

**Title:** The Impact of Sunscreen on the Growth of Red Mangrove Propagules

**Theme:** Biodiversity

**Team:** One Ocean

**School:** Saint Stephen's Episcopal School

**Country:** USA

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Mangroves are important plants to the Florida coastline. They provide habitat for many organisms and protect the coastline from erosion and storms. Many residents and tourists spend time in and around Florida's beaches, often wearing sunscreen to protect them from the sun. While sunscreen in the water has been shown to impact coral health - the common ecosystem in tropical regions- little is known about sunscreen's specific effects on mangroves. The question being asked is what the effects of sunscreen (with and without coral reef safe ingredients) are on mangroves. We are using empty fish tanks with chicken wire to hold the mangrove propagules in place, while testing the effects of different concentrations of reef-safe and non reef-safe sunscreen. To measure the effects, the length of new growth on each propagule is measured, as well as, number of roots and leaves in each tank. We expect to see some mangroves die from the exposure to the sunscreen, and aim to see if the non reef-safe or reef-safe has a greater effect on the growth of the propagules.