

EDISTO RIVER ROUNDUP

Just down the bank from the artesian well is the Edisto River. Much of the water in this area that doesn't get trapped in the confined aquifer makes its way to the river. Unlike the artesian well, the water in the river isn't safe to drink, but many plants and animals rely on it to survive. Can you find these common species near the river?



Clean water is essential for life to thrive. We can all do our part to help keep the river clean.

Can you think of 3 ways to protect the river?

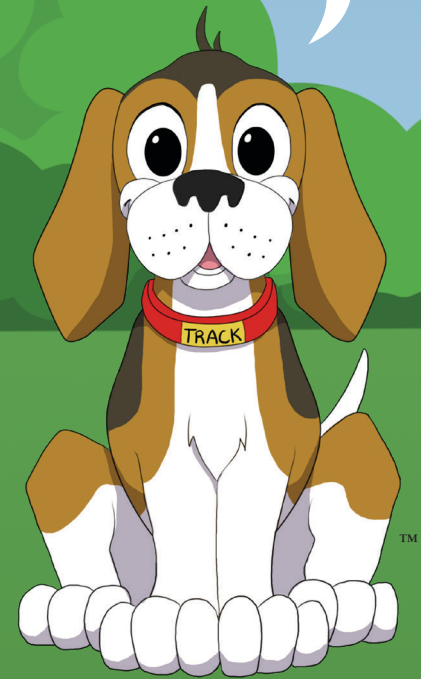
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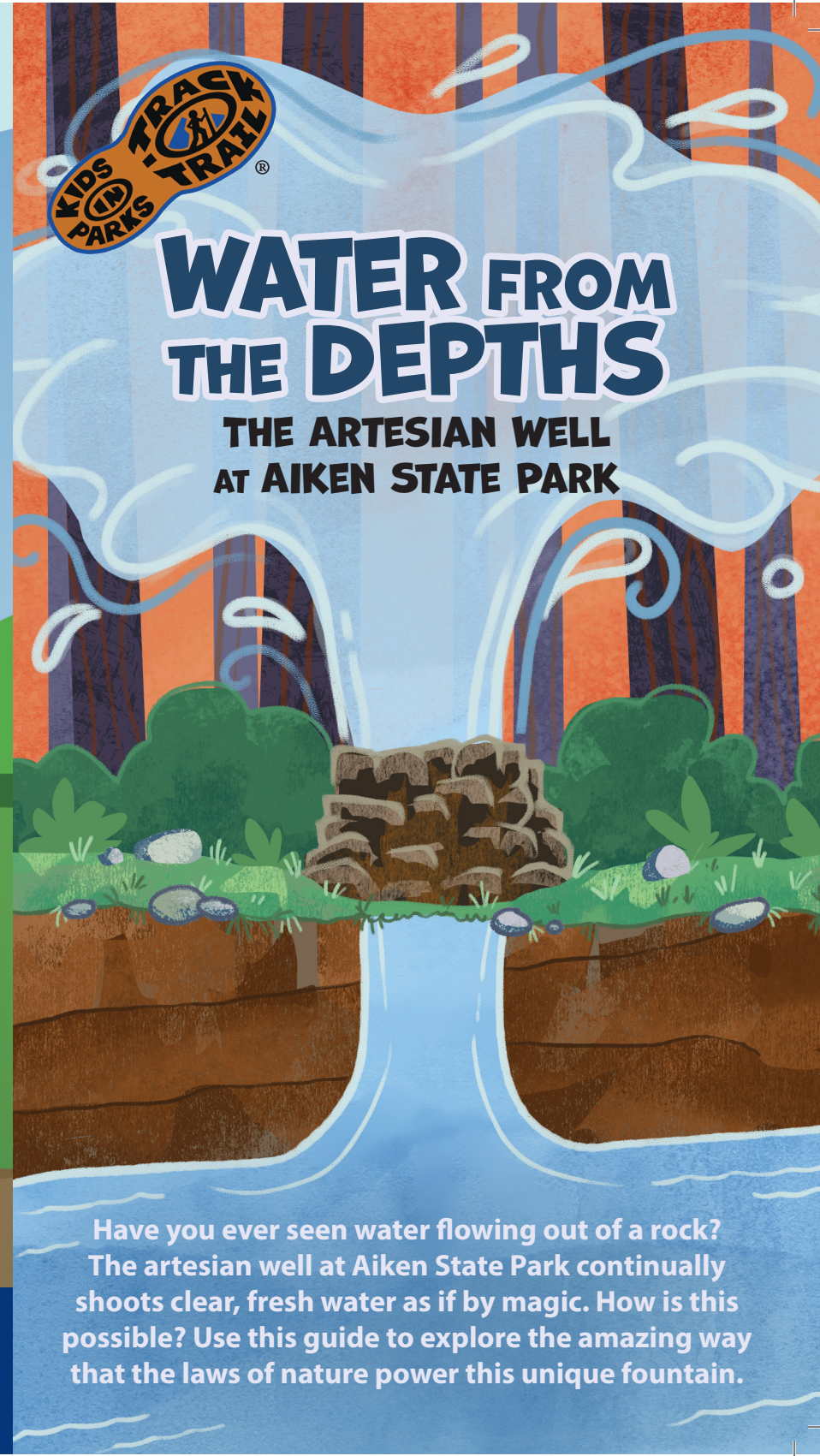
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WATER FROM THE DEPTHS

