

# **DEBBIE'S DESERT**

A simulation of a Jeep trip to explore a desert's ecosystem

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#### Teacher Guide **DEBBIE'S DESERT**

# **PURPOSE**



We wrote DEBBIE'S DESERT and other science units in this passport series because we are concerned by a national trend discussed in the April 9, 1990, issue of Newsweek: "Whether out of boredom, laziness, or the allure of other pursuits, American students are fleeing math and science in droves. 'By the third grade, half of all students don't want to take science any more,' says Edward Pizzini, associate professor science education at the University of Iowa. 'By the eighth grade, only one in five wants to keep going. Fewer than half ever take a math or science course after the 10th grade.' "

DEBBIE'S DESERT is a scientific camping trip that allows young naturalists (K–2) to explore the desert habitat. It is designed to broaden the students' scientific knowledge through the study of life forms found in the desert. Eleven lessons include information on desert insects, plants, and animals; the final lesson is a review of the unit. Other scientific and travel-related concepts are emphasized throughout the unit. DEBBIE'S DESERT is a science program that stimulates young learners through well-planned activities. The unit's activities are a base on which to build required science concepts for grades K–2.

Many options and enhancements are included that expand the concepts beyond the basics. The guided tour is sponsored by your own personal travel agency. Each student has a passport that is stamped throughout the camping trip as activities are completed.

During the scientific camping trip, students will experience the following:

### Knowledge

- 1. Learning selected scientific vocabulary words and the importance of building upon them.
- 2. Understanding how specific concepts in nature interrelate.
- 3. Following sequential steps in order to complete a product.
- 4. Determining how traveling procedures relate to a travel agency and guided tours.

### **Feelings**

- 1. Feeling positive toward science.
- 2. Appreciating nature and its habitats.
- 3. Experiencing the simulation of traveling on a guided camping tour.

#### **Skills**

- 1. Studying scientific concepts carefully to understand terms and definitions.
- 2. Creating multi-dimensional projects.
- 3. Enhancing vocabulary and language.
- 4. Experimenting, gathering information, and estimating in the science field.
- 5. Learning to read directions to complete an activity.
- 6. Following oral and written directions.

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# **QUESTIONS AND ANSWERS - 1**



- **Q.** I have never had my students work in teams before. Can cooperative learning really be successful?
- A. Yes. Children can work cooperatively in groups very successfully. Research shows we can learn a great deal from our peers whatever the age. DEBBIE'S DESERT is an introductory unit to cooperative learning for young people. Give it a good try. Be open minded and be willing to try different strategies within the cooperative-learning framework. Keep behavioral objectives clear throughout the unit. Be generous with praise and points for the teams that work well.
- **Q.** Must all the activities be done in teams?
- A. No. The activities can be done in a large group as well as in small groups. The idea of working together on a camping trip adds an element to the unit that children enjoy. Complete most activities in the Jeep teams to carry out the camping theme.
- **Q.** How do you arrange it so one or two children in each group do not do all the work?
- A. Many of the lessons are set up so everyone ends up with an individual project. You may find a few students more eager for everyone to finish their project. Thus they help verbally or, if needed, physically. When you assign job responsibilities in each group, stress that the task was given because you know that the individual will do an excellent job. More than likely only one or two students will not work successfully in team activities. Team pressure will enable the student to tune into the spirit of DEBBIE'S DESERT.
- **Q.** How long should it take to finish the unit? Do I have to do every lesson?
- A. The unit is divided into 11 lessons and a short quiz. Each lesson activity, option, and enhancement takes approximately 30 minutes. There is enough material to keep busy for week upon week. It is suggested that you go through the lessons and pick the activities most important and appropriate to your class. Set your own unit length from the activities you want to use.

# **Lesson 2: Post Card**

## Concept

When you take a trip you send a post card to someone you know to tell them what you are doing on your trip.

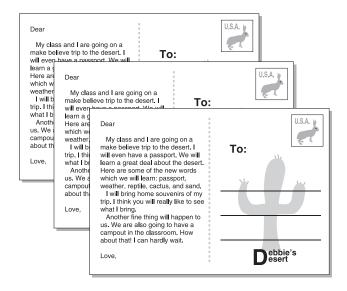
## **Vocabulary**

- 1. map
- 2. passport
- 3. post card
- 4. trip
- 5. souvenirs
- 6. tour
- 7. travel

### **Materials**

Activity: POST CARD

- 1. POST CARD (page 18), one per student
- 2. markers/crayons/pencils
- 3. scissors



### **Procedure**

- 1. Put students in Jeep teams.
- 2. Explain the concept and vocabulary in simple terms. These words appear on the POST CARD. For example:
  - "A passport is a small booklet that is used when people travel from one country to another country. We are going to pretend that Debbie's Desert is a country because we are going to explore the borders, animals, plants, and insects in Debbie's Desert."
- 3. Do POST CARD activity.
- 4. Ask teams Closure Question: What is a post card?

