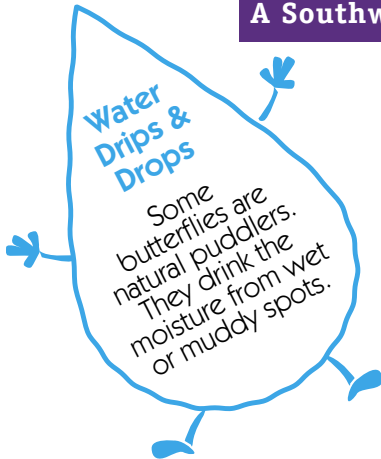


WATERDROPS

Water-Conserving Gardens Issue

A Southwest Florida Water Management District Water Resources Newsletter



Hello Readers!

This issue of *WaterDrops* is all about special kinds of gardens that use less **water**. We call them **water-conserving** gardens, or Florida-friendly gardens. These gardens look just as nice as traditional gardens except they don't require nearly as much **water**. The **water-conserving** gardens can also be created to attract a variety of butterflies and other beneficial insects.

Many of the beautiful gardens throughout our area use **water** conservation methods. You may have even been lucky enough to walk through **water-conserving** gardens that were created to attract lots and lots of butterflies.

To help you learn more about **water-conserving** gardens and butterfly gardening, we have included a feature story, articles, activities and games. When you finish this issue, we hope you will have a better understanding of Florida-friendly gardening. Don't forget to send in the activity on the back page for a free prize.

Happy Splashing!



Southwest Florida
Water Management District

WaterDrops is published by the Southwest Florida Water Management District as a part of the Splash! program.

Water Drips & Drops

Feature Story

Take It Home

Water Cycle Wanda

Water in Our World

Games & Puzzles

What's Wet on the Web!

Feature Story

THE BUTTERFLY HOUSE



As part of a science project at school, Rainer's class is developing a plan for creating a [water](#)-conserving garden. The garden will be located next to the playground behind the school. The class already decided that it wants to attract butterflies to the [water](#)-conserving garden. Now the students need to learn more about creating a habitat for butterflies.

The class decided to take a field trip to the public gardens.

Rainer and his classmates followed a tour guide along the winding path through the maze of separate garden areas. They looked all around and made notes in their journals.

The tour guide stopped frequently to tell them about each of the areas.

"All the trees, shrubs, plants and ground covers that we use for landscaping are native to the area and they don't need much [water](#)," said the guide. "Everything you see

in the landscape is well-suited to our natural conditions and climate."

Just then, the tour guide noticed Emma closely watching the hundreds of butterflies fluttering around the orange, red, yellow and purple flowers that filled part of the garden.

"Butterflies are attracted to flowers with strong colors," the guide told Emma. "They also like flowers that are very fragrant, because butterflies have a sensitive sense of smell. The butterflies also search for sun-loving plants that can serve as good hosts on which they can lay their eggs."

"Are those butterflies drinking water?" asked Katie as she pointed to a group of butterflies around the edge of a small puddle.

"Yes, there are some butterflies that cannot survive on a diet of nectar alone. There are certain minerals that these butterflies need that are found in standing water, or mud puddles. Creating a mud puddle or two in your garden is just another



way of attracting butterflies to your garden,” said the guide.

“Do you have to use a lot of chemicals to keep insects out of the gardens?” asked Rainer.

“Oh, no,” replied the guide. “We don’t use any chemicals. If we did, we wouldn’t have any butterflies. This is an environmentally friendly garden where we don’t depend on fertilizers and chemicals to create attractive landscapes.”

“Wow! That tree limb over there is covered with butterflies,” said Derrick.

“Those are monarch butterflies,” said the guide. “They are often called the ‘wanderers’ because they travel so far. Every year, hundreds of millions of them fly from the eastern part of the United States to Mexico. The trip may be over 2,000 miles. The monarchs sometimes use Florida as a resting place before flying across the Gulf of Mexico.”