THE ARTESIAN WELL AT AIKEN STATE PARK

Have you ever seen water flowing out of a rock? The artesian well at Aiken State Park continually shoots clear, fresh water as if by magic. How is this possible? Use this guide to explore the amazing way that the laws of nature power this unique fountain.

WHAT IS AN ARTESIAN WELL?

An artesian well is a special type of well where water flows up from an underground aquifer without a pump. This happens because the water is trapped between **impermeable** layers, creating a lot of pressure. When someone drills into this **confined aquifer**, the pressure pushes the water up to the surface.

Think of it like squeezing a water-filled balloon—poke a hole and the water comes out on its own. Artesian wells are useful because they provide fresh, clean water without the need for electric pumps.

UNDER PRESSURE

Water always wants to find level balance. When an artesian well is drilled, the pressure of the **confined aquifer** pushes water up to the water pressure level. This level is called the **piezometric surface**.

If the top of the well is far enough below this level, water will flow out.

Piezometric Surface

Recharge Area

Upper Confining Bed

Confined Aquifer

Lower Confining Bed

PATH OF WATER

Permeable and impermeable surfaces have a big impact on the flow of water over and through a landscape. Where those surfaces are affect where water can go and where it can collect. Trace the flow of water through this maze. You can pass through permeable layers, but impermeable layers block your path. Can you make it to the river?



FILTERED WATER

Water from an artesian well is often delicious and safe for drinking. The confined aquifer is filled with layers of small rocks and sand, naturally filtering the water of impurities.

How does it taste to you?

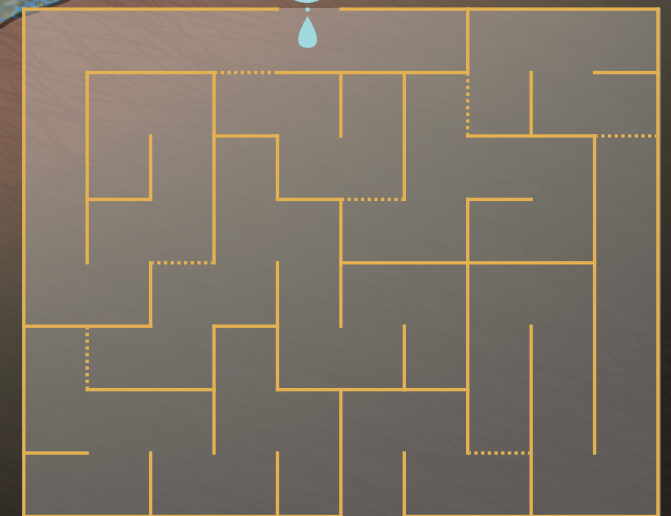
PERMEABLE vs IMPERMEABLE

Permeable surfaces, like soil or sand, allow water to pass through them easily. Impermeable surfaces, like clay and rock, prevent water from passing through.

Use a water bottle to collect some water from the well. Pour equal amounts on a rock and on soil.

Which took longer to soak in?

ROCK OR **SOIL**



Did water get trapped anywhere? Where would you drill a well?