Students will research the past and present of the early Chumash and Indian tribes, as well as the physical environment and cultivation of land and sea resources.

Adventure #4
Visiting JADA TOYS

We will be traveling south on Camino Real and then transferring onto the 60 Pomona until arriving into the famous City Of Industry. When we arrive, Robert Shinohara CEO of [JADA TOYS] will be waiting for us to discuss about the development and location of new industries since the turn of the century and the importance of trade links in the Pacific Ocean Rim. He will point out the building of the railroad and the contribution of the Chinese workers.

On June 30th the tour group will be driven to Los Angeles International Airport for a flight to Mexico City via Mexicana Airlines.

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Sylvia: Our Tour Guide in Mexico

Welcome to Mexico

After departing from California, we then arrive at the beautiful country of Mexico. No other country like Mexico combines as much rich culture for you to enjoy an unforgettable vacation.
Week 1: We will begin by visiting Chiapas. There we will visit some of the beautiful archeological places.

Week 2: We will go for 3 days to Yucatan and explore the ancient cities of the Mayan culture, then fly to the city of Mexico and compare it to the Aztec culture.

- In Yucatan we will visit the city of Palenque. The view that greets the visitors of Palenque is spectacular. The first place to explore is an ancient palace, a ceremonial site built on a huge artificial platform, to which it displays its tower and its open air galleries.

- The Mayan World is a magical adventure, that is made up of half a million square kilometers. There are rivers, plains, jungles, and volcanoes.
- The Mayan and Aztec adventure will wake up the historian, environmentalist, and biologist person in you.

-Mayan

-We will compare both civilizations by researching the internet, and exploring the areas.

-Aztec Ruins  

-The Aztec culture was also very rich in culture and had many beautiful amazing archeological sites. The legacy of the Aztecs is quite astonishing.

-Aztec Ruins

Week 3: We will visit Guanajuato. It is one of the cities that accurately preserves the feel of the Colonial era. With a rich mining tradition, the city was built under the influence of Spanish architecture with thick walled houses and hundreds of narrow streets.
Week 4: The last week we will visit the beautiful Cancun. At this time students will be allowed to catch up on any work. There research papers will be turned in (students will research on-line every place we visit). The students will also use this time to create a collage using pictures taken of every place we visited. Students will also be sure to have sent post cards and letters to friends or relatives.

History of Cancun, Mexico

Mexico is all of this and more. The lucky bunch invites you to come and rediscover its unique and authentic cultural riches. Its incomparable ancestral attractions and every corner of Mexico is full of history and magical landscapes.

After recuperating in Cancun we will board a Mexicana Airlines jet to San Jose, Costa Rica.

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Christina: Our Tour Guide in Costa Rica
WELCOME TO COSTA RICA

During the month of August will be Cristina's turn to guide the group of the Lucky Five to explore the marvels of Costa Rica.
WEEK 1
August 1-7, 2004

On the first week of our stay in Costa Rica the group will visit the Curu National Wildlife Reserve in the city of Punta Islita. At this place we will explore the history, and beauty of the park. All the students will bring with them notepads, graphing calculators, pencils and all the necessary supplies needed to gather data about the animals living on this park reserve. While exploring animal life in the park the learners will keep track of the kinds of animals kept in the park. They will gather as much information they can to later categorize the animals into the different animal groups. The students will put to work their math skills. Prior to visiting the park they would have already be given a question they must answer using the information gathered at the park.

QUESTION:

Gather information about the animals living in the park. What type of animals live here? Classify the animals observed at the park and create a pie chart. Find the percentage of the animals in each category. Convert that percentage into a fraction and decimal.

Hummingbird Garden

Butterfly Observatory

Week 2
August 8-14, 2004
Before departing to our next destination every student will be given a map of Costa Rica. They will use this map to locate the places we will be visiting. Our smart students will use their lap top computers to figure out the distance between one place to the other. They will keep a record of the kilometers traveled and use their knowledge of the metric system to convert that distance into miles. They will use their graphing calculator to plot in the number of miles and create a graph.

**Distance between cities**

**Week 3**  
**August 15-21**

The Lucky Five will be taken to the city of Arenal where the students will relax and learn about the culture of Costa Rica. Since each of them was given $100,000 dollars to spend they have to keep a record of all their spending. When purchasing souvenirs they will have to convert the Costa Rica currency (colons to $USD) to US dollars.