“If I had to fly that far, I would need a rest too,” said Emma.

The students continued their walk through the gardens. They saw butterflies of many different colors, shapes and sizes. Butterflies seemed to be everywhere.

At the end of the walk, the guide made the following suggestion to the students:

“Remember, you have only taken the first step in learning about butterflies and environmentally friendly gardens,” said the guide. “You can continue to discover more by visiting other gardens, going to the library, using the Internet and creating your own garden.”

The students thanked the tour guide for their visit and returned to school to begin planning their garden.



Pretend that you are in Rainer’s class. Write three questions that you would like to have answered while planning an environmentally friendly garden.

Example: How much space will be available for the garden?

1. _____
2. _____
3. _____

Take It Home

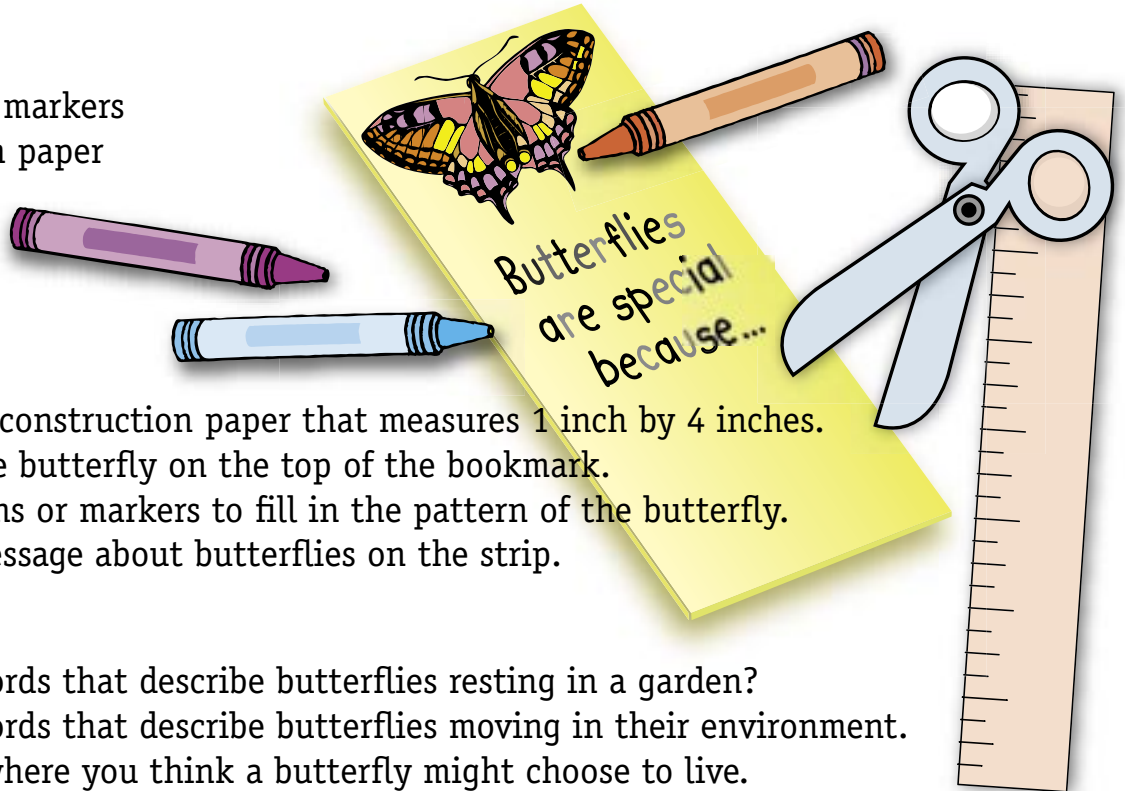
MAKE A BUTTERFLY BOOKMARK

And Create Your Own Butterfly Message!

Butterflies are special to our environment. Create a bookmark and write a personal message on it. You may want to begin your message with, "Butterflies are special because..."

