

Fifth graders 3D print a prosthetic leg for Stumpy the turtle

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A 3D printed prosthesis has improved the wellbeing of a three-legged turtle (Photo: Brittany Lohmiller/Savannah Morning News)

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Advances in 3D printing have made it hard to keep up with the new breed of prostheses and their [impacts on human life](#), but its potential in the animal kingdom has been largely unexplored. Much like [Derby the disabled dog](#), Stumpy the box turtle had been short of a limb since the amputation of his injured front leg. But a group of fifth graders have put its school's 3D printer to use and produced a custom-made prosthetic, saving Stumpy from life with a lopsided hobble.



When Stumpy was brought to Oatland Island Wildlife Center in Savannah, California back in September, her badly injured and infected leg prompted veterinarian Leslely Mailer to

swiftly amputate the limb. But rather than this concluding the treatment, Mailler contacted May Howard Elementary school where her daughter studied and had mentioned using a 3D printer in class.

Mailler then collaborated with some of the school's science teachers and a group of fifth grade students, including her daughter, to design and produce a 3D printed prosthesis for Stumpy. The process required careful consideration, as the team needed the new leg to be small enough to optimise mobility, yet large enough to keep the bottom of her shell from scraping along the ground.

The final design was inspired by the rolling wheels on the bottom of a classroom chair. A holster would be fixed permanently to Stumpy's underside, which would house interchangeable ball casters and give the turtle's stump an entirely new range of movement. Using software program 3DTin, the school's printer and a whole lot of lunchtime hours, the design was finalized, printed and taken along with Stumpy to Mailler's clinic.



Attaching the prosthetic with a dollop of Gorilla glue and allowing some time to dry, the group then flipped Stumpy over and prepared to put her new limb to the test. After a gentle prod from Mailler, Stumpy was on the move. Though she found it difficult to gain traction on the tiled floor, on a towel she was able to make impressive progress.

The fifth graders now plan on refining the design and making it slightly smaller, which they hope will mean the turtle doesn't veer so much to the left.

Source: [Savannah Morning News](#)