



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Alison F. Hoffman	Project Number J1714
Project Title To Float or Not to Float: Seed Dispersal in Sea Rocket	
Abstract Objectives/Goals Growing in the sand is the plant Sea Rocket (<i>Cakile edentula</i>) that produces a floating fruit in order to spread its seeds along the beach. The fruit of the Sea Rocket is divided into two parts: a tip and a base. When the seeds are ripe and ready to drop, the top section of the fruit drops first and when close to the water will float away. Can the fruit bases also float in the ocean, and if so, will they float as long as the tips? Maybe they are supposed to also float but not travel as far. Methods/Materials I collected 100 tips and 100 bases from plants growing on the beach. I floated all the tips and bases in two separate containers filled with ocean water. Once a day I counted, removed and recorded all the sunken tips and bases. Results I found that the bases of the fruit do float, but not as long as the tips. Most of the bases sank on the 4th day. Most of the tips sank on the 12th and 14th days. Only 25% of the bases were still floating after four days, where 97% of the tips were still floating. By the time 97% of the bases had sunk (on the eighth day) only 34% of the tips had sunk. Conclusions/Discussion The fruit of the Sea Rocket that is separated into two parts, allows the tips of the plants to float longer in ocean water and therefore travel farther in the waves before sinking in the sand and producing a new plant. The bases of the fruit can also float, but not as long, so the seeds in this part will make a new plant closer to the plant they came from. My results did support my hypothesis.	
Summary Statement The floating ability of two different fruit parts from the Sea Rocket plant.	
Help Received Mother helped with discussion of project methods, driving to the beach and typing. Father helped with graph.	