

Teacher's Guide for ASK® *Mysteries of the Desert*

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Introduction: pre-reading activities:

- As a whole class or in groups, ask the students to make a list recording what they know about a desert.
- Use a Map of the World to indicate the locations of the deserts of the world.
- Let the students either write or tell you what they think the camel, on the cover of the magazine, could say about his life in the desert.
- Look at the Contents page and discuss/predict the content of the pictures.
 1. What is the camel telling us?
 2. Why is the person loaded down with equipment?
 3. What can we tell about the cactus?
 4. Do you think that there is a speed limit?

"Nestor's Dock" (pg. 4-5)

- Do you think that Nestor made a good decision to let the gerbils free?
- Why do you think that he let them go?
- What mistake did Nestor and Trip make when they were searching for the gerbils?
- What is a mirage?
- What mistake were Phil and his friend making?

"Secrets of the Sahara" (pg. 6-12)

Vocabulary: wilderness, regs, plateau, hammad, ergs, dunes, emerge, eerie, avalanches, vibrations, collide, wadis, oasis, oases, irrigation, artesian wells, fossil, seminomadic, indigo, caravans, blowhole

- Use a map to locate the Sahara.
- How large is the Sahara?
- How much of the Sahara is covered in sand?
- What makes up the rest of the Sahara?
- What creates the shape of sand dunes?
- How does the sand move?
- Compare the possible height of a sand dune to the height of your school.
- Describe walking sands.
- What eerie sound might you hear in the desert?
- What is the Great Sand Sea?
- What are wadis?
- What is an oasis?
- What exists deep below the Sahara?
- Make a math chart to compare population/land mass between the USA and the Sahara.

- Who are the Tuareg?
- Why are some of the men blue?
- Why is salt important especially in the desert?
- Describe how salt is mined.
- How is salt collected in an oasis town?
- What do fish fossils tell the scientists?
- How does the sand from the Sahara reach America?
- Name other examples, which prove that the Sahara had water and wild life.
- Long ago, what might have changed the climate of the Sahara?
- What is the Valley of the Whales?
- What is happening to the Sahara today?
- Science - Do an experiment with salt to demonstrate how salt crystals form.

Art - Students could make pictures of any aspect of a desert. A mural might be a great way to combine various desert scenes.

Language Arts - Ask the students to write a story/adventure about the desert.

"The Desert Makes Mummies" (pg. 13-16)

Vocabulary: ochre, archaeologists, swirl, bacteria, parched, desolate

- On a map locate the Taklamakan Desert.
- What is a mummy?
- Who is Cherchen Man?
- What do you think the yellow swirl means?
- Suggest answers for the two questions at the top of page 14.
- Describe the climate of the Taklamakan.
- How did ancient desert people make mummies?
- Describe how priests in Egypt worked on mummification.
- Why is the desert a perfect place to preserve a body?
- The best-preserved bodies were buried in winter. Why?
- What do their tools tell us about the mummies?
- Where do the scientists think that Cherchen Man and his people originated?
- What helps to prove this theory?
- Science/Art - Make dried apple dolls to emulate a mummy.

Desert Destinations

- Use the Map of the World to help the students complete the card matching.
- Research - Students could spend time researching other deserts and then reporting back to the class.

"Keeping Cool in the Desert" (pg. 17-21)

Vocabulary: converting, estivate, evaporates

- List four ways in which a camel can survive a desert storm.
- What helps camels find food?
- How does the hump help the camel?

- How long can a camel survive without water?
- How does their nose help retain water?
- Why do humps shrink and fall over?
- Why is a camel's urine thick and smelly?
- Why do desert animals usually move about in the morning and evening?
- Why are reptiles suited to desert life?
- Why are desert animals different from North American animals that hibernate?
- Why do desert toads reproduce so quickly?
- Explain how oryx survive.
- Why do jackrabbits have big ears?
- Tell why urine helps the turkey vulture.

Standing Tall

- Why do the spines help the saguaro cactus?
- How does a saguaro mature?
- Why is it best that saguaros do not have leaves?
- Why are cactus roots so shallow in the ground?
- Why are flowers important to a saguaro cactus?
- How does the saguaro feed desert animals?
- Why does the saguaro form scabs?
- What are the woody ribs?
- Explain why a saguaro is like an accordion.

"Desert Dangers" (26-29)

Vocabulary: dehydration, droughts, harvested, scrubby

- Explain why people can survive in the desert.
- What are the dangers of the desert?
- How much water does a human need to survive in the desert?
- How do the people of the Kalahari find other liquid to drink?
- How is fog harvested?
- Why do people wear long clothes in the desert?
- How can a person be protected in a sandstorm?
- What are mental maps?
- Compare the Arabian Desert with Texas on a classroom map.
- In the schoolyard follow the directions for getting around a sand dune.

"Ask Jimmy the Bug" (pg.33)

Vocabulary: sound waves, vibrate, air pressure, Eustachian tube, equalize
Marvin and Friends

- What did Marvin take into the desert?
- How did the friends find relief from the desert heat?

Creative Writing: Make a cartoon about survival in a desert.