Materials:

- colored crayons or markers
- heavy construction paper
- scissors
- pencil
- ruler



Directions:

1. Cut out a strip of construction paper that measures 1 inch by 4 inches.
2. Draw your favorite butterfly on the top of the bookmark.
3. Use colored crayons or markers to fill in the pattern of the butterfly.
4. Write a special message about butterflies on the strip.

Questions:

1. What are three words that describe butterflies resting in a garden?
2. What are three words that describe butterflies moving in their environment.
3. Describe a place where you think a butterfly might choose to live.



Ask Water Cycle Wanda

Conner asks: My neighbors have a butterfly garden that attracts all kinds of butterflies. They said there are many species of butterflies that live in Florida. Is this true?

Water Cycle Wanda: Your neighbors are right. In fact, there are about 100 species of butterflies found in Florida. You can find pictures of these different species of butterflies in books, field guides, magazines and on Internet Web sites.

TURNING INTO REAL BUTTERFLIES

Butterflies have an amazing life cycle. They must go through several stages before they can become real butterflies. Here is a summary of what happens to these special creatures. It's awesome!

Stage 1: The Egg



The mother butterfly lays her eggs on a *host plant*, which is the plant the baby, or caterpillar, feeds on. The eggs are very small (about as big as a pencil point), come in many shapes and colors, and hatch in a few days.

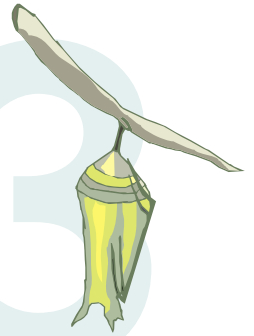
Stage 2: Hatching Into a Caterpillar

After chewing a hole in the eggshell, the caterpillar pokes out its head and climbs out. Some caterpillars eat their eggshells because they contain important minerals. It then eats the tender leaves or flowers of host plants and grows very quickly. The caterpillar will shed its skin many times before it is fully grown. Each new stage may look different from the one before.



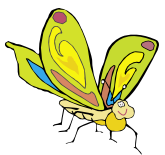
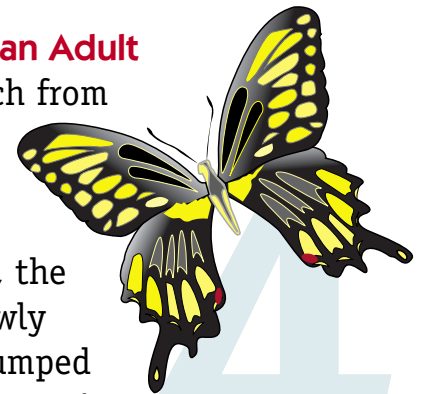
Stage 3: Forming a Chrysalis

Now the caterpillar stops feeding and searches for a place where it will shed for the last time. It spins a tiny pad of silk and sheds its skin, but instead of a larger caterpillar, a *chrysalis* (kris-ah-lis) appears! The chrysalis can come in all shapes, sizes and colors. The caterpillar is busy inside, changing itself into a beautiful butterfly!



Stage 4: Becoming an Adult

Most butterflies hatch from their chrysalis in the morning so they can have a full day's sun. While hatching, the butterfly's wings slowly unfold as blood is pumped along the veins in them. A newly hatched butterfly holds its wings apart to let them dry and become hard before making its first flight into the world.



Bugsy the Butterfly has had a very busy life. For each description, write the correct number of the stage in Bugsy's life cycle.

Stage # ___ I am holding my wings apart so they will dry and harden.

Stage # ___ I am very tiny. I hope no one eats me!

Stage # ___ I spin a tiny pad of silk and shed my skin, turning into something else!

Water in Our World

CREATING A BOUNTIFUL BUTTERFLY GARDEN

Attracting butterflies to a **water**-conserving garden is easy and fun to do. By following the suggestions for the two plans below, you can be successful. First, you will want to create a garden that uses less **water** than more traditional gardens. This kind of landscaping conserves **water** and is called Florida-friendly landscaping. Second, you will want to create an environment in which butterflies will want to live. This will be a butterfly habitat. By combining these two plans, you can have a Florida-friendly garden, which also provides a habitat for butterflies. It is nature at its best!