**Currency**

**Week 4**  
**August 22-28, 2004**

On the fourth week of our stay in Costa Rica the students will exchange information about what they learned. They will put together all their data and as a group come up with a way to present their information to their classmates back in California. With this concludes out wonderful trip over the beautiful country of Costa Rica.
Sylvia Guapo and the lucky bunch visiting the land
of the Incas
in Peru

Since money is not a problem for us the lucky five, we will also be visiting the Cradle of the Inca Empire, the awesome country of Peru, an exotic, magical and mysterious land blessed with a rich and ancient past and a vibrant present, making it one of south America’s most popular travel destinations.

Peru is one of the most colorful, friendly and exciting countries in the western hemisphere. It is a country rich in archaeology dating back as early as 1,200 B.C. with the Chavin culture and proceeding through the Mochica and Nazcan cultures up to the Incan empire that flourished in the 15th century until the Spanish conquest. The Spanish colonial splendor is ever-present in Peru’s churches, buildings and homes.

Age-old arts and crafts still abound in Peru weavings and ceramics playing an important role in the everyday life of the people. Weaving is considered one of the oldest crafts that reached unsurpassed levels of artistry with its extraordinary close weave. Many crafts are sold in colorful markets throughout the country.

**Week 1:** September 1, 2004 at 9:00 A.M. Arrival to the Airport by Cruz del Sur Airlines.
International Airport Jorge Chavez in Lima, gets most of the international traffic, being a stopover point for flights between Europe, North America and the Andean countries. It is fully facilitated with services such as: International Police facilities, migration, customs as well as restaurants, bathrooms, stores selling traveling articles, magazine stores, and waiting rooms.
September 1, 20004
Arriving to the Lima Melia Hotel.

Since our trip is a combination of learning and leisure we will take time to enjoy the hotel’s best foods and relax to get ready for the adventure of our lives!

An exotic education

The lucky bunch will combine leisure with study and adventure in the South American paradise of Peru. We will immerse ourselves in the culture, customs and history of the Peruvian people. This unique academic experience will be full of adventure; from the city of Lima, Cuzco, the Nazca Lines, the mountain peaks, t the ruins of the Incan empire this will be an education experience filled with fun and excitement like no other.
TENTATIVE ITINERARY

9/1  Arrival From Costa Rica, to Lima Peru at 9:00 A.M.
9/1  Checking in at the Lima Melia Hotel.
9/2  City tour of Lima, sightseeing, shopping informal exploring.
9/3-  With the expert guidance of tour guides will visit several
9/7  museums located in the city of lima.
9/8  Travel via air to Cuzco, the former capitol of the Inca
     Empire. City tour and a visit to the nearby ruins.
9/9  Attend the Inti Rayimi Inca Festival of the Sun.
9/10- Visit the spectacular archaeological ruins of Machu Picchu,
9/15  which today remains a mysterious site.
9/16  All day visit to the Pisac Indian Market and the Inca fort of
     Ollantaytambo as we travel along the beautiful urubamba
     Valley.
9/17  Leave Cuzco for Puno by bus. Much of this trip will occur at
     altitudes between 8,000 and 13,000 feet and is considered to
     be strenuous travel.
9/18- Will go visit Lake Titicaca area. We will venture out on a
9/21  totora reed boat to the unique Uro Indian floating islands.
     And go see traditional Aymara Indian dances on the streets
8/22  will go rent a plane to fly over the Nazca Lines.
9/23  Will visit the city of Arequipa and spend five days
9/27  observing the everyday lives of the people to learn more
     about their culture, sightseeing, and shopping.
9/28  Back to the city of Lima, rest from all the strenuous
     activities, enjoy the hotel pools and relax.
9/29  Time to pack and get ready for a good night sleep enjoying
     our last hours in the enchanting land of Peru.
9/30  Arrive to the international airport of Lima, and depart to
     our next and final destination of our spectacular trip, Brazil.

This tentative itinerary will be adjusted as we travel along, depending on
weather, physical conditions of all our students, and upon any other
unpredictable circumstances. Flexibility will be our touring guide, since our
principal objective will be to have fun, explore and learn as we go along!
Machu Picchu

The following are some samples of the many sites that we will give the students the opportunity to visit during our trip to Peru.

The impressive and magnificent Machu Picchu which is situated two thousand feet above the rumbling Urubamba river.

