

Desert Buddies



Saguaro Cactus

ACTIVITY OVERVIEW

The purpose of this activity is to move students through the completion of an investigation using the scientific process. Having previously made observations, asked questions, made predictions, and gathered evidence students now analyze their results and draw conclusions about desert plant and animal buddies. After reviewing what they learned during their visit to the Desert Botanical Garden, students create a drawing of a desert plant and animal buddy and communicate their results with others. Students are also encouraged to submit their work for posting online at the Desert Botanical Garden website.

MATERIALS

- DBG Buddy Cards from the Inquiry Stage 1 Introductory Activity (Saguaro Cactus, Gila Woodpecker Creosote Bush, Ground Squirrel, Palo Verde Tree, Pocket Mouse)
- Paper, colored markers, crayons, pencils
- Optional: Data Collection Journal from the fieldtrip



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Gila Woodpecker

ACTIVITY PROCEDURES

- 1. Discuss the students' experiences during their trip to the Desert Botanical Garden. Tell them that in this activity, they are going to compare their predictions to the actual results from their trip. Then they are going to have fun creating a buddy drawing and sharing what they learned.
- 2. Review with students the name of the desert we live in (Sonoran Desert) and the characteristics of a desert (hot and dry). Review what a buddy is. Show the *DBG Buddy Cards* from the Introductory Activity and review the names of each plant and animal.
- 3. Review the predictions and questions about possible plant and animal buddies that the students made during the Introductory Activity (refer to the table that was completed during that activity). (Optional: Together the class can complete the Putting It Together section of their *Data Collection Journals* to recap their investigation.) Then for each plant, discuss the correct animal buddy. Review what the students learned on the trip about each buddy pair and compare with the predictions. Complete a new table on the board listing each buddy pair, how they are buddies and the evidence gathered on the trip.

The first cell is completed as an example:

Buddy Pair	How They Are Buddies	Evidence
Palo verde/Pocket Mouse	 Palo verde provides many seeds for pocket mouse to eat. Pocket mouse carries away and buries many of the seeds which may sprout to become new trees. 	 Pocket mouse has pouches on the outside of cheeks to carry the seeds away. New palo verde trees grow away from the mother tree.
Saguaro/Gila Woodpecker		
Creosote Bush/ Ground Squirrel		

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Round-Tailed Ground Squirrel

ACTIVITY PROCEDURES

- 4. Tell the students they are now going to do a "Think, Pair, Share" activity. First, ask students to think (to themselves) of other desert plant and animal buddies that they have recently studied or are familiar with (e.g., Lizard/Mesquite, Butterfly/Flower, Bee/Flower, Hummingbird/Flower, Tortoise/Prickly Pear, Bat/Columnar Cactus Flower).
- 5. Have students work in pairs (as classroom buddies!). Give the pairs several minutes to discuss at least two other desert plant and animal buddies. Ask several pairs to share some examples with the class.
- 6. Instruct each pair to choose one desert buddy pair. They should think of at least two different ways the plant and animal help each other. Next, they should make a drawing of their buddy pair using the available materials, being sure to show how the plant and animal are buddies. If students are able, they can write the name of their plants and animals and label how they are buddies.
- 7. When students have finished their buddy drawings, ask pairs to share their drawings with small groups or the entire class. Students should be sure to name the plant and animal and describe how they are buddies when sharing with other students.
- 8. Commend the class for creating such wonderful buddy drawings and for describing their buddy pairs so well. Remind them that they worked well together as buddy pairs themselves!

POST YOUR FINDINGS ON THE INTERNET!

The final step of the Inquiry Process is to share your findings. One way that scientists do this is by publishing in science journals. You can share your findings by visiting the *DBG Journal of Student Findings* at http://www.dbg.org/index.php/digital/students/journal. Here you can submit your investigation findings or original art inspired by your Inquiry in the Garden. For more ideas on art projects that tie into Garden themes, teachers can go to the *Additional Resources* section of the Digital Learning website.



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RELATED ADE STANDARDS:

VISUAL ARTS STRAND 1: CREATE

CONCEPT 2	PERFORMANCE OBJECTIVE
Materials, Tools, and Techniques – The student will use materials, tools, and techniques in his or her own artwork.	PO 001. Identify and experiment with materials, tools, and techniques in his or her own artwork.
CONCEPT 4	
Meanings or Purposes • The student will express ideas to communicate meanings or purposes in artwork.	PO 001. Describe and explain his or her own artwork.

VISUAL ARTS STRAND 2: RELATE

CONCEPT 4	PERFORMANCE OBJECTIVE
Meanings or Purposes – The student will interpret meanings or purposes of artwork based on contextual information.	PO 001. Interpret meanings and/or purposes of an artwork using subject matter and symbols.

COMPREHENSIVE HEALTH STRAND 5

CONCEPT	PERFORMANCE OBJECTIVE
5CH–F2. Describe characteristics needed to be a responsible friend and family member.	PO 1. Explain what it means to care and be a friend.