A **water**-conserving garden should have:

- plants that don't need a lot of **water**
- mulch to hold **water** and prevent weeds
- plants that are grouped with similar **water** needs
- plants that are native to the area

A butterfly habitat should have:

- a sunny place
- brightly colored, fragrant plants
- flat rocks for resting and sunbathing
- flowering plants with rich nectar
- some wet sand or soil for puddling



Let's see how much you learned about creating a bountiful butterfly garden. For each statement, circle True or False.

True False

Butterflies can use rocks for sunning themselves.

True False

Butterflies are only attracted to plants that need a lot of **water**.

True False

A Florida-friendly garden can save **water**.

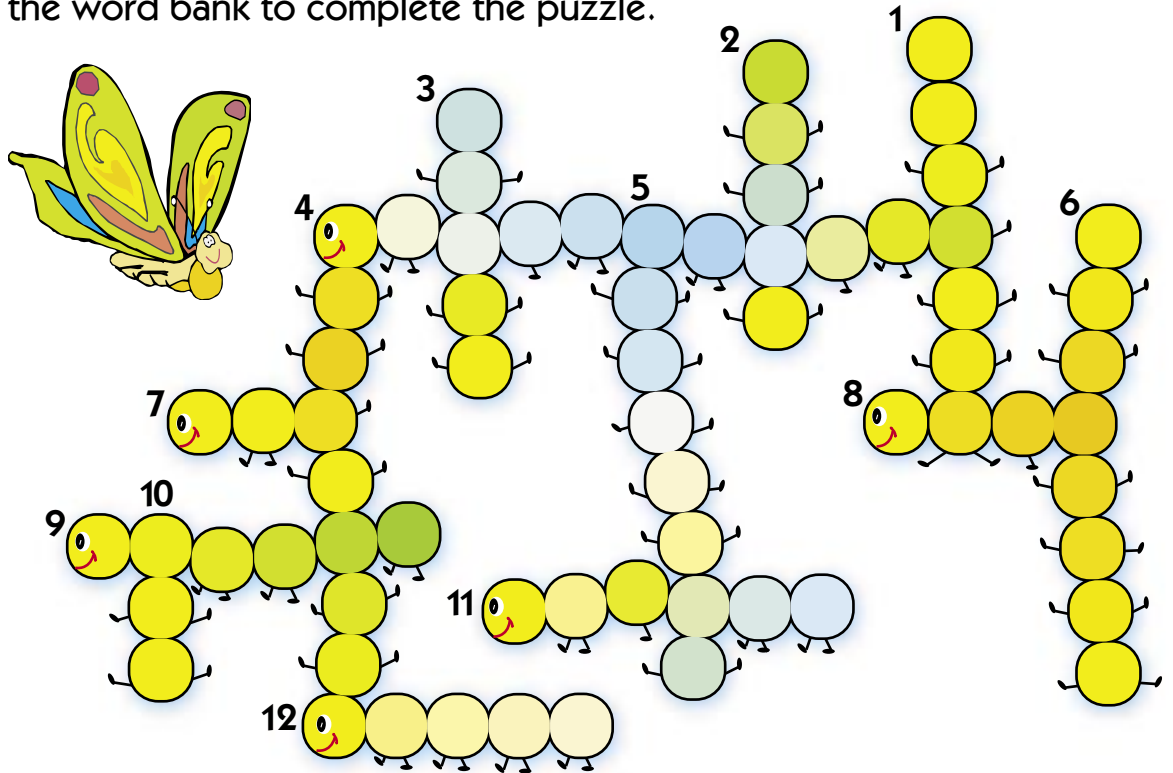


GARDENS CROSSWORD PUZZLE

Use the clues and the word bank to complete the puzzle.

