



## *The Tarantula Scientist* *Classroom Activities Packet*



*The Tarantula Scientist* is the thirteenth title in Houghton Mifflin's non-fiction series 'Scientists in the Field,' the inaugural publication of which was launched with another joint creative effort by Sy Montgomery and Nic Bishop, *The Snake Scientist*. To research the spiders for *The Tarantula Scientist* the pair traveled with the tarantula scientist, Sam Marshall, to the remote tarantula capital of the world, French Guiana, where they braved 90-degree heat, 99 percent humidity, and angry wasps.

**Sy Montgomery** is an author, naturalist, newspaper columnist, documentary scriptwriter, and all round adventurer. She is also an award-winning author of Houghton children's books. Sy resides in New Hampshire with her husband and a menagerie of animal companions.

**Nic Bishop** is the award-winning photographer of *The Snake Scientist*, the winner of the 2000 IRA Children's Book Award. He lives in Michigan.

### *Praise for The Tarantula Scientist*

★ "This [book] would liven up a science curriculum no end, and it might also convince young readers to go beyond the elemental pleasures of 'Ew gross' to the more sophisticated appreciation of 'Wow, cool'."—*The Bulletin*, starred review

★ "Montgomery has a gift for scene-setting [and] deftly weaves clear explanations into the main text. Bishop's phenomenal photos show spiders mating, shedding their skin, even leaping through the air. It's enough to make Miss Muffet fall in love."—*Kirkus Reviews*, starred review

2004 • Ages 7–12 • Full-color photographs • 80 pages • \$18.00 • ISBN 0-618-14799-3

Available wherever books are sold or by calling 1-800-225-3362

The following activities were written by Leigh Lewis, an elementary school teacher in Wynne, Arkansas.

# Activities for The Tarantula Scientist

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- 1** **“Picture a Tarantula”** is an activity that builds observation skills. Students will listen to a description of a goliath birdeater tarantula and draw a picture from that description. This activity points out the importance of detail. It links science, reading/literacy, and art in a way that students love!
- 2** **“Classify, Classify, Classify”** is an activity that can be utilized in a variety of ways. Students will hear how living organisms are classified, and then they will look at the animals pictured in the book and decide how they should be classified. This is truly an adventure! Once students collect the data, they will organize the information in tables and graphs. Students can do this individually, or in groups. This activity links math, science and technology.
- 3** **“Creature Search”** is an activity that combines science, writing and reading. Students will be given a topic from *The Tarantula Scientist* to research. They will then do a written and oral report. As an added bonus students will be learning about many fascinating plants and animals that live in the jungles and rainforests that are rapidly being destroyed.
- 4** The **“Spider Crossword Puzzle”** is a fun conclusion to a great book. Students will read *The Tarantula Scientist*, and then put all of their newly acquired knowledge to use by filling in the puzzle.

# Picture a Tarantula



**GRADE LEVEL:** 4th-8th

**OBJECTIVE:** TSW listen to a description of a Goliath birdeater tarantula from *The Tarantula Scientist* and tsw create a picture from the description.

**PURPOSE:** The purpose of this activity is to build observation skills.

**MATERIALS NEEDED:**

- *The Tarantula Scientist* by Sy Montgomery
- Construction paper
- Colors, markers or other art supplies

**TIME:** 45-55 minutes

**PROCEDURE:**

- Begin reading the book *The Tarantula Scientist*, careful not to show any of the pictures. Read to page 8.
- Stop at the end of page 8, and ask students what they know about how the Goliath birdeater tarantula looks. You may want to put this information on the board.

**Some characteristics students may come up with at this point:**

- Hairy legs
- Big (“cover your whole face” or “weigh as much as five mice”)
- 2 Feet or pedipalps next to the front of its head
- 8 walking feet
- Two claws on each leg or tarsi
- 7 segments to each of the 8 legs
- Legs covered with hair
- Hair is long
- Hair is reddish brown

- Read page nine (still careful not to show any of the pictures).
- Tell students to think about the characteristics, and draw a life-sized picture of a Goliath birdeater tarantula. Tell students they can change their pictures as you read and as they learn more about tarantulas.
- Allow students to work on their pictures while you continue reading through page 15.
- Go back and show students the pictures from the beginning of the book, have them compare their pictures to the picture of the Goliath birdeater tarantula on pages 8 and 9.
- Point out some of the specific characteristics mentioned in the text; compare these to the pictures the students created and the ones in the book. Explain the importance of detail while doing scientific research, or ask the students why they think it is important. This could be a very good opportunity for a class discussion that you can direct toward good experimental procedures.

**Note:** The pictures would make a great hall display or classroom decorations! Finish reading *The Tarantula Scientist* to your students, and check out all the other great activities that you can use with this book!

# Class Information

From "Classify, Classify, Classify"



	<b>VERTEBRATES</b>	<b>INVERTEBRATES</b>	<b>ARACHNIDS</b>	<b>THERAPHOSIDAE</b>
<b>Group 1</b>	_____ 30	_____ 105	_____ 100	_____ 100
<b>Group 2</b>	_____ 33	_____ 104	_____ 101	_____ 100
<b>Group 3</b>	_____ 36	_____ 107	_____ 102	_____ 93

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## LET'S CLASSIFY!!

