Tropical Tour Training

Savanna: Introducing the savanna as a grassland habitat with seasonal rainfall. Ask kids leading questions about what they see in the exhibit (grass, only a few trees, water) and what they think would happen to those things during extreme drought and extreme rain. Also talk about what the biodiversity in the savanna is like and contrast to what kids think about the rainforest. Do any of the animals you see here have physical adaptations that you think help them survive in this environment? Can talk about seasonal migration of Zebra and Wildebeest due to dry season and lack of food and water.

3rd Grade CA LS Standard 3 b.*"Students know examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands."And* ***3 d.*** *"Students know when the environment changes, some plants and animals survive and reproduce; others die or move to new locations."*
4th Grade CA LS Standard 2 a. *"Students know plants are the primary source of matter and energy entering most food chains." And* ***2 b.*** *"Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem." And* ***3 c.*** *"Students know many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter."*
5th Grade CA LS Standard 3 c. *"Students know water vapor in the air moves from one place to another and can form fog or clouds, which are tiny droplets of water or ice, and can fall to Earth as rain, hail, sleet, or snow."*

PDC: Feeding and physical adaptations depending on type of rainforest the primate dwells in…would be great to compare rainforest primates:

1) Francois langurs – "old world" monkey from rainforest in SE Asia. Climbs through canopy looking for favorite leaves.
2) Black howler monkey – most often in the mid and upper canopy, fully prehensile tail, loud call
3) Black & white colobus
4) Mandrill - "old world" monkey from tropical rainforest of western Africa. Largest/heaviest of the monkeys, they are omnivores and are mostly terrestrial
5) Orangutan – great ape of Borneo and Sumatra. Mainly frugivores.

All of these primates eat leaves. Ask kids to think about what would happen if the place we spent the most time (the ground) started to disappear and we had to live in the trees. How easy would it be for us? Would we be as good of brachiators as the siamangs or as good of leapers as the Francois langurs? What if at the same time the ground started to disappear, our favorite foods started to disappear? Discuss why the forests of the world are important, not only to the primates we just met, but to us.

3rd Grade CA LS Standard 3. "*Adaptations in physical structure or behavior may improve an organism's chance for survival."****3 a.*** *"Students know plants and animals have structures that serve different functions in growth, survival, and reproduction."*
4th Grade CA LS Standard 3 *"Living organisms depend on one another and on their environment for survival." And* ***3 c.*** *"Students know many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter."*
5th Grade CA LS Standard 2 f. *"Students know plants use carbon dioxide (CO2) and energy from sunlight to build molecules of sugar and release oxygen."*

Bird Short String: Compare and contrast brightly colored macaws and black parrots. Both occupy a similar niche and habitat. Have kids brainstorm why the coloration between the two could be so different. Encourage them to write a story when they get back to their classroom with their scientific "theory" about why black parrots are black.

3rd Grade CA LS Standard 3. "*Adaptations in physical structure or behavior may improve an organism's chance for survival."****3 a.*** *"Students know plants and animals have structures that serve different functions in growth, survival, and reproduction."*
4th Grade CA LS Standard 3 *"Living organisms depend on one another and on their environment for survival." And* ***3 c.*** *"Students know many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter."*
5th Grade CA LS Standard *none for this stop.*

Puente: Feeding and water adaptations. Talk about the world's largest freshwater wetlands, the Pantanal, and the great biodiversity there. Giant anteater is a great swimmers. Anteater is a specialty feeder, eating only ants.

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4th Grade CA LS Standard 2 a. *"Students know plants are the primary source of matter and energy entering most food chains." And* ***2 b.*** *"Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem." And* ***3 c.*** *"Students know many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter."*
5th Grade CA LS Standard 3 c. *"Students know water vapor in the air moves from one place to another and can form fog or clouds, which are tiny droplets of water or ice, and can fall to Earth as rain, hail, sleet, or snow."And* ***3 d.*** *"Students know that the amount of fresh water located in rivers, lakes, underground sources, and glaciers is limited and that its availability can be extended by recycling and decreasing the use of water."*

Tropical Building:

Anaconda – Anaconda line-up, weight comparison, adaptation to water.

Parrots – Observe the use of their beaks and feet – how would they aid them with an arboreal lifestyle. Also, listen…how would you communicate with your flock in the dense rainforest?

Ibis & Spoonbill – Observe their long legs and the use of their beaks and feet – How are their feeding mechanisms different from the parrots?

Frogs – Warning colors and adaptation to using bromeliads as nursing chambers for their tadpoles.

Glossary:

Anisodactyl: the hallux is behind and the other three toes are in front, as in perching birds.

Biodiversity: the range of variation found among microorganisms, plants, fungi, and animals; the richness of species of living organisms.

Zygodactyl: the toes are arranged in pairs, the second and third toes in front, the fourth and hallux behind, as in a woodpecker.