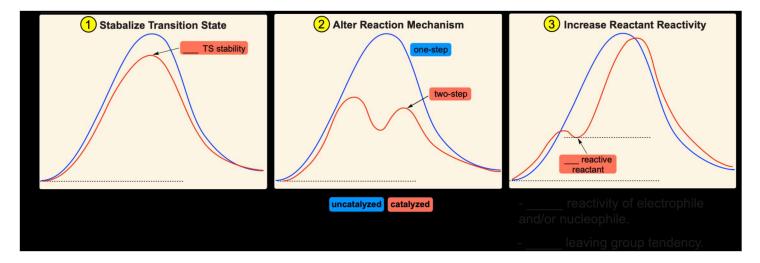
## **CONCEPT: INTRO TO CATALYSIS**

- Recall: Catalysts are substances that increase the \_\_\_\_\_ of a reaction without being \_\_\_\_\_
  Lowers Energy of activation (\_\_\_\_) without changing the equilibrium constant (\_\_\_\_).
- Catalysts can lower Ea in \_\_\_ ways:



**EXAMPLE:** Select the best way in which an acid catalyst can increase rate of organic reactions?

- a) By shifting the equilibrium towards the products, thus resulting in a faster rate.
- b) By providing a higher energy pathway for the reaction to take, resulting in greater transition state stability.
- c) By increasing the concentration of reactants, thus resulting in a faster rate.
- d) By increasing electrophilicity of a reactant, thus decreasing the Ea of the reaction pathway.