

Reading the Weather, Reading the World
Grade 4: Nonfiction, Unit 2

Readers, today you will read two texts to learn more about some extreme insects. Read text 1 and answer questions 1, 2, and 3 on a separate piece of paper. Then read text 2 and answer question 4 on the same sheet as your other answers.

<p>1. Summarize text 1, “Extreme Insects!”</p> <p>When summarizing, remember to:</p> <ul style="list-style-type: none"> • write about the main idea • include carefully selected details that link to the main idea • use the text structure in your response • keep your summary brief • write about the ideas in the text, not your own opinions. <p style="text-align: center;"><i>Main Idea(s) and Supporting Details/Summary</i></p>	<p>2. Why is the section “Unfair Reputation” important to the text?</p> <p>When writing about how part(s) of a text fit with others, remember to:</p> <ul style="list-style-type: none"> • explain why the part is important • explain how the part fits with the rest of the text. <p style="text-align: center;"><i>Analyzing Parts of a Text in Relation to the Whole</i></p>
<p>3. In lines 13–15 (One man was mowing a lawn and accidentally disturbed a nest of killer bees. 800,000 bees swarmed out! The man died of a heart attack after bees covered his entire face and neck.) from “Extreme Insects!” the author uses a craft technique.</p> <p>Explain the craft technique the author used and why the author may have used this technique.</p> <p>When analyzing author’s craft, remember to:</p> <ul style="list-style-type: none"> • identify craft technique(s) the author used • write about the writerly goal(s) the author seems to have been aiming toward • elaborate on this, writing at least a few sentences. <p style="text-align: center;"><i>Analyzing Author’s Craft</i></p>	<p>4. Both “Extreme Insects!” and “Amazing Fire Ant Rafts” teach about an important subtopic—fire ants building rafts. Explain briefly what these texts teach about fire ant rafts.</p> <p>When synthesizing, remember to:</p> <ul style="list-style-type: none"> • focus on the subtopic • include information from each text that fits with this subtopic • organize information into categories (if possible). <p style="text-align: center;"><i>Cross Text(s) Synthesis</i></p>

Extreme Insects! Killer Bees and Fire Ants

Killer bees and fire ants have both earned reputations for being insects that swarm and sting in ways that harm people. People fear both kinds of insects. Although they are similar in these ways, they are also different in some important ways. 1

Attack!

Fire ants and killer bees are similar because they both defend their nests in aggressive ways. If someone steps on a fire ant mound, a swarm of ants will charge toward that person, stinging the person many times. Getting stung by a fire ant can feel like being burned. 5

Killer bees are also called the “Africanized honey bee.” These bees are called killer bees because of how aggressive they are when defending their nest. When someone bothers the nest of killer bees, thousands of bees can zoom out to attack. 10

One man was mowing a lawn and accidentally disturbed a nest of killer bees. 800,000 bees swarmed out! The man died of a heart attack after bees covered his entire face and neck. Killer bees have been known to chase people for a quarter of a mile. Even after a person jumps into water to get away from the bees, killer bees continue attacking. 15

Away from Home

These insects are also similar because both of them now live in places that are far from their original homes. Most fire ants originally lived in South America. That was their home. But somehow they traveled to many different parts of the world, including parts of the southern United States and California. Some bees that were originally from Africa got together with local bees from Brazil and made killer bee colonies. Now these bees, like fire ants, are spreading to lots of places. They now live in some parts of the southern United States. 20 25

Not All Stinging Insects Are the Same

Although fire ants and killer bees are similar in some ways, they are different in other ways. For one thing, one fire ant can sting over and over.

Killer bees, however, can only sting once. After stinging an enemy, the killer bee's stinger becomes stuck inside the enemy and when the bee tries to pull away, it dies.

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Fire ants and killer bees are also different because of how they deal with the environment. If the weather becomes too cold or too hot, cold-blooded fire ants can dig deep down into the soil. Fire ants have been known to survive in temperatures as cold as 10 degrees Fahrenheit. Fire ants can also survive floods by building rafts out of their own bodies. Each ant joins with other ants and they form a kind of boat so they can sail safely. Some of these rafts can include more than 100,000 ants! The ants put their queen right in the center of the raft where she'll be safe. They put their babies at the bottom because they are more buoyant, which means they can float better.

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Killer bees, on the other hand, cannot survive extreme weather conditions. They fly great distances to find warmer weather. If there is a drought, instead of staying in the area and finding a way to adapt to the drought, they leave and look for new homes.

Unfair Reputation

Even though fire ants and killer bees (or Africanized honey bees) have a bad reputation, the chances of a person being killed by either of these insects are small. Only about one percent of people experience a deadly allergic reaction to stings by fire ants or killer bees. And when these insects sting, they are only defending themselves. Dr. May Berenbaum, a professor who studies killer bees, says that they "sting only defensively—they don't try to kill." Despite the scary names of these insects, people are not apt to be killed by killer bees or fire ants. Fire ants and killer bees may be extreme insects but they are not out to get people.

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Amazing Fire Ant Rafts

Although fire ants are famous especially for their painful stings, they should be equally famous for their amazing building skills. They can build complex nests with lots of tunnels. But these ants don't just build tunnels and nests. Fire ants also build rafts, or boats, using their bodies!

Many fire ants live in places that flood often, and when that happens, the tunnels in their underground nests may fill with water and the ants may be forced to leave. This is especially true for fire ants that live in places such as the rainforests of Brazil.

When floodwaters arrive, fire ants leave their underground home, gather up their colony, and form a raft out of their bodies to float in the water. They do this by hooking their legs and mouths together. Their claws and the sticky pads on their legs help them hold together. The ants leave a little bit of space between their bodies, which creates air bubbles that help the raft float. This creates a living ant raft!



"Fire ants in water" von Junglectat—Eigenes Wer

A fire-ant raft is made of thousands of ants. There are almost 200 ant bodies per square inch! Many of these rafts are the size of small dinner plates.

Ant colonies are very organized. Recently, during a flood in South Carolina, observers noticed that thousands of ants made a raft in about 100 seconds. Fire ant rafts have been known to float for weeks or even months. When the ants start getting hungry, they'll eat their only food source on the raft—some of their babies. If any ants die, they are immediately removed from the raft to keep the raft strong. 20

Fire ant rafts will rearrange themselves if something threatens them—like a falling stick. They are not safe from all danger, however. Hungry fish can nibble the ants off one by one. If they eat enough ants, the fish can weaken the raft and the raft can collapse. 25

Scientists think that by studying fire ant rafts they will learn more about how to improve the way humans build. 30