

# River Patterns

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<sup>1</sup> What is wet and always running? It isn't soggy mechanical sneakers; it's a river! The rivers of the world have one thing in common- they are always flowing. However, did you know that there are different types of river channel patterns and river **drainage patterns**? Drainage patterns are patterns rivers form when their water drains into larger bodies of water, like oceans. Let's take a "plunge" into the world of rivers.

<sup>2</sup> The most uncommon formation or pattern is a straight river. Most rivers do not have straight river banks or sides. When banks happen to be straight, the water in the deepest part of the river moves from side to side along the river bottom. Sediment is deposited on both sides, and eventually, this forms bars of sediments. As a result, shallow areas and deep pools begin to develop in the river. The most common types of rivers are **meandering**, **oxbow**, and **braided**.

<sup>3</sup> Meandering rivers usually flow on the floors of valleys. A meander is a sharp loop or bend in a stream's course. Imagine a snake gliding along a sandy path. If you were to view a meandering river from the sky, it would look like a wet snake gliding along the valley floor. As the water flows through curves on the deepest part of the channel, the water flowing on the outside of the curve moves faster than the water on the inside of the curve. The difference between the speeds on the inside and outside curves causes sediment to form. The sediment builds up the inside bank making it move toward the river. The water gradually erodes or wears away the outside bank.

<sup>4</sup> Meandering rivers also produce oxbow lakes. Over time, the curves in a meandering river may become curvier. The inside curves slowly wear away until the river branches off into a new curve. Now your slithering snake (river) has a horseshoe (oxbow lake) lying next to it.

<sup>5</sup> Braided rivers are found on **floodplains**. A floodplain is an area next to a river where water spreads to during a flood. As the waters recede or move back into the river, bars of sediment are deposited. These bars of sediment look like small islands. As the streams flow around these bars, they cross each other. The final result is a river that looks "braided" or like a huge leaf-shaped tennis racket.

<sup>6</sup> In addition to different types of rivers, there are different types of river drainage patterns. Some rivers flow over bedrock or land that lies in horizontal layers. When this happens, the rivers have a **dendritic** drainage pattern. This means that the water makes its own path in the bedrock. The result is a pattern that looks like branches of a tree. Rivers with **radial** drainage patterns are usually found at the top of volcanoes. The rivers begin at the center at the top of the volcano. As the water flows, they radiate or spread out like the spokes of a bicycle wheel.

<sup>7</sup> **Trellis** drainage patterns happen when rivers flow over land that has soft and hard rocks. Picture in your mind a brick wall with some cracks that appear in the bricks. The flowing water erodes the softer rock and flows around the harder rock. Some rivers flow over circular rocks like cooled magma. These rivers form **annular** drainage patterns. The rivers drain in a pattern of concentric circles or circles that share the same center. This pattern is similar to the rings on a bull's eye. As you can see, rivers flow and drain in their unique ways.

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<p>1. A meander is _____.</p> <p><input type="radio"/> A A sharp loop or bend in a stream</p> <p><input type="radio"/> B A sharp loop or bend in a pool</p> <p><input type="radio"/> C Loose curve in a pool</p> <p><input type="radio"/> D None of the above</p>	<p>2. The most common type of river is a straight river.</p> <p><input type="radio"/> A False</p> <p><input type="radio"/> B True</p>
<p>3. What are river drainage patterns?</p> <p>_____</p> <p>_____</p>	<p>4. Braided rivers are found _____.</p> <p><input type="radio"/> A On floodplains</p> <p><input type="radio"/> B On airplanes</p> <p><input type="radio"/> C On grasslands</p> <p><input type="radio"/> D On valley floors</p>
<p>5. How are oxbow rivers formed?</p> <p>_____</p> <p>_____</p>	<p>6. Rivers with dendritic drainage patterns drain in concentric circles.</p> <p><input type="radio"/> A False</p> <p><input type="radio"/> B True</p>
<p>7. Rivers with radial drainage patterns usually begin _____.</p> <p><input type="radio"/> A In floodplains</p> <p><input type="radio"/> B At the bottom of volcanoes</p> <p><input type="radio"/> C On valley floors</p> <p><input type="radio"/> D At the top of volcanoes</p>	<p>8. What do meandering rivers look like from the sky?</p> <p>_____</p> <p>_____</p>

