

## A Classroom Demonstration for *The Life of a Leaf*

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### **Properties of a Composite (Page 198):**

Another composite you can make and play with consists of fiberglass, as stiff component, and gelatin, as compliant matrix. You might form two troughs of aluminum foil—perhaps 10 x 2 x 1 inch (25 x 5 x 2.5 cm)—and spray their insides with no-stick cooking spray (“Pam”). In one, lay a strip or two of fiberglass batting—sold as pipe or wall insulation—and place the troughs in a baking pan. Dissolve one ounce (28 g) of gelatin in 3 cups of boiling water and nearly fill the troughs. Add enough water outside the troughs to offset the flimsiness of the foil. Chill until set, drain the pan, and fold back the foil molds. Explore the properties of the resulting composite, noting in particular the differences connected with crack propagation.