The ruins of Machu Picchu are one of the most beautiful and enigmatic ancient sites in the world. Legends and myths indicate that Machu Picchu (meaning old Peak) in the Quechua Language was revered as sacred place from a far earlier time.
Nazca

In the southeast of Peru is one of the world’s greatest enigmas. The area is a series of drawings of animals, geometric figures and birds ranging to 300 metres (100 feet) in size, etched into the arid crust of the pampa. Since this impressive drawings can best be visible from the air, we will rent an airplane that will fly us over Nazca for us to see, and admire these drawings which are one of the greatest scientific mysteries in the world. This will be an air plane ride that for sure the students will remember for the rest of their lives and that will become one of their long lasting learning experiences.
These is the Orquidea Hotel where we will be staying during our stay in the city of Cuzco.
Lima, Peru

In the beautiful city of Lima, we will visit museums and have the opportunity to appreciate the Peruvian arts, attend festivals where they will learn and enjoy the beautiful music, and folk dances and traditional costumes of the Peruvian people.
Richard: Our Tour Guide in Brazil

The 5th leg of our journey takes us to the rainforests of Brazil. We will be flying in from Lima, Peru, on Cruz del Sur Airlines. We will be arriving in Manaus, Brazil. Manaus is the capital of the Brazilian State of Amazonas and the largest city in this region (and has been since 1850). The city sprang up due to the booming trade in natural rubber during the late 1800’s. Now it is an industrial city with a population of over a million people. High
technology companies have moved to the region. Gold has caused the influx of people.

Even though there has been rapid development and deforestation during the last 30 years, the Amazon rain forest is still mostly intact. It covers nearly 25% of the continent in parts of 9 countries. 62% of it is in Brazil. That is why I chose to bring us here. It also lies along the equator. They call this area Amazonia and it has the world's largest river system. It is home to half of the earth's species and almost one-third of the world's 250 primates. The rain forest is an incredibly diverse ecosystem fed by bright sunlight and huge amounts of rainfall. We will be needing our binoculars, cameras, waterproof notebooks and rainforest clothing for this leg of the journey. Our Portuguese-speaking guides will join us on each leg of the journeys. We will be involved in some ecotourism. Our visit to the Amazon Rainforest will provide money to help sustain the forests and help the indigenous people, plants and animals from further deterioration of the rainforests.

Here are some study guides to explore before we leave on our adventure and during the casual evenings of our trip:

- Rainforest Guide Info for our Laptop Computers
- Amazonia Funquest
- Slideshow
- Video Clip

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We need to convert some money before we get too far along in our adventure. Right now the Brazilian “real” trades at 3.1 per dollar. Question: A $1000 buys you how many reals?

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Tips and Suggestions
Bring: trousers, long sleeved shirts, T-shirts, hat, walking boots, tennis shoes, sneakers, sun lotion, swimming suit, shorts, light sweater, mosquito repellent, rain gear, sunglasses, camera, binoculars, rolls of films and flashlight.

Adventure #1
October 1 – 13

Aldeia dos Lagos was built as a part of the Project "Silves: a Project of Ecotourism of local Community in the Brazilian Amazon" executed by ASPAC with technical support of WWF and sponsored by the Austrian Government and WWF. The purpose of the project was to develop the first project of an undertaking in ecotourism community based in Amazon
Region. The profit has been used in the benefit of preservation of fishing lakes system, and to improve the life quality of Silves community.

During the summer, it is possible to reach Silves from Manaus by car. We will begin our journey with a 350 km drive. How far is this in miles?

**Accommodations**

The hotel has a main building which hosts the lodge administration, a visitor's shop, the restaurant, the kitchen and a lookout. There are 2 lodging modules with a total of 12 apartments with private bathroom, screened window, fan and veranda.

**Facilities**

The hotel has restaurant, laundry, handicraft shop, meeting room, recreation patio and lookout area. Electricity-110 volts and phone.