WORD BANK

puddling
chrysalis
caterpillar
plants
Florida
water
nectar
cycle
conserve
egg
dry
sunny
eats



Across

4. Sometimes a _____ will eat its eggshell because it contains important minerals.
7. Plants found in a **water**-conserving garden will not be bothered by _____-weather conditions.
8. A caterpillar _____ the tender flowers and leaves of its host plant.
9. Butterflies are attracted to the _____ found in the blooms of flowers.
11. The _____ in a **water**-conserving garden should be grouped with similar **water** needs.
12. Butterflies may be seen resting on rocks in a _____ location.

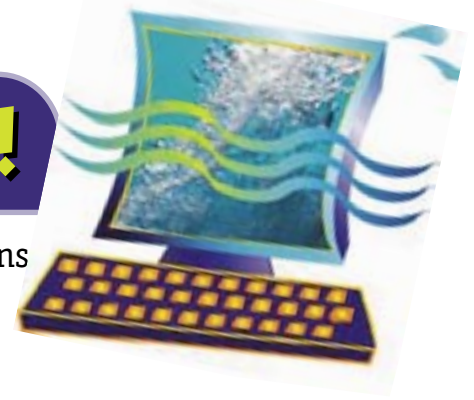
Down

1. _____-friendly landscaping uses less **water**.
2. Butterflies have an amazing life _____.
3. Some butterflies don't drink from open _____. They sip moisture from wet spots.
4. During the _____ stage, this creature doesn't feed or move about.
5. When butterflies sip moisture from wet or muddy spots, it's called _____.
6. There are many ways to _____ **water** in our gardens.
10. The _____ of a butterfly is less than a millimeter in diameter.

Answers to **WaterDrops** activities are printed in the Teacher's Guide. View the Teacher's Guide and other **WaterDrops** issues at the Information & Education section on the World Wide Web at WaterMatters.org, or request a copy by calling (352) 796-7211 or 1-800-423-1476 (FL only), ext. 4757.



What's Wet on the Web!



Are you ready to discover more about **water**-conserving gardens and butterfly gardening? Use a search engine and type in the following key words: **butterflies for kids**, **Florida gardening**, **butterfly gardening**. Also, visit the Web sites listed below.



www.si.edu/gardens/butterfly

The Smithsonian Institution, Butterfly Habitat Garden

www.monarchwatch.org

The University of Kansas Entomology Program monarch watch site

WaterMatters.org

The Southwest Florida **Water** Management District, Kids' Page



FIND THE HIDDEN WATER MESSAGE

A large graphic featuring a butterfly and wavy water lines. Overlaid on the graphic are several rows of numbers, each with a horizontal line above it, intended for a word search activity. The numbers are arranged in a grid-like pattern across the butterfly's wings and the water waves.

- | | |
|--------|--------|
| 1 = a | 14 = n |
| 2 = b | 15 = o |
| 3 = c | 16 = p |
| 4 = d | 17 = q |
| 5 = e | 18 = r |
| 6 = f | 19 = s |
| 7 = g | 20 = t |
| 8 = h | 21 = u |
| 9 = i | 22 = v |
| 10 = j | 23 = w |
| 11 = k | 24 = x |
| 12 = l | 25 = y |
| 13 = m | 26 = z |

Mail your message to us and we will send you a prize!

Name _____
 Address _____
 City _____ State _____ ZIP _____
 County _____ School _____
 Teacher _____ Grade _____

Send to: **WaterDrops — Water-Conserving Gardens**
In-School Education
Communications Department
 Southwest Florida **Water** Management District
 2379 Broad Street
 Brooksville, FL 34604-6899



If a disabled individual wishes to obtain the information contained in this document in another form, please contact the Communications Department at (352) 796-7211 or 1-800-423-1476 (FL), extension 4757; TDD only 1-800-231-6103 (FL); fax (352) 754-6883; Suncom 628-4150 or view our site on the Web at WaterMatters.org.