1. What is an invertebrate?

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2. What is a vertebrate?

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3. What is the largest category used to sort living things?

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*Look in The Tarantula Scientist...Skip pages 23 & 47*

4. How many vertebrates are there in the book?

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5. How many invertebrates are there in the book?

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6. How many arachnids are there in the book?

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7. How many Theraphosidae are there in the book?

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8. Make a chart to organize your data.

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9. Make a graph that represents your data.

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# Creature Search

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**OBJECTIVE:** This is an activity that combines science, writing and reading. Students will be given a topic from *The Tarantula Scientist* to research. They will then do a written and oral report. As an added bonus students will be learning about many fascinating plants and animals that live in the jungles and rainforests that are rapidly being destroyed.

# Spider Crossword Puzzle

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**GRADE LEVEL:** 4th-8th

**OBJECTIVE:** TSW complete the crossword puzzle after reading *The Tarantula Scientist*.

**PURPOSE:** The purpose of this activity is to build vocabulary.

**MATERIALS NEEDED:**

- *The Tarantula Scientist* by Sy Montgomery
- Copies of the Spiders! Crossword puzzle and clues

**TIME:** 30 minutes (to work the puzzle...longer to read book cover to cover)

**PROCEDURE:**

- Read the book *The Tarantula Scientist*.
- Let the students work the puzzle.

This can be done in cooperative groups.  
This could also be used as an internet scavenger hunt.

# Spider Crossword Puzzle



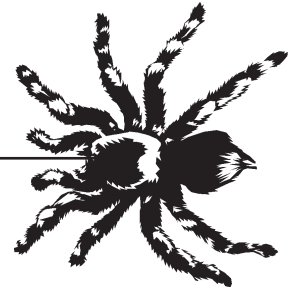
## DOWN:

- 1 THE FOOD-HANDLING LEGS AT THE FRONT OF THE SPIDER'S HEAD
- 3 BREATHING TUBES THAT LEAD FROM THE OUTSIDE OF THE SPIDER DEEP INTO THE BODY. MOST MODERN SPIDERS HAVE THEM, BUT NOT TARANTULAS
- 5 THE NOZZLELIKE DISPENSERS OF SPIDER SILK ON THE BACK OF THE ABDOMEN
- 6 THE SPIDER FAMILY TO WHICH TARANTULAS BELONG
- 7 SPIDERS AND THEIR EIGHT LEGGED RELATIVES
- 9 THE BULBLIKE STRUCTURE ON THE LAST JOINT OF THE PEDIPALPS IN MALE SPIDERS, WHICH HE USES TO TRANSFER HIS SPERM TO THE FEMALE SPIDER
- 12 THE OLD-FASHIONED BREATHING ORGANS THAT TARANTULAS HAVE
- 13 A PERSON WHO APPRECIATES ARACHNIDS
- 14 THE SENSE ORGANS ON SPIDERS' LEGS THAT PERMIT THEM TO TELL, FROM VERY FAINT VIBRATIONS, THE SIZE OF AN APPROACHING CRITTER, BE IT A CRICKET IN THE LEAF LITTER OR A PERSON ENTERING THE DOOR OF THE LABORATORY ACROSS THE ROOM
- 19 THE STRONG, LIGHT, WATERPROOF MATERIAL THAT COMPOSES THE EXTERNAL SKELETONS OF INVERTEBRATES FROM SHRIMP TO SPIDERS—AND EVEN THE HAIRS ON TARANTULAS
- 21 THE SILKEN PURSE THE MOTHER SPIDER WEAVES TO HOLD HER EGGS. SOMETIMES SHE CARRIES THIS AROUND IN HER MOUTH

## ACROSS:

- 2 A PERSON WHO UNREASONABLY FEARS ARACHNIDS, ESPECIALLY SPIDERS
- 4 THE WAY SPIDERS USE SILK TO RIDE THE WIND TO A NEW LOCATION. BABY SPIDERS OFTEN USE THIS METHOD TO LEAVE THE NEST
- 8 ANOTHER NAME FOR TROPICAL TARANTULAS
- 10 THE MORE THAN 90 PERCENT OF ANIMALS ON EARTH WHO DON'T HAVE INTERNAL SKELETONS
- 11 THE TWO CLAWS AT THE END OF SPIDERS' WALKING FEET
- 15 THE ACT OF MAKING SOUND BY RUBBING ONE BODY PART AGAINST ANOTHER
- 16 THE SPIDER'S HEAD, CONTAINING (ALONG OTHER THINGS) THE SUCKING STOMACH
- 17 SPIDER BLOOD, WHICH IS NEVER RED, BUT MIGHT BE CLEAR OR LIGHT BLUE
- 18 THE EXTERNAL SKELETON OF INVERTEBRATES
- 20 BABY SPIDERS, OFTEN QUITE DIFFERENT IN COLOR FROM THE ADULTS
- 22 A SCIENTIST WHO STUDIES ARACHNIDS
- 23 THE SPIDER'S TWO-PART JAW, THE LAST SEGMENT OF WHICH ENDS IN A FANG

# Spider Crossword Puzzle



**SOLUTION:**

