

## 7.12.2: Lecture Demonstrations

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### Magic Sand

Add Magic Sand to water and observe "rabbit guts" like formations that suggest the importance of water in biogenesis. Add magic sand to isopropanol or hexane to demonstrate that it is the water, not the sand, that is "magical". [\[1\]](#) [\[2\]](#) [\[3\]](#) [\[4\]](#)

### Flipping Graphite Card

A 2 cm x 2 cm square of index card is coated thoroughly on one side with graphite from a #2 pencil. About 100 mL each of water and carbon tetrachloride are added to a 250 mL beaker. If the square held in tweezers and is released at the interface of the water and carbon tetrachloride, it will invariably flip so that the bare paper side is toward the polar water, and the nonpolar graphite side is toward the nonpolar liquid. This is not a gravity effect, as proven by using hexane (floats on water) and water in the same experiment.

### References

1. J. Chem. Educ., 1982, 59 (2), p 155
2. J. Chem. Educ., 1990, 67 (6), p 512
3. J. Chem. Educ., 2000, 77 (1), p 40A
4. J. Chem. Educ., 2000, 77 (1), p 41

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