

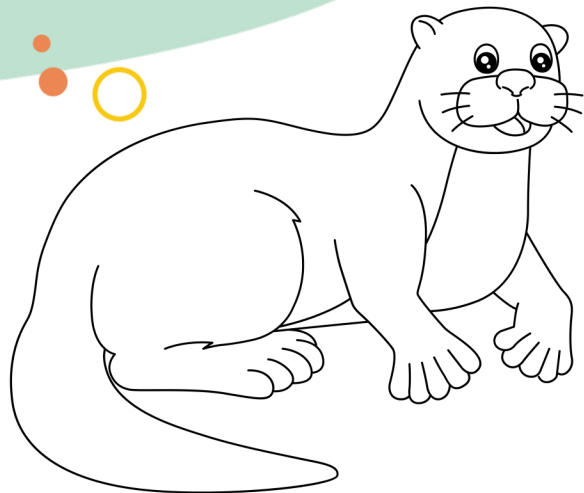
Watershed Wonders

The Big Sioux River is 419 miles long, stretching from the northeast corner of South Dakota all the way south to North Sioux City. A river's watershed includes not only the river but all the communities whose excess water sheds to the river as well. This means that anyone living within the watershed can impact the health of the river. Complete the activities below to learn more about rivers!



It's Up to Us!

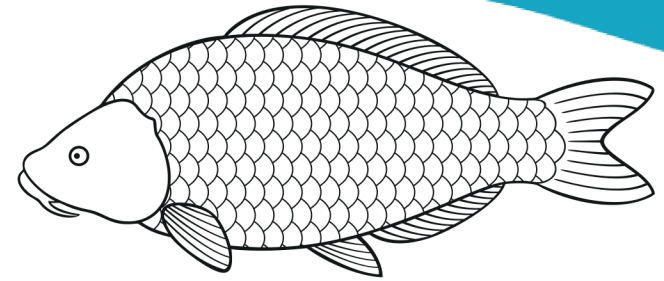
By cleaning up the river, you can help reduce pollution in our waterways. All wildlife needs a safe, healthy, and clean home, just like us.



Fill in the Blank

Pollution Animals Big Sioux Water

The _____ River flows into the Missouri River. Currently, the river contains a lot of _____. Many _____, including otters and fish, call this _____ home.



Word Search

W	W	T	D	K	C	C	C	E	S
E	A	S	C	T	L	F	H	O	M
T	T	W	K	M	E	E	I	Y	A
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T	R	M	Y	E	N	E	K	D	M
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Canoe Clean Up Fish Kayak
Otter Stream Swim Watershed

Did You Know?

The Big Sioux River watershed is the size of New Jersey!

The World of Aquatic Insects

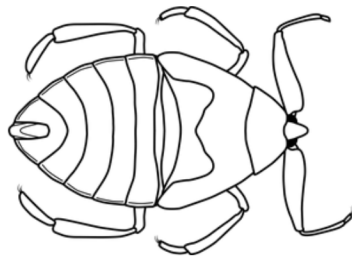
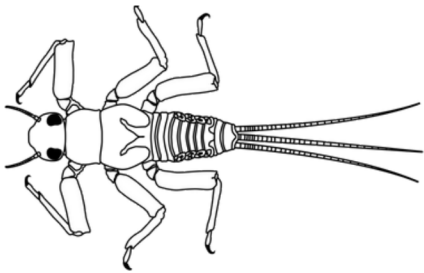
What Is an Aquatic Macroinvertebrate?

Aquatic means water, **macro** means big, and **invertebrate** means without a backbone. All put together, an aquatic macroinvertebrate is a water bug that is big enough to see with our naked eye.

Some macroinvertebrates spend their entire lives in the water. Many others, however, only live in the water as eggs, larva, or nymphs, and emerge onto land as adults. For example, dragonflies can live as nymphs in the water for up to five years, but only live on land as adults for six months.

Where Do They Live?

Aquatic macroinvertebrates live in rivers, streams, wetlands, ponds, and lakes. Many of these creatures have flattened bodies and sharp claws or suction cups that allow them to grasp onto large gravel and small boulders in rocky streams.



Why Are They Important?

Different species of aquatic macroinvertebrates tolerate varying levels of stream conditions and pollution. They are very sensitive to nutrients and sediments in the water, making them excellent tools for assessing water quality. Waterbodies with a wide variety of pollution-intolerant species (caddisflies, dragonflies, freshwater clams) are generally healthy, while those with only pollutant-tolerant species (blackflies, leeches, aquatic worms, lunged snails) are less healthy.

What Do They Eat?

Aquatic insects can be split into four categories based on what they eat:

- **Shredders:** Eat leaves and decaying material
- **Scrapers:** Eat algae that covers rocks and logs
- **Collectors:** Feed on small pieces of organic material in the stream bottom
- **Predators:** Eat other aquatic insects, tadpoles, and small fish

