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Subject: Springs

The article in the January 2002 TPT on springs on page 35 is rather interesting. The author of the note suggests that students experiment with springs to find the relationship between the force constant, k , and the relaxed length of the spring, L . He outlines a procedure by which spring elements are cut off and the spring constant is measured in the usual manner.

I bought some plastic Slinky springs and instead of cutting the coils, students just reduced the number of coils as they proceeded to measure k . They measured the relaxed length, L , with vernier calipers, including only those coils involved in the measurement. The results were as the author predicted, k varied inversely with L . The plastic Slinky springs are cheap and can be used over again next time the experiment is done, since the coils aren't actually cut away from the Slinky.