"A Special Consideration of Capacitors and Coils",
when subjected to
"Controlled Current Sources"

An Introduction:

Key words:

Rate of Flow & Container Volume

Rate of Change vs Current Flow

Rate of Change vs CEMF

Review of some definitions:

1 Amp is a flow of 1 Coulomb per second

1 Coulomb (besides being a quantity) is 6.24 x 10^{18} electrons (i.e. a "bucket-full")

1 Farad will hold 1 Coulomb at 1 Volt

1 Henry will develop 1 Volt CEMF against a change of 1 ampere per second, as a Rate of Change

Things to look for:

We are going to discover a case where a constant causes a rate change, and

we are going to discover another case where a rate change causes a constant.

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Remember that Capcitors react to voltage changes by drawing or discharging current, and
that Inductors react to changes in current by opposing the voltages by CEMF, but
what happens to a Capacitor if we deliberatly control the current being fed to a capacitor?
And what happens to the CEMF of an Inductor if we don't change the current?
What determines the CEMF of an Inductor if we increase or decrease the rate of change?

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Now, where are we going with this?

How about an ultra-simple example for a start: