

San Francisco Zoo Project Kit #1

Congratulations! You're going to the San Francisco Zoo! Use these project ideas to enrich your educational experience in the park. Read through them before you go to make sure you understand the terms and concepts, and to help you determine if you want to expand upon any of them. **You'll find fun facts and printable worksheets at the end of this packet**

a- elementary level activity b- middle school level activity c- high school level activity

Language Arts

Animals have language, too! Take some time to observe animals interacting with each other. How are they communicating to each other? How are they reacting to one another? Do you see positive or negative emotions in their communications? What are they trying to achieve? Is the way they are communicating effective? What can we learn from them?

- a. Draw a picture about what you see. Talk or write about it.
- b. Write a few short paragraphs about what you see. Talk about it.
- c. Write a short essay about what you see. Discuss ways in which we, as humans, can use some of our communication skills to better exist in harmony with one another. What kinds of communications should we avoid, and which should we employ more frequently?

Materials required: Notebook, pen/pencil

Submission: A copy of your writings/drawing, and any pictures/videos

Teaching or learning notes:

Applied Math

Animals eat a lot! How much animal food does the San Francisco Zoo have to purchase and prepare? How many animals live at the park? Use technology or ask a docent/keeper/employee to get estimates, and use those estimates to calculate how much money the zoo spends to feed its animals.

- a. Choose one animal to research how much it eats in a day. Calculate how much food it would need in a year. Draw or write about your findings.
- b. Choose one animal to research how much it eats. Calculate how much food it would need in a year, and estimate how much that food will cost. Then, multiply that figure by the number of that type of animal the park takes care of. Record your calculations.
- c. Calculate estimates of food needs for each animal, each type of animal, and all of the animals at the park. Do this per day and per year. Estimate how much that would cost. Record your calculations.

Materials required: Notebook, pen/pencil, calculator or smartphone (optional)

Submission: Your calculations, estimations, and conclusions, and any pictures/videos

Teaching or learning notes:

Science

Animals are awesome! Zoologists study animals. Every animal has a unique life history. A “life history” is the story of an animal’s life from birth (or fertilization) to adulthood (and death). How many different ways can an animal begin it’s life? Are some animals more independent as babies than others? Why do you think this is? What about their lives affect how vulnerable they are when they are born? What kinds of animals raise their babies, and what kinds don’t? How does this affect how many babies survive to adulthood?

- a. Choose an animal to think about these questions for. Draw or write about your ideas.
- b. Discuss and diagram the unique life history of one of the animals you see. Write a paragraph about your findings.
- c. Discuss the life history of one of the animals at the park. Write a short essay on your findings. Then, explore zoology. What kinds of things does the zoo need to keep in mind about each animal's' life history when it is designing its living space and their plan for taking care of it? Does the zoo have breeding programs for any of the animals? What are they working on currently? Ask a zookeeper.

Materials required: Notebook, pen/pencil

Submission: A copy of your drawings, diagrams, maps, or designs, and any pictures/videos

Teaching or learning notes:

Social Studies

San Francisco is a popular tourist location. Throughout your trip pay attention to the people around you. Can you tell if any of them are foreign travellers? Do some come from other states? How can you tell? What other languages can you hear? How far did they travel? Do they look like they're enjoying their vacation? How large are their groups that they are travelling in? How well do you feel The Zoo is representing America, California, or San Francisco?

- a. Pay attention to the people around you. Find at least one group of tourists and see if you can find out where they are from. Be discreet and polite while you look and listen for clues. Write down the clues you found. If you are brave, ask them where they are from and tell them you hope they are having fun on their trip!
- b. See how many languages or accents you can identify. Where are those languages or accents spoken? What can you guess about the travellers based on their language or accent? How far did they have to travel to come to The Exploratorium? Why do you think they picked The Zoo, or San Francisco? Is there anything like this in their home country? Write about your ideas.
- c. What makes San Francisco so popular for tourists? The Exploratorium gives you lots of clues about the city's rich history. Do a little research about the area, including the use of the pier before it became what it is now. Write a short essay about San Francisco and why it is such an interesting city.

Materials required: Notebook, pen/pencil, smartphone (optional)

Submission: A copy of your writings/drawings, and any pictures/videos

Teaching or learning notes:

FUN FACTS

- The Zoo is home to more than 1000 individual animals representing over 250 species.
- This zoo is the birthplace of Koko the gorilla, and also the home of Elly, The Black Rhinoceros said to be the oldest rhino in North America.
- The Zoo has a Bald Eagle named after Stephen Colbert. Stephen Jr. was born in 2006, and generated a lot of business and publicity for the zoo.
- The horn of a rhinoceros is made from compacted hair rather than bone or another substance.
- Even when a snake has its eyes closed, it can still see through its eyelids!
- All howler monkeys have long, prehensile tails that aid them in grasping limbs and moving through the canopies.
- In the wild, lions rest for around 20 hours a day.
- Giraffes are ruminants. This means that they have more than one stomach. In fact, giraffes have four stomachs, the extra stomachs assisting with digesting food.
- Instead of drinking water, frogs soak it into their body through their skin.
- Tigers can reach a length of up to 11 feet and weigh as much as 660 pounds!
- If you lift a kangaroo's tail off the ground it can't hop – they use their tails for balance.
- The sentence “The quick brown fox jumps over a lazy dog.” uses every letter of the alphabet.