**Highlights:**

Day 1: Bird Island by motorized canoe: herons, parrots, predators
Day 2: Lake excursion: caimans, dolphins, fish, birds and small animals
Day 3-5: Flooded forest, (Igapos) and floodplains (Varzea): fruit, ornamental flowers, fauna
Day 6-7: Amazonas River by steam power: see cacao crops along shore, fauna, flora

Day 8: Practice primitive fishing; picnic with the catch on the beach

Day 9: Visit Silves City and observe the local culture

Day 10: Silves Isand in a motorized canoe: water lilies, fauna & flora

Day 11-13: Pau-rosa Tree Trail, Angelin Tree Trail, both in the jungle

Students will be expected to keep a daily journal of all the fauna and flora that they observe and where it was observed. Our Brazilian tour guides will have all the books and reference materials needed in identifying as many plants and animals as we can. (Research scientists at the station will have checklists for identified fauna and flora in the area.) At the end of this adventure they will be asked to prepare a profile of the different ecosystems and biological webs they’ve encountered here at Aldeia dos Lagos.

On the 13th of October we will be driving back to Manaus along the same route we drove up (350 km). Fly to Tefe on Brazilian Varig Airlines.
The ecotourism program at Mamiraua Reserve is just beginning. It is a beautiful place to accumulate information for scientific research and the traditional understanding of the Caboclo people. Small groups of visitors are allowed to visit. It is possible to **admire concentrations of Amazonian fauna never before recorded.** It is the home to approximately 400 species of bird and 45 species of mammals.

![Image of monkeys and birds](image1.jpg)

The Brazilian Government declares Mamiraua Reserve’s status a “sustainable development preserve”. It is an area protected by international Ramsar Convention of the IUCN as a wetland of global importance. It is a future UNESCO Biosphere Reserve in the Brazilian Amazon. It is also included in one of the ecological corridors to be implemented for the protection of Brazilian tropical forests.

**Highlights:**
* Thousands of caiman observed in the dry season.
* Black Headed Squirrel Monkeys
* Amazon manatees
* Concentrations of up to **15,000** cormorants and herons are seen fishing in the lakes, which are full of fish.
* In the trees, numerous groups of monkeys share the branches with sloths and with beautiful bromeliads and orchids.
* River dolphins, legendary creatures in the flooded forest, enchant all who see them.

Day 1: Meet Mamiraua English-speaking staff who take our group to a hotel in town.
Day 2: Boat trip to reserve at Lake Tefe and Solimoes River. Local guides are our eyes and ears in the forest; view nocturnal fauna in evening. View **BBC** documentary; fish for piranha.
Day 3: Sunrise hike for fauna and flora; trails not strenuous. After dinner hike to observe nocturnal fauna.
Day 4: Early morning hikes for monkeys, capuchin, uakaris, squirrel and 3-toed sloth, etc.
Day 5: Hike trails and visit different lakes.

Students will be expected to keep a daily journal of all the fauna and flora that they observe and where it was observed. Our Brazilian tour guides will have all the books and reference materials needed in identifying as many plants and animals as we can. At the end of this adventure they will be asked to prepare a profile of the different ecosystems and biological webs they’ve encountered here at Mamiraua Reserve.

Fly from Tefe on Varig Airlines to the city Cuiaba.

**Adventure #3**
**October 19 – 26**

Mato Grosso is the only state in Brazil that holds within its borders three ecosystems almost equidistant from its capital, Cuiaba, and its respective airport. This program provides the visitor with the opportunity of visiting the Pantanal, (100 km towards the south), the savanna tablelands, Chapada dos Guimaraes (76 km towards the northeast), and the Amazon Rain Forest, (290 km towards the northwest), comprising 1,050 km of true photo-safari without wasting time with flights and airports.

**Highlights:**
Day 1: Arrive in am at Cuiaba / Varzea Grande Airport and transfer to hotel in the Amazon rainforest, Jardim da Amazonia Lodge.
Day 2: Enjoy birding along the Orchid Trail in the rainforest.
Day 3: Observe the fauna and flora of the local ecosystem.
Day 4: Observe the transition from the Amazon Rainforest to the savana tableland. Hike to visit caves, grottos, and lakes while observing the fauna and flora.
Day 5: We will be viewing the savana from the distance and viewing the Pantanal Plains. View waterfalls, landscape and the enjoy a photo-safari of the local fauna and flora.
Day 6: We will travel along the Pantanal Lowlands on horse back during the day and then travel during the night to observe nocturnal fauna.
Day 7: Observe the Pantanal Lowlands with a morning hike. Canoe along the Rio Clarinho, explore the border forest and mangroves. See giant river
otters if we’re lucky. Fish for piranha and dogfish. Have a barbecue at sunset.

Day 8: Enjoy another photo safari as we drive to Cuiaba.

