



CURIOSITY ZONE
"EVER WONDER?"



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Ever wonder . . . why fireflies flash? and other late summer wonders

C-Zone News

IT'S NOT TOO LATE!

Register now for **fall CLASSES**
Toddler – 6th Gr.

Bugs, bats, dinosaurs, flowers, frogs – we've got it all in our great new fall session!

Sign up now on our website to take a **FREE CLASS!**

THANKS!

For the **HUGE** turnout at our **BIG BUG SHOW** and an awesome summer of camps and classes!

NEW @ THE C-ZONE

Great bug toys, music and rhythm toys for tots, and really cool book covers, pens and pencils. **PLUS:** 3 toads, 2 frogs and lots of live bugs to look at!

explore. School and fall are right around the corner; there is so much change in the air! Take the time now to enjoy these last few weeks of summer by looking at all of the late summer wonders appearing in your own backyard!



Discover.

Catch a Firefly. Fireflies flash from mid-summer to early autumn; their lights can be seen from dusk to about midnight. Fireflies prefer tall grass to freshly mown grass, so look for them on the edge of the woods or in meadows. To catch them, flick a flashlight on and off in about the same rhythm as the bugs are flashing; some should eventually fly toward you. As they do, gently wave a small mesh net through the air (you can make one from a wire coat hanger and some netting from the fabric store) or try to catch them with your hands. Keep your lightening bugs in a glass jar with a breathable lid. Putting the jar in warm water will make your fireflies glow even brighter!



Pot Bulbs for Indoor Blooms, or Plant a Fall Garden. Though the crisp fall air is fast approaching, it's a great time to plant things! Tulips, narcissus and hyacinth are all great bulbs to plant for winter bloom. Plant your bulb in a pot, water thoroughly, then place in a cold spot that hovers between 35 and 50 degrees (like your refrigerator). Leave tulip bulbs in the cold for 12-14 weeks; narcissus bulbs for 10-12 weeks and hyacinth bulbs for 6-8 weeks. Next, move your pot to a warmer area that is 45-60 degrees – like your basement -- and water regularly. Keep out of direct sunlight until green shoots appear. When you can see green, move the pot into direct sunlight (but preferably still in a cool spot) and wait for your plant to bloom! You can also start a fall garden outside as late as the first week of September by planting broccoli, lettuce, spinach and radish seedlings. You might even get to pick fresh vegetables in the snow!

Look for Flying Ants and Monarch Butterflies. In late summer, both queen ants and male ants grow wings. If you look carefully, you can find entire swarms of flying ants! Monarch butterflies are also on the move in late summer. Like birds, they fly south before winter, many flying from Canada the whole way to Florida or Mexico. Some fly as far as 2000 miles!



Collect Wildflower Seeds. Birds, bees and butterflies often prefer native plants to the ones you can buy at the store. So start collecting seeds now for next year's garden! Over the next several weeks, as the fall wildflowers begin to bloom, mark the plants you'd like to have growing in your garden by using a small, marked stake. (You may also want to make a map of where the plants are!) Later in the fall, when the blooms are gone and the plants have gone to seed, return and harvest the seeds for your garden – but be sure to take only what you need, and leave the rest for nature! Many wildflower seeds need to rest in the cold before they can grow, so be sure to plant them this fall, or store them in plastic bags in the refrigerator until you can plant them in the spring.

Word of the Month: Firefly. Use it in a sentence at least once a day!

Amazing People: The Filming of March of the Penguins

The documentary "March of the Penguins" (rated G) has only been in theaters for a few weeks, but it is already on its way to being the most successful documentary film ever made! The movie's director, Luc Jacquet, and his film crew moved to the freezing, bitterly cold continent of Antarctica for over 13 months to capture the beauty of the emperor penguins' annual migration. Mr. Jacquet not only makes movies, but he is also a biologist. He said it was easy to get close to the penguins because most of them had not seen humans before, and they were not afraid. Finding and filming the penguins was also easy because the penguins are really predictable, taking the same paths to the same places year after year.



Note to parents: Several reviewers have said that, despite its G rating, this film may not be appropriate for kids under 6 because of difficult themes centering on danger and death.

Learn.

Fireflies, also known as lightning bugs, are neither flies nor bugs! They are actually beetles that use their flashing lights to attract other beetles. If you look carefully, you can see variations in their flashing colors, ranging from yellow to green, and in the timing of their signals. These variations allow specific species to attract others of the same species.



Fireflies glow because of a chemical reaction going on in their abdomen. Fireflies contain a substance called luciferin, which reacts with oxygen to produce light and carbon dioxide. (That's why your firefly jar needs to let in air!) The reaction also involves a chemical called Adenosine Triphosphate (ATP). A lightning bug can control the rhythm of its flashes by controlling the flow of oxygen through its abdomen, and therefore the rate of the chemical reaction.



Though male ants grow wings in the fall, they won't be around long to enjoy using them! These male ants aren't allowed to return to the ant colony after they take flight, and eventually become food for other critters. Only the queen returns to the colony and lives to see another spring!

Birds and butterflies aren't the only critters that migrate. For example, in Antarctica, emperor penguins waddle more than 70 miles to their winter grounds. Also, some species of salmon migrate by swimming long distances upstream – as much as 10 miles a day!



Secret Science Agents: Your Mission for Late summer

Your mission this month is to spot at least one of each of the following things:

- ◆ Lightning bug
- ◆ Flying ant
- ◆ Monarch butterfly
- ◆ Wildflower
- ◆ Seed with a parachute top
- ◆ Seed with a helicopter top
- ◆ Seed with a burr top

Good luck!



Wildflower seeds have a funny way of getting around in the fall! To survive, most have to find their way to an unoccupied spot of soil. To do that, seeds have a variety of tricks they use.

Some have burrs (like cockleburs) that allow them to piggyback onto animals that then carry them to new places. Others (like maples) have "helicopter wings" that cause them to float and spin as they fall to the ground. Still others (like dandelions) have "parachutes" that allow them to fly along with a breeze. Can you tell which is which in these pictures?



Parents and Teachers: Register to receive the Wonder Wire™ by email each month at www.curiosityzone.com/wonderwire.html

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