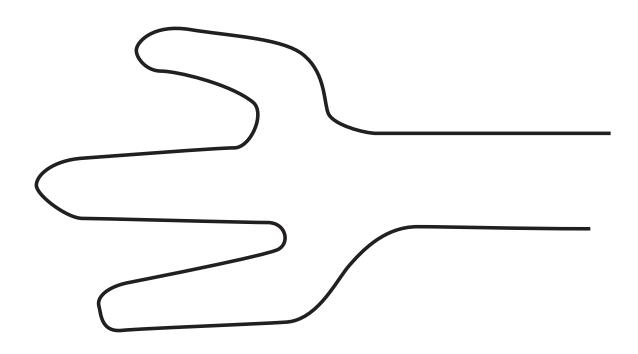
# **Activity: POST CARD**

- 1. Briefly review the camping trip to the desert that the class is going to take.
- 2. Hand out POST CARDS.
- 3. Read or have a child read the POST CARD to the entire class. Talk about the vocabulary that appears on the POST CARD.
- 4. Have students fill in the name to whom they wish to send the POST CARD.

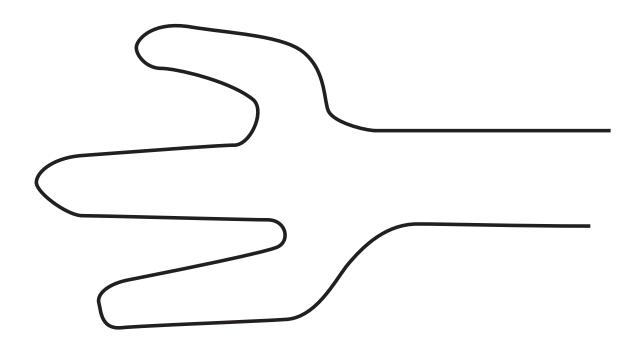
Lesson 4 Activity

# **DEBBIE'S DESERT MAP**

**Directions:** Duplicate on green paper; one page per student.



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# **CAMPFIRE STORY**

A very long time ago a family of pioneers started on a long trip to San Diego, California. They were traveling with two big water barrels, two mules, and a wagon load of furniture from their Ohio home. They were so excited to be moving to San Diego. The father, Elmer, loved his family and wanted the trip to be safe. The mother, Alice, tried her best to keep everyone fed and in a happy mood. Billy and Sara, the two children, were excited about the idea of a new home. The family dog Scuffy ran alongside the wagon and hunted for rabbits.

One of the hardest things they had to do was cross the hot, windy, dry desert. It was important that they had plenty of water and food before they started across the desert. Father checked the water barrels. They were full. He had filled them in Phoenix, Arizona, and knew he had enough water to get them through the desert. Alice checked to see that they had flour, coffee, dried beef, and beans to make the difficult trip across the desert. The children were ready to travel the desert for they had heard scary stories about traveling in this dangerous place. They wanted to see if the stories were true.

They got an early start this lovely morning hoping to stop in the middle of the hot day for a snack of beef jerky, biscuits, and water. About two hours had passed when one of the wooden wheels hit a very big rock and caused the whole wagon to tip side to side. Some of the water on the left side of the wagon spilled out. The mules got scared and started to kick against the wagon. Billy was thrown out of the wagon and Scuffy ran to him. Elmer got the mules under control and stopped to see if Billy was all right. Mother ran to her son and found he had hit his head on a rock but seemed to be okay.

The family checked their belongings and thought nothing was harmed. But there was one thing they did not check — the water barrels. One of the barrels developed a small crack in the wood when the wheel bumped over the big rock. A small trickle of water was dripping onto the hot sand. As the family pulled away from the accident the water continued to slowly drip onto the ground.

As the family traveled on Billy complained of a headache. Mother was concerned because of the bump on his head. Father kept the mules going slowly but surely until the sun was straight up in the sky. They stopped to rest and take a drink. When father stopped the wagon the children ran to get a drink from one of the water barrels. The water tasted so refreshing. They poured some in Scuffy's bowl. He lapped up the wonderful drink. Mother laid out some beef jerky and biscuits for the noontime snack while Father got water for the mules. Father used the barrel on the right side of the wagon. It was still quite full. The children had used the water on the left side of the wagon. It was the one that had developed a leak.

The water in the left barrel was almost half gone but father and mother did not know it. The happy travelers continued on their trip to San Diego without knowing their precious water was dripping onto the ground. When they stopped for the night they could hear the coyotes howling close to their camp. The animals could smell the water and were calling to other coyotes that they knew where some water could be found.