READING STRAND 3: COMPREHENDING INFORMATIONAL TEXT

CONCEPT 1: EXPOSITORY TEXT	PERFORMANCE OBJECTIVE
Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.	PO 2. Answer questions (e.g., who, what, where, when, why, how) about expository text, heard or read. PO 5. Locate specific information from graphic features (e.g., charts, maps, diagrams, illustrations, tables, timelines) of expository text.

4. continued...



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RELATED ADE STANDARDS:

WRITING STRAND 3: WRITING APPLICATIONS

CONCEPT 2: EXPOSITORY	PERFORMANCE OBJECTIVE
Expository writing includes non-fiction writing that describes, explains, informs, or summarizes ideas and content. The writing supports a thesis based on research, observation, and/or experience	PO 2. Participate in creating simple summaries from informational texts, graphs, tables, or maps.

LANGUAGE ARTS STRAND 3: LISTENING AND SPEAKING

STANDARD 3: LISTENING AND SPEAKING	PERFORMANCE OBJECTIVE
Students effectively listen and speak in situations that serve different purposes and involve a variety of audiences.	LS-F1. Use effective vocabulary and logical organization to relate or summarize ideas, events and other information. LS-F2. Give and follow multiple-step directions. LS-F3. Prepare and deliver information by generating topics; identifying the audience; and organizing ideas, facts or opinions for a variety of speaking purposes such as giving directions, relating personal experiences, telling a story or presenting a report.

LANGUAGE ARTS STRAND 4: VIEWING AND PRESENTING

STANDARD 4: VIEWING AND PRESENTING	PERFORMANCE OBJECTIVE
Students use a variety of visual media and resources to gather, evaluate and synthesize information and to communicate with others.	VP–F3. Access, view and respond to visual forms such as computer programs, videos, artifacts, drawings, pictures and collages. VP–F4. Interpret visual clues in cartoons, graphs, tables and charts that enhance the comprehension of text.

5. continued...



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RELATED ADE STANDARDS:

SCIENCE STRAND 1: INQUIRY PROCESS

CONCEPT 1: OBSERVATIONS, QUESTIONS, AND HYPOTHESES	PERFORMANCE OBJECTIVE
Observe, ask questions, and make predictions.	PO 1. Compare common objects using multiple senses. PO 2. Ask questions based on experiences with objects, organisms, and events in the environment. PO 3. Predict results of an investigation based on life, physical, and Earth and space sciences (e.g., animal life cycles, physical properties, Earth materials).
CONCEPT 2: SCIENTIFIC TESTING (INVESTIGATING AND MODELING)	
Participate in planning and conducting investigations, and recording data.	PO 4. Record data from guided investigations in an organized and appropriate format (e.g., lab book, log, notebook, chart paper).
CONCEPT 3: ANALYSIS AND CONCLUSIONS	
Organize and analyze data; compare to predictions.	PO 1. Organize (e.g., compare, classify, and sequence) objects, organisms, and events according to various characteristics. PO 2. Compare the results of the investigation to predictions made prior to the investigation.
CONCEPT 4: COMMUNICATION	
Communicate results of investigations	PO 1. Communicate the results of an investigation using pictures, graphs, models, and/or words. PO 2. Communicate with other groups to describe the results of an investigation.

SCIENCE STRAND 4: LIFE SCIENCE

CONCEPT 3: ORGANISMS AND ENVIRONMENTS	PERFORMANCE OBJECTIVE
Understand the relationships among various organisms and their environment.	PO 1. Identify some plants and animals that exist in the local environment.
	PO 3. Describe how plants and animals within a habitat are dependent on each other.

6. continued...



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RELATED ADE STANDARDS:

WORKPLACE SKILLS STRAND 1

STANDARD 1: Students use principles of effective oral, written and listening communication skills to make decisions and solve workplace problems.	PERFORMANCE OBJECTIVE
1WP-F2. Respond to oral presentations by formulating relevant questions and opinions and summarizing accurately.	PO 1. Recognize the content of an oral presentation. PO 2. Ask questions relating to content. PO 3. State opinions relating to content. PO 4. Develop summary of relevant content.
IWP-F3. Apply critical listening skills (e.g., listening for content, long-term contexts, emotional meaning, following directions).	PO 1. Listen effectively. PO 2. Analyze/evaluate orally received information. PO 3. Respond appropriately.
IWP–F4. Listen to an oral presentation, evaluate, and express an opinion orally.	PO 1. Recognize the content of an oral presentation. PO 2. Develop summary of relevant content.

WORKPLACE SKILLS STRAND 3

STANDARD 3: Students apply critical and creative thinking skills to make decisions and solve workplace problems.	PERFORMANCE OBJECTIVE
3WP–F5. Identify the need for data, obtaining it from existing sources such as the library, on–line databases or field research	PO 2. Apply data from existing sources, such as the library, on-line database and field research



AMENDMENT TO STANDARDS

1st Grade Inquiry in the Garden Stage 3

EDUCATIONAL TECHNOLOGY STRAND 2: COMMUNICATION AND COLLABORATION

Concept	Performance Objective
C1: Effective Communications and Digital Interactions	PO1: Communicate with others as a whole class using digital tools. PO2: Identify and demonstrate safe and appropriate behavior when using digital environments.
C3: Global Communications	PO1: Participate as a class in communication at a distance.