

Rationale

To understand the different landforms and geographic features surrounding the nest sites of California Condors, students work to identify different landforms and infer characteristics of the condor from their geographic location.

Aligned Standards

NGSS: Communicating Information; Systems
LS2.C: Condor nest sites and local landforms offer resources and temperatures, which affect reproduction and survival.
LS 4.D: Nest sites vary in distance to human populations and affect the relationships between condors and humans.

Vocabulary

nest site
cavity

Tech Integration

Nest Sites photo library

Materials

Images of nest sites

Objectives

1. Students identify landforms in condor territory
2. Students understand the typical characteristics of a condor nest site

Time

Day 1 of two-day lesson
Teaching time: one hour (approximately)

PROCEDURE – DAY 1

IMAGES (20 minutes)

Students receive images of nest sites either individually or in groups. Frame the lesson by explaining the need for conservationists and condor observers to be aware of what nest sites look like and where they are located. We need to identify geographic landforms to guess where the nest site could be located. In pairs or individually, have the students make lists of the landforms and locate the nest site on the image.

EXTENSION (30 minutes)

Visit yardmap.org and following the instructional video, have students map out the school grounds, a nearby park, or their homes. This is a free, interactive, citizen science mapping project. It encourages learning about local habitats and low impact land use.

EXPLORE (20 minutes)

The teacher leads a discussion of landforms identified by students and guides the students to make inferences of why nest sites are located in the geography seen in the images.

Before you begin

Prepare to project photos of landforms and nest sites from the corresponding photo libraries.

What to do

If possible, a Unit on Unique Landforms and Biomes should be taught prior to this learning set.

Every species lives in a habitat that supports its survival. The condor in many ways is fit for a certain type of habitat. Think about some of the physical features that we have learned about previously: size, food source, and flight ability.

Images

Begin by reviewing previously taught landforms. Discuss what the differences are between mountains and other landforms: Desert, Chaparral, and other biomes. Project or pass out copies of image “nest site 9” and ask the students what type of land-form they see, and what biome they believe it to be a part of. Why would condors live in this type of habitat?

Looking at image “nest site 7”; it is clear that the condors’ nest is in a mountainous cavity. Ask the students to infer why they think this is. Have any of them seen a place like this before?

Next, focus on image “nest site 11” and have the class identify the nest site. Why do they think the condors have chosen this site? What features would make this a good/bad choice? (A Perch is necessary for watching for predators).

After going through your selected images, have the class work in small groups or pairs to discuss what features are important for the survival of all living things (food, water, shelter). Have them journal which features they can identify in the images and how this information might help conservationists be more effective.

Explore

If you would like to extend the lesson, visit yardmap.org to map out the schoolyard, a nearby park, or a student’s home. This activity is web-based, interactive, free, and promotes learning about local habitats and low-impact land use. Have the activity open and available on the computer before the lesson begins. You will need to click the “Join YardMap” button on the yardmap.org page. Once you are signed up, the students can create yard maps. If you create an account, you may return to yardmap.org later on and click “sign in” at the top right to return to your account.

Have students work in groups to draw a map of their local park, school, etc. Encourage them to think about local habitats and the birds from the Biofacts biology lesson that dwell in these habitats.

(End of lesson 1 of 2)

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SUPPLEMENTAL INSTRUCTION:

If needed, a Unit on General Landforms and Biomes to help students differentiate the condor’s habitat from others that exist around the world can support this lesson.



OPTIONAL EXTENSION:

Create a Native Plant Garden in the schoolyard to visit in this lesson and others. Students can encourage native plant life, learn watering and drought techniques, and observe native plant and animal species.



OPTIONAL EXTENSION:

Guide the class discussion toward the remoteness of the nest sites in the images. Where do they think these photos were taken? Do they think there are homes, streets, and populations of people nearby? If so, how might this affect the nesting process and why would the condors choose to stay there?