Students will be expected to keep a daily journal of all the fauna and flora that they observe and where it was observed. Our Brazilian tour guides will have all the books and reference materials needed for identifying as many plants and animals as we can. (Research scientists should have checklists for identified fauna and flora in the area.) At the end of this adventure they will be asked to prepare a profile of the different ecosystems and biological webs they’ve encountered here in Mato Grosso.

Students should be able to include in their profiles observations about the climate, topography of the terrain, and water drainage in the area. They should be able to understand and explain the dynamics of a rainforest and what creates and sustains it. They should be able to know how organisms in the ecosystems exchange energy and nutrients among themselves and with the environment. They should be able to write about how energy enters ecosystems as sunlight and is transferred by producers into chemical energy through photosynthesis and then from organism to organism through food webs. They will have to write a final report that discusses rainforests with respect to organisms, food webs, biomes, climate, soil composition, water drainage systems, etc. The students should be able to understand the phenomena of the power of the water cycle and the transfer of energy through radiation, evaporation and convection currents in the atmosphere. This report will feature descriptions of the different ecosystems encountered in each of our adventures.

From Cuiaba we will board a flight to Rio de Janeiro on Varig Airlines.
The country’s biodiversity can be described by the diversity in biomes, biological species, endemicity and genetic heritage. The continental dimensions of the country, and the large geomorphological and climatic variations, shelter eight large biomes, 49 already classified ecoregions, and a large number of ecosystems holding some of the richest flora of the world, with approximately 56,000 registered plant species. The Brazilian fauna is equally rich with over 3,000 species of freshwater fish, approximately 600 species of mammals, 1,700 species of birds, 400 species of reptiles and over 100,000 species of invertebrates, including 70,000 insects.

Climate Zone

Adventure #4
October 26 – 31

Our adventure ends in Rio de Janeiro, Brazil. We will be giving the whole group a chance to relax on the beaches, do some sightseeing, buy some gifts, and send those last minute postcards.
Accomodations: Copacabana Palace Hotel  
Av. Atlantica 1702  
Copacabana District

Flight Home:  
Depart: Sunday 6:30 pm 10/31/04 Rio de Janeiro (GIG)  
Varig 8922 Aeromexico 15 / 5465  
Stopovers: Sao Paolo (GRU) Mexico City (MEX)  
Arrive: Monday 9:06 am 11/1/04 Los Angeles (LAX)  
Duration: 18 hours 36 minutes

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California Content Standards
Grade 6: Mathematics Content Standards

Number Sense
1.0 Students compare and order positive and negative fractions, decimals, and mixed numbers. Students solve problems involving fractions, ratios, proportions, and percentages:

1.4 Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.
1.4 Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.

2.0 Students calculate and solve problems involving addition, subtraction, multiplication, and division:
2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.

Algebra and Functions
2.0 Students analyze and use tables, graphs, and rules to solve problems involving rates and proportions:
2.1 Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches).
2.2 Demonstrate an understanding that rate is a measure of one quantity per unit value of another quantity.
2.3 Solve problems involving rates, average speed, distance, and time.

Grade 6: Science Content Standards
Shaping Earth's Surface
2. Topography is reshaped by the weathering of rock and soil and by the transportation and deposition of sediment. As a basis for understanding this concept:
   a. Students know water running downhill is the dominant process in shaping the landscape, including California's landscape.
   b. Students know rivers and streams are dynamic systems that erode, transport sediment, change course, and flood their banks in natural and recurring patterns.
   c. Students know beaches are dynamic systems in which the sand is supplied by rivers and moved along the coast by the action of waves.
   d. Students know earthquakes, volcanic eruptions, landslides, and floods change human and wildlife habitats.

Heat (Thermal Energy) (Physical Science)
3. Heat moves in a predictable flow from warmer objects to cooler objects until all the objects are at the same temperature. As a basis for understanding this concept:
   a. Students know energy can be carried from one place to another by heat flow or by waves, including water, light and sound waves, or by moving objects.
   b. Students know that when fuel is consumed, most of the energy released becomes heat energy.
   c. Students know heat flows in solids by conduction (which involves no flow of matter) and in fluids by conduction and by convection (which involves flow of matter).
   d. Students know heat energy is also transferred between objects by radiation (radiation can travel through space).