San Francisco Zoo

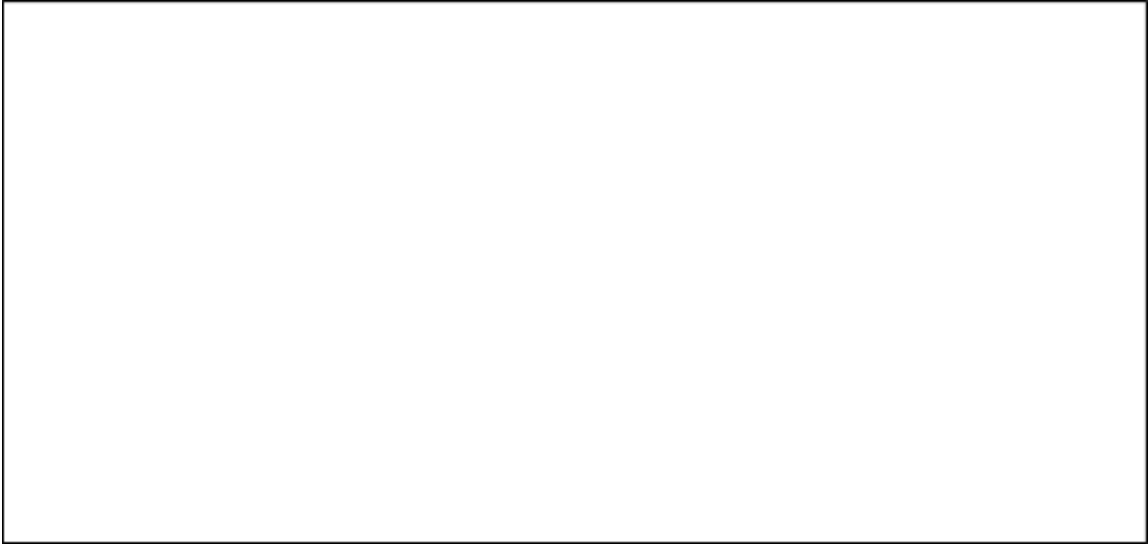
1. Draw a picture of your favorite animal at the zoo.



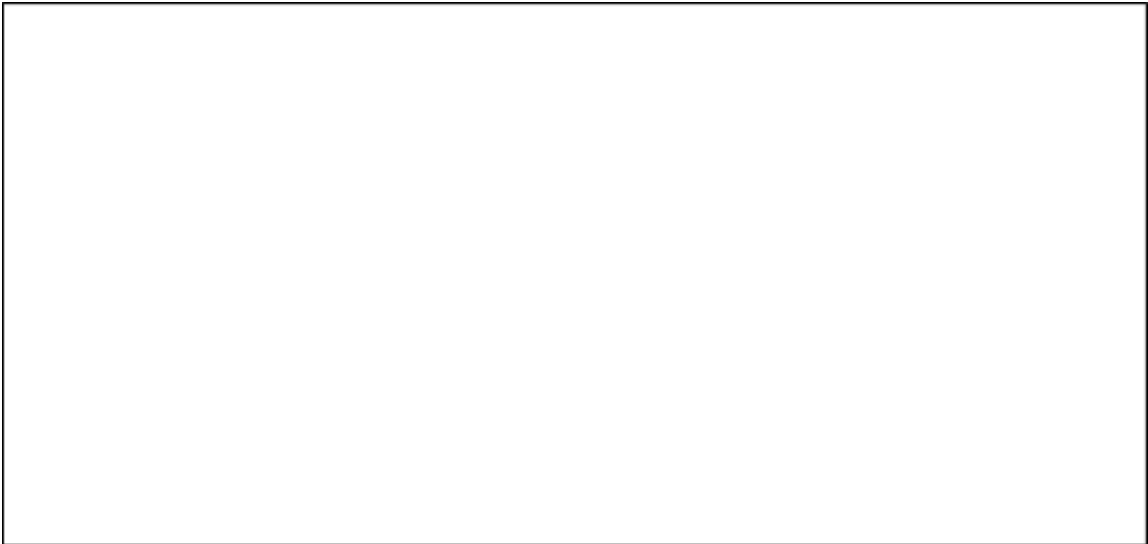
2. Describe your favorite animal, something it did while you were there, and why you love it.

3. What is one thing you learned about mammals at the zoo?

4. Draw or describe a bird that you saw at the zoo.



5. Describe or draw a reptile you saw at the zoo.



6. What are the differences between mammals and birds?

BONUS:

Zoo Scavenger Hunt!

- Something with wings _____
- Something that hibernates _____
- Something that is bipedal _____
- Something that is blue _____
- Something with flowers _____
- Something that eats mice _____
- Something that eats fruit _____
- Something with leaves _____
- Something that is diurnal _____
- Something that lives in the water _____
- Something that likes to hide _____

