

Desert Resource Choices

How resource availability can shape animal interactions

LS.6.b “the availability and use of resources may lead to competition and cooperation;”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each resource the meerkats need. Circle one example of competition and number two examples of cooperation to show how animals respond when resources are scarce.

Meerkats in a Dry Season

- ① On the edge of the Kalahari Desert, a meerkat group depends on insects, scorpions, and water. During a long dry season, hard soil holds fewer prey animals, and small water holes shrink. Meerkats from different groups may arrive at the same water hole. Each group needs the water to survive, so adults may threaten or chase away the other group. This competition is strongest where the resource is limited.
- ② Within one group, the same shortage can lead to cooperation. Several meerkats dig together to uncover buried prey, which one animal might not reach quickly alone. While others feed, a sentinel stands watch for hawks and jackals. A warning call sends the group to cover. The guard loses feeding time, but the group can search longer and more safely because other members take turns as sentinel.
- ③ After rare rainstorms, insects become easier to find and temporary pools appear. Meerkats still need food and water, but groups are less likely to meet at one crowded location. The reason for fighting over a water hole decreases when more water holes are available. Cooperation within a group can continue, however. By taking turns digging and watching, group members use scattered food resources efficiently while reducing danger from predators.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What two changes during the dry season make resources less available to meerkats?

2 What do meerkats from different groups do when they need the same limited water hole?

3 How does taking turns as a sentinel help the meerkat group use food resources?

4 Why does competition over water decrease after rainstorms, even though cooperation can continue?

3 YOUR TURN _____ Your own words

Write exactly three sentences about a different animal group. Describe a resource becoming limited, one way animals might compete for it, and one way they might cooperate to use or protect resources.

PART 1 • READ AND MARK

Underline each resource the meerkats need. Circle one example of competition and number two examples of cooperation to show how animals respond when resources are scarce. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What two changes during the dry season make resources less available to meerkats?	Hard soil holds fewer prey animals, and small water holes shrink.
2	What do meerkats from different groups do when they need the same limited water hole?	Adults may threaten or chase away the other group.
3	How does taking turns as a sentinel help the meerkat group use food resources?	A sentinel watches for predators and warns the group, so other meerkats can search for food longer and more safely. Members take turns, so the job is shared.
4	Why does competition over water decrease after rainstorms, even though cooperation can continue?	Temporary pools mean groups are less likely to meet at one crowded water hole. Meerkats can still cooperate by taking turns digging and watching while they use scattered food.

PART 3 • YOUR TURN (SAMPLE ANSWER)

In a dry summer, a beaver family finds fewer willow branches near its pond. Beavers may compete with nearby beavers for the remaining branches. Family members cooperate to carry branches and repair their dam, helping them keep a safe pond.

Accept resource examples from the passage: insects, scorpions, water, prey animals, and food. For the open response, accept any biologically reasonable example that clearly connects limited resources to both competition and cooperation.