Energy in the Earth System
4. Many phenomena on Earth's surface are affected by the transfer of energy through radiation and convection currents. As a basis for understanding this concept:
a. Students know the sun is the major source of energy for phenomena on Earth's surface; it powers winds, ocean currents, and the water cycle.
b. Students know solar energy reaches Earth through radiation, mostly in the form of visible light.
d. Students know convection currents distribute heat in the atmosphere and oceans.
e. Students know differences in pressure, heat, air movement, and humidity result in changes of weather.

Ecology (Life Science)
5. Organisms in ecosystems exchange energy and nutrients among themselves and with the environment. As a basis for understanding this concept:
a. Students know energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis and then from organism to organism through food webs.
b. Students know matter is transferred over time from one organism to others in the food web and between organisms and the physical environment.
c. Students know populations of organisms can be categorized by the functions they serve in an ecosystem.
d. Students know different kinds of organisms may play similar ecological roles in similar biomes.
e. Students know the number and types of organisms an ecosystem can support depends on the resources available and on abiotic factors, such as quantities of light and water, a range of temperatures, and soil composition.

Resources
6. Sources of energy and materials differ in amounts, distribution, usefulness, and the time required for their formation. As a basis for understanding this concept:
a. Students know the utility of energy sources is determined by factors that are involved in converting these sources to useful forms and the consequences of the conversion process.
b. Students know different natural energy and material resources, including air, soil, rocks, minerals, petroleum, fresh water, wildlife, and forests, and know how to classify them as renewable or nonrenewable.
c. Students know the natural origin of the materials used to make common objects.

Investigation and Experimentation
7. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
a. Develop a hypothesis.
b. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.
c. Construct appropriate graphs from data and develop qualitative statements about the relationships between variables.
d. Communicate the steps and results from an investigation in written reports and oral presentations.
e. Recognize whether evidence is consistent with a proposed explanation.
f. Read a topographic map and a geologic map for evidence provided on the maps and construct and interpret a simple scale map.
g. Interpret events by sequence and time from natural phenomena (e.g., the relative ages of rocks and intrusions).
h. Identify changes in natural phenomena over time without manipulating the phenomena (e.g., a tree limb, a grove of trees, a stream, a hillslope).

1.0 ARTISTIC PERCEPTION
Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts
Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

Develop Perceptual Skills and Visual Arts Vocabulary
1.1 Identify and describe all the elements of art found in selected works of art (color, shape/form, line, texture, space, and value).
1.2 Discuss works of art as to theme, genre, style, idea, and differences in media.
1.3 Describe how artists can show the same theme by using different media and styles.

Analyze Art Elements and Principles of Design
1.4 Describe how balance is effectively used in a work of art (e.g., symmetrical, asymmetrical, and radial).

3.0 HISTORICAL AND CULTURAL CONTEXT
Understanding the Historical Contributions and Cultural Dimensions of the Visual Arts

Students analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists.

**Role and Development of the Visual Arts**

3.1 Research and discuss the role of the visual arts in selected periods of history, using a variety of resources (both print and electronic).

3.2 View selected works of art from a culture and describe how they have changed or not changed in theme and content over a period of time.

**Diversity of the Visual Arts**

3.3 Compare, in oral or written form, representative images or designs from at least two selected cultures.

**2.0 Reading Comprehension (Focus on Informational Materials)**

Students read and understand grade-level-appropriate material. They describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose. The selections in *Recommended Readings in Literature, Kindergarten Through Grade Eight* illustrate the quality and complexity of the materials to be read by students. In addition, by grade eight, students read one million words annually on their own, including a good representation of grade-level-appropriate narrative and expository text (e.g., classic and contemporary literature, magazines, newspapers, online information). In grade six, students continue to make progress toward this goal.

**Structural Features of Informational Materials**

2.1 Identify the structural features of popular media (e.g., newspapers, magazines, online information) and use the features to obtain information.

2.2 Analyze text that uses the compare-and-contrast organizational pattern.

**1.0 Writing Strategies**

Students write clear, coherent, and focused essays. The writing exhibits students' awareness of the audience and purpose. Essays contain formal introductions, supporting evidence, and conclusions. Students progress through the stages of the writing process as needed.

**Organization and Focus**

1.1 Choose the form of writing (e.g., personal letter, letter to the editor, review, poem, report, narrative) that best suits the intended purpose.

