



Classroom Activities for World Rhino Day



Objective

Instill an appreciation for rhinos and their unique adaptations along with an understanding of the conservation issues rhinos face in the wild and why we must help protect them.

Background Information

There are five species of rhinoceros that can be found throughout Africa and Asia, two of which live at the San Francisco Zoo. We have two black rhinos (Ellie and Boone, the African species) and one Greater One-Horned Rhino (Gauhati, the Asian species). Rhinos are the second largest land mammal after the elephant, sometimes weighing up to 5,000 pounds—woah!

Rhinos have lots of adaptations to help them survive in their environments. They are very large and have very thick skin (which can be up to four inches thick!). The greater one-horned rhinoceros even looks like it is wearing armored plates! Rhinos are *herbivores* and are constantly grazing for food. Largely due to their poor eyesight, rhinos are known to charge at any and all perceived threats. Instead, they rely mainly on their senses of smell and hearing. As evidence of their excellent hearing, they have ears that swivel to pick up sounds from different directions (similar to deer’s ears or a satellite dish).

Even with all of these survival adaptations, all rhino species are *endangered* as their populations are threatened by *habitat destruction* and *poaching*. Demand for rhino horn as a traditional medicine in some cultures fuels rhino poaching. No scientific evidence exists to prove that rhino horn is an effective medicine; in fact, it is composed of *keratin*, the same material in our hair and fingernails. One of the best ways for us to help the rhinos is to talk about them to our friends and family—this raises awareness about these wonderful animals and their cause!

Many people wonder why our one-horned rhinoceros doesn’t have a horn. Much like humans have habits, so does he—he files his horn down on the rocks in his exhibit, just like you might trim and file your fingernails! In the wild, rhinos might file their horns on trees to keep them smooth.

Vocabulary (italicized above)

<i>endangered</i>	a species that is low in number and, therefore, in danger of becoming extinct
<i>herbivore</i>	an animal that eats only plant matter
<i>keratin</i>	the same material that makes up our hair and fingernails
<i>conservation</i>	protecting a species or resource from becoming endangered/extinct
<i>habitat destruction</i>	destroying the places where animals live; usually driven by money and profit (land use, agriculture, resources, etc.)
<i>poaching</i>	killing animals to sell them (or their body parts) for money
<i>adaptation</i>	a feature an animal has that allows it to survive in its habitat; they affect how the animal looks and behaves

All of the following activities are correlated to the NGSS Life Science Standards listed below. Accompanying each individual activity are corresponding Visual Arts, ELA/Literacy, and Physical Education standards.

Kindergarten: LS1-1, ESS2-2, ESS3-1, ESS3-3, K-2-ETS1-2, K-2-ETS1-3
1st Grade: LS1-1, LS1-2, K-2-ETS1-2, K-2-ETS1-3
2nd Grade: LS4-1, PS1-1, PS1-2, K-2-ETS1-2, K-2-ETS1-3



One-horned rhinoceros
Rhinoceros unicornis

Black rhinoceros
Diceros bicornis





Classroom Activity: Charging Rhino! *Visual Arts*



Have everyone squint until their eyes are almost closed. This is the way a rhino sees—not very well! Since they see poorly, they often charge at anything that spooks, scares, or startles them. Rhinos can charge at speeds of up to 35 mph, a lot faster than humans can run! This is especially surprising because they are the second largest land mammal after the elephant, and can even weigh up to 5,000 pounds! That’s a lot of mass to move!

Materials:

Each individual student will need:

rhino & grassland template (see below)

paper cup with a hole pre-poked into the center of the bottom

popsicle stick

Materials to share:

scissors

glue

crayons/markers

watercolors (optional)

Procedure:

Have students color, then cut out their rhino and grassland scene. Glue the grassland scene around the paper cup. Glue the rhino horizontally onto one end of the horizontal popsicle stick. Put the bare end of the popsicle stick downward through the cup so that the rhino is hidden in the cup and the bare end of the popsicle stick is like a handle. When startled, the rhino can “charge” out of the paper cup grassland.

CA State Standards (Visual Arts):

Kindergarten: VA.1.1-1.3, VA.2.2, VA.2.7, VA.4.1-4.4

1st Grade: VA.1.1, VA.1.3, VA.2.5

2nd Grade: VA.2.2, VA.2.4, VA.5.1





Classroom Activity: Do You Hear What I Hear? *Speaking and Listening*



Rhinos have large ears that can swivel to help them hear in different directions. Some examples of other animals that share this large-eared trait: dogs, mule deer, California leaf-nosed bat, fennec foxes, red-necked wallabies, and many more! Help your students conceptualize this by demonstrating how effective rhino ears can be.

Procedure:

Based on an animal's physical characteristics, you can often tell which of their senses are well-developed. In looking at the picture of the rhinoceros, which feature on their head looks biggest? (Their ears!) Which look the smallest? (Their eyes!) What does that tell us about the way they see and hear?

From the front of the room, say a sentence like "Do you hear what I hear?" Next, have your students cup their hands behind their ears making 'rhino ears'. With their 'rhino ears' facing you at the front of the room, say the same sentence again. Compare: did their 'rhino ears' help them hear your voice better?

Now, move to a different area of the room. With the students' bodies and 'ears' still facing forward, repeat the sentence once more. Then, have them keep their bodies facing front but swivel their 'ears' toward you. Repeat the sentence. Did their 'rhino ears' help them hear your voice better?

Discuss or journal how the 'rhino ears' affected their ability to hear. How do they think this would be beneficial to animals in the wild? What about for animals that don't have a good sense of sight?

CCSS Standards (ELA/Literacy):

Kindergarten: *SL.1, SL.2, SL.3, SL.6*

1st Grade: *SL.1, SL.2, SL.3, SL.6*

2nd Grade: *SL.1, SL.2, SL.3, SL.6*



One-horned rhinoceros
Rhinoceros unicornis

ARKIVE
www.arkive.org

Fennec fox

Vulpes zerda



© Eyal Bartov



Mule deer

Odocoileus hemionus

©Wayne Dumbleton

California leaf-nosed bat

Macrotus californicus

© B. Moose Peterson



Red-necked wallaby
Macropus rufogriseus

©Josh More





Classroom Activity: Rhino Red Light, Green Light *Physical Education*



Rhinos are mostly solitary, especially males; however, females and their young occasionally form small herds. Did you know? A group of rhinos is called a crash! Rhinos, as herbivores, are also called “browsers”—they move slowly and steadily as they look for grasses and branches to eat.

Procedure:

Students will form a crash of rhinos by standing in a line, against one wall/edge of the playing area (can be indoors or outdoors).

From the opposite edge, the teacher calls out one of three commands:

Charge! (green light)

Browse! (yellow light)

Snort! (red light)

When teacher calls out “**Charge!**” students can stampede toward the teacher.

When teacher calls out “**Snort!**” students will freeze and bellow, grunt, or snort.

When teacher calls out “**Browse!**” students will browse around the room looking for grasses and shrubs to munch on.

For a twist, have the students take turns calling out commands.

CA State Standards (Physical Education):

Kindergarten: *PE.1.1-1.3, PE.3.1, PE.4.3, PE.5.1, PE.5.3, PE.5.5*

1st Grade: *PE.1.1, PE.2.2, PE.3.1, PE.4.6, PE.5.1, PE.5.3, PE.5.6*

2nd Grade: *PE.1.1, PE.3.1, PE.5.1, PE.5.2, PE.5.5*