

Assignment 4: Why Does a Curling Rock Curl?

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Why do you think a curling rock's trajectory will curve or curl?

This question remains unanswered, as the expected behaviour would be to curl opposite to the direction of rotation. However, the rock curls in the direction of rotation. One theory suggests

Why does sweeping extend the distance the rock will travel? Sweeping helps reduce the friction between the rock and the ice, which allows the rock to travel further. The heat generated by the friction between the broom and the ice melts the ice, creating a thin layer of water. This water acts as a lubricant, reducing the friction between the rock and the ice. As a result, the rock can travel further with less resistance.¹

What is the weight of a curling rock? The weight of a curling rock according to Curling Canada falls in the range of 17.46 kg to 19.96 kg (38.5 lbs to 44 lbs).²

¹<https://ssec.si.edu/stemvisions-blog/why-does-curling-stone-curl>

²<https://www.curling.ca/about-curling/getting-started-in-curling/rules-of-curling-for-general-play/>