**History and Social Sciences**

**Historical and Social Sciences Analysis Skills**

The intellectual skills noted below are to be learned through, and applied to, the content standards for grades K-5. They are to be assessed only in conjunction with the content standards in grades K-5 and are not to be assessed in isolation.

**Grades K-5**

**In addition to the standards for grades K-5, students demonstrate the following intellectual, reasoning, reflection and research skills:**

**Chronological and Spatial Thinking**

1. students place key events and people of the historical era they are studying both in a chronological sequence and within a spatial context; they interpret timelines

2. students apply terms related to time correctly, including past, present, future, decade, century, and generation
3. students explain how the present is connected to the past, identifying both similarities and differences between the two, and how some things change over time and some things stay the same

4. students use map and globe skills to determine the absolute locations of places and interpret information available through the map's legend, scale, and symbolic representations

5. students judge the significance of the relative location of a place (e.g., close to a harbor, trade routes) and analyze how those relative advantages or disadvantages can change over time

Research, Evidence and Point of View
1. students differentiate between primary and secondary sources

2. students pose relevant questions about events encountered in historical documents, eyewitness accounts, oral histories, letters, diaries, artifacts, photos, maps, art and architecture

3. students distinguish fact from fiction by comparing documentary sources on historical figures and events with fictionalized characters and events

Historical Interpretation
1. students summarize the key events of the era they are studying and explain their historical contexts

2. students identify the human and physical characteristics of the places they are studying and explain how these features form the unique character of these places

3. students identify and interpret the multiple causes and effects of historical events

4. students conduct cost/benefit analyses of historical and current events

GRADE 4
CALIFORNIA: A CHANGING STATE
Students learn the story of their home state, unique in American history in terms of its vast and varied geography, its many waves of immigration beginning with pre-Columbian societies, its continuous diversity, economic energy, and rapid growth. In addition to the specific treatment of milestones in California history, students examine the state in the context of the rest of the nation, with an emphasis on the U.S. Constitution and the relationship between state and federal government.

4.1 Students demonstrate an understanding of the physical and human geographic features that define places and regions in California by:
1. explaining and using the coordinate grid system of latitude and longitude to determine absolute locations of places in California and on Earth
2. distinguishing between the two poles; the equator and the prime meridian; the tropics; and the hemispheres using coordinates to plot locations
3. identifying the state capital and describing the basic regions of California, including how their characteristics and physical environment affect human activity (e.g., water, landforms, vegetation, climate)
4. identifying the location of and explaining the reasons for the growth of towns in relation to the Pacific Ocean, rivers, valleys, and mountain passes
5. using maps, charts and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation

4.2 Students describe the social, political, cultural and economic life and interactions among people of California from the pre-Columbian societies to the Spanish mission and Mexican rancho periods, in terms of:
1. the major nations of California Indians, their geographic distribution, economic activities, legends, and religious beliefs; and how they depended upon, adapted to and modified the physical environment by cultivation of land and sea resources
2. the early land and sea routes to, and European settlements in, California with a focus on the exploration of the North Pacific, noting the physical barriers of mountains, deserts, ocean currents, and wind patterns (e.g., Captain Cook, Valdez, Vitus Bering, Juan Cabrillo)
3. the Spanish exploration and colonization of California, including the relationships among soldiers, missionaries and Indians (e.g., biographies of
Juan Crespi, Junipero Serra, Gaspar de Portola

4. the mapping, geographic basis of, and economic factors in the placement and function of the Spanish missions; how the mission system expanded the influence of Spain and Catholicism throughout New Spain and Latin America

5. the daily lives of the people, native and non-native, who occupied the presidios, missions, ranchos, and pueblos

6. the role of the Franciscans in the change of California from a hunter-gatherer economy to an agricultural economy

7. the effects of the Mexican War for Independence on Alta California, including the territorial boundaries of North America

8. the period Mexican rule and its attributes, including land grants, secularization of the missions and the rise of the rancho economy

4.3 Students explain the economic, social, and political life of California from the establishment of the Bear Flag Republic through the Mexican-American War, the Gold Rush and California statehood, in terms of:

1. the location of Mexican settlements in California and other settlements including Ft. Ross and Sutter's Fort

2. comparisons of how and why people traveled to California and the routes they traveled (e.g., biographies and legends of James Beckwourth, Jedediah Smith, John C. Fremont, Juan Cabrillo)

