

Le Chatelier's Principle

* a system at equilibrium will respond to **STRESS** so as to reduce the stress

START HERE

HAPPY SYSTEM



@ equilibrium
 $\Delta G = 0$ $Q = K$
free energy is at a minimum

Oh no! here comes stress!

STRESS!

- * CHANGES IN
 - concentration
 - pressure
 - temperature

SYSTEM IS NOT HAPPY!
system is Stressed!

$Q \neq K$ and $\Delta G \neq 0$

* concentration and pressure changes will change Q

* temperature change will change K

May-day May-day all hands on deck! Time to relieve that stress!



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★ RESPONSE

→ $Q < K$
reaction goes forward

→ $Q > K$
reaction goes Reverse

I'm feeling much better!



SYSTEM ADJUSTING
 ΔG nearing zero

Q and K getting closer

System responding to stress