

The Life and Times of Somewhere Creek

While Somewhere Creek is not a real creek, it represents a typical urban freshwater creek, stream, or river.

Cecelia and Tómas grew up together in Someplace City. They've been friends since they were very young. Back then, their favorite thing to do was to splash around in puddles at the park in their neighborhood. Over the years their shared love of water has helped hold their friendship together. Cecelia loves math and wants to study engineering and work for the city water department when she grows up. Tómas can't understand what Cecelia finds so interesting about math, but he loves the water, too. Ever since his family went rafting on Big River a few years ago, he's wanted to learn to fish and kayak. He'd like to be a river guide when he grows up.

In school, Cecelia and Tómas are studying their local watershed. Their assignment is to research water quality conditions in a body of water—a lake, stream, river, or reservoir—in their watershed. They picked Somewhere Creek, a stream that flows through their city neighborhood. Here is what they have learned so far.

Somewhere Creek begins as a fast-moving stream high in the mountains, many miles from Someplace City. A variety of fish and aquatic insects live in and around the water, and deep pools provide them shelter. Trees and shrubs along the bank also provide shade and shelter, and their roots hold the soil to the creek's banks. Shallow rocky areas of the creek (called riffles) stir up the water, and there are many small waterfalls. When Cecelia's parents took them to visit the upper reaches of Somewhere Creek, they saw many families playing and picnicking near the stream. Cecelia noticed a couple of artists who had set up their easels and were painting the beautiful scene. Tómas persuaded one of the people fly fishing in the stream to give him a casting lesson.

As the creek descends into the foothills, it naturally slows and begins to meander. Shrubs and thick grasses line the stream banks, and the water flows across the rocky bottom and through deep pools where the water is calmer and slower.

Further downstream, Somewhere Creek flows past farms and golf courses, picking up runoff that often contains fertilizers and other nutrients. Tómas has a cousin, Merced, whose family owns a farm near Tiny Town, an aptly named community along the banks of Somewhere Creek. A few times when he's visited his cousin during the summer, Tómas has noticed that the water in the local fishing hole (which is actually a small reservoir, created by a dam, that holds water used for irrigation) has turned brownish-green and has mats of algae floating near the water's edge.

Below the dam, Somewhere Creek picks up speed again, passing through an area where new homes are being built. Some of Merced's neighbors have sold parcels of their farmland to people who want to live in the country. Merced took Tómas here on their bicycles one day after a heavy rain. Tómas noticed that the stream was brown with soil that had washed into the creek from the construction sites. Merced told him that rocks at the bottom of the stream were all covered by fine silt now.



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Fifty miles from its beginnings, Somewhere Creek flows into a suburban area. Tomás and Cecelia took the bus there one Saturday. They saw people walking in the park along the creek's banks with their dogs and children. Some of the children were playing in the water, turning over rocks to look for aquatic insects, but they didn't seem to be having much luck. Cecelia's grandfather told her that fishing in that part of the creek was once fantastic but that it had become mediocre at best after all the roads, parking lots, and lawns were put in. He told Cecelia that the water had always turned a little murky and green in the summer and fall when water levels dropped, but now he refused to fish there because he'd noticed an oily smell and sheen on the surface of the creek during low water.

Further downstream, where Somewhere Creek flows into the Someplace City limits, Tomás and Cecelia learned that the creek used to overflow into a flat area, especially during the spring. About thirty years ago, the county built a channel lined with concrete to contain the stream and prevent flooding. Because they were now protected against floods, people built houses in the flat area, and Somewhere Creek flows swiftly by during high water. Over the years, some silt has collected on the bottom of the channel, but most of it gets washed away during periods of high, fast water.

As the creek enters the neighborhood where Cecelia and Tomás live, its channel becomes a tunnel under the streets. Most people in this neighborhood of Someplace City don't even know the creek exists.

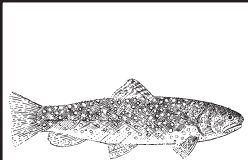

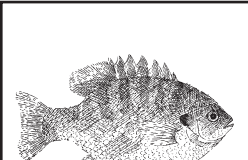
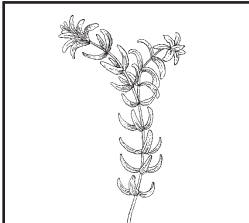
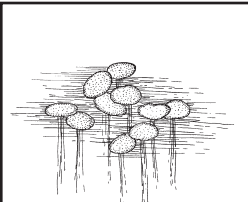
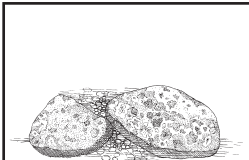

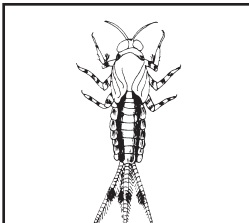
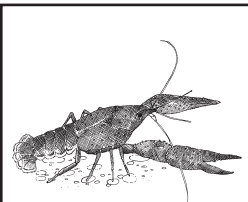
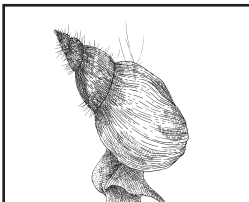
Once it emerges from the tunnel, Somewhere Creek flows through downtown Someplace City. About 20 years ago, the city parks department planted trees and native plants along the stream bank. Now, the trees provide plenty of shade for the slow-moving creek. When Cecelia and Tomás visited this section of the creek, they noticed that some of the trees had fallen into the water and were left there to provide shelter for fish. The water here seemed cleaner than it did in certain places upstream.

Downstream of the downtown park, Somewhere Creek flows past the city wastewater treatment plant, several manufacturing plants, and a fuel storage facility. Tomás and Cecelia talked with a local biologist who told them that the water in that part of the river was polluted with chemicals that made the water more acidic. No one knew exactly where the chemicals were coming from, but the city environmental protection department was conducting an investigation.

After flowing through Someplace City, Somewhere Creek continues its journey toward Big River, which eventually empties into the ocean.



Stream Inhabitants

 <p>brook trout</p>	<p><i>Cutthroat trout, brook trout</i></p> <p>Need very clean water with high levels of dissolved oxygen.</p> <p>Need colder water than many other fish.</p>	 <p>small-mouth bass</p>	<p><i>Rainbow trout, brown trout, small-mouth bass, suckers, whitefish</i></p> <p>Need relatively clean water.</p> <p>Can tolerate somewhat warmer water temperatures than cutthroat and brook trout.</p>
 <p>sunfish</p>	<p><i>Carp, chub, shiners, sunfish</i></p> <p>Pollution tolerant.</p> <p>Prefer warmer, slower-moving water than other types of fish.</p>	 <p>elodea</p>	<p><i>Eelgrass, elodea, and other types of rooted aquatic plants</i></p> <p>Unlikely to grow in fast-moving water.</p>
 <p>duckweed</p>	<p><i>Duckweed, water lily, and other types of floating aquatic vegetation</i></p> <p>Need slow-moving, sometimes even stagnant, water.</p>	 <p>algae on rocks</p>	<p><i>Spots of algae growing on rocks</i></p> <p>Found in many water conditions from cold to warm, including fast-moving water.</p>
 <p>floating algae</p>	<p><i>Large beds and floating mats of algae</i></p> <p>Generally require slow-moving or stagnant water.</p> <p>Encouraged by high nutrient levels in the water.</p>	 <p>mayfly nymph</p>	<p><i>Mayfly, caddisfly, and stonefly nymphs; gilled snails; adult riffle beetles; hellgramites (dobsonfly larvae)</i></p> <p>Pollution sensitive.</p> <p>Need good to excellent water quality.</p>
 <p>crayfish</p>	<p><i>Crayfish, riffle beetle and crane fly larvae, dragonfly and damselfly nymphs, clams and mussels</i></p> <p>Somewhat pollution tolerant.</p> <p>Need fair water quality to survive.</p>	 <p>lunged snail</p>	<p><i>Midge fly and blackfly larvae, leeches, aquatic worms, lunged snails</i></p> <p>Pollution tolerant.</p> <p>Can survive in water of poor quality.</p>