3. the effect of the Gold Rush on settlements, daily life, politics, and the physical environment (e.g., biographies of John Sutter, Mariano Guadalupe Vallejo, Phoebe Apperson Hearst)

4. the immigration and migration to California between 1850 and 1900; its diverse composition, the countries of origin and their relative locations, and the conflicts and accords among diverse groups (e.g., the 1882 Exclusion Act)

5. the lives of women who helped build early California (e.g., biographies of Bernarda Ruiz, Biddy Mason)

6. how California became a state and how its new government differed from those during the Spanish and Mexican periods

4.4 Students explain how California became an agricultural and industrial power by
tracing the transformation of the California economy and its political and cultural development since the 1850's, in terms of:

1. the story and lasting influence of the Pony Express, Overland Mail Service, Western Union, and the building of the Transcontinental Railroad, including the contributions of the Chinese workers to its construction

2. how the Gold Rush transformed the economy of California, including the type of products produced and consumed, changes in towns (e.g., Sacramento, San Francisco) and economic conflicts between diverse groups of people

3. rapid American immigration, internal migration, settlement, and the growth of towns and cities (e.g., Los Angeles)

4. the effects of the Great Depression, the Dust Bowl and World War II on California

5. the development and location of new industries since the turn of the century, such as aerospace, electronics, large scale commercial agriculture and irrigation projects, the oil and automobile industries, communications and defense, and important trade links with the Pacific Basin

6. California's water system and how it evolved over time into a network of dams, aqueducts and reservoirs

7. the history and development of California's public education system, including universities and community colleges

8. the impact of 20th century Californians on the nation's artistic and cultural development, including the rise of the entertainment industry (e.g., biographies of Louis B. Meyer, Walt Disney, John Steinbeck, Ansel Adams, Dorothea Lange, John Wayne)

4.5 Students understand the structure, functions, and powers of the United States local, state and federal governments as described in the U.S. Constitution, in terms of:

1. what the U.S. Constitution is and why it is important (i.e., a written document that defines the structure and purpose of the U.S. government; describes the shared powers of federal, state, and local governments)
2. the purpose of the state constitution, its key principles, and its relationship to the U.S. Constitution (with an emphasis on California's Constitution)

3. the similarities (e.g., written documents, rule of law, consent of the governed, three separate branches) and differences (e.g., scope of jurisdiction, limits on government powers, use of military) among federal, state, and local governments

4. the structure and function of state governments, including the roles and responsibilities of their elected officials

5. the components of California's governance structure (i.e., cities and towns, Indian rancherias and reservations, counties, school districts)

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Diversity of the Visual Arts
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National Educational Technology Standards for Students
NETS Standards
GRADES 3 - 5
Performance Indicators:
All students should have opportunities to demonstrate the following performances.

Prior to completion of Grade 5 students will:
1. Use keyboards and other common input and output devices (including adaptive devices when necessary) efficiently and effectively. (1)
2. Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide. (1, 2)
3. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use. (2)
4. Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum. (3)
5. Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and
publishing activities to create knowledge products for audiences inside and outside the classroom. (3, 4)

6. Use telecommunications efficiently and effectively to access remote information, communicate with others in support of direct and independent learning, and pursue personal interests. (4)

7. Use telecommunications and online resources (e.g., e-mail, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom. (4, 5)

8. Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem solving, self-directed learning, and extended learning activities. (5, 6)

9. Determine which technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems. (5, 6)

10. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources. (6-8)
GRADES 6 - 8
Performance Indicators:
All students should have opportunities to demonstrate the following performances.
Prior to completion of Grade 8 students will:
1. Apply strategies for identifying and solving routine hardware and software problems that occur during everyday use. (1)
2. Demonstrate knowledge of current changes in information technologies and the effect those changes have on the workplace and society. (2)
3. Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse. (2)
4. Use content-specific tools, software, and simulations (e.g., environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research. (3, 5)
5. Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum. (3, 6)
6. Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom. (4, 5, 6)
7. Collaborate with peers, experts, and others using telecommunications and collaborative tools to investigate curriculum-related problems, issues, and information, and to develop solutions or products for audiences inside and outside the classroom. (4, 5)
8. Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems. (5, 6)
9. Demonstrate an understanding of concepts underlying hardware, software, and connectivity, and of practical applications to learning and problem solving. (1, 6)
10. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems. (2, 5, 6)