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| **Lesson Plan:** |

**Big Ideas**

1) Not all acids and bases dissociate completely in water, the more they dissociate in water, the stronger they are

2) The stronger the acid/base, the more they "don't want"/"want" their proton

**PLOs**

**D3** analyse balanced equations representing the reaction of acids or bases with water

**D4** classify an acid or base in solution as either weak or strong, with reference to its electrical conductivity

**D5** analyse the equilibria that exist in weak acid or weak base systems

**D6** identify chemical species that are amphiprotic

**Material and equipment needed**

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| Hover Cam | Notes | White Boards | Speaker | Kute Tuesday |
| Kahoot | AcidBase video | Markers | Milk | Food coloring |
| Dish soap |  |  |  |  |

**Assessment Plan:**

**Formative -** Inquiry question and Kahoot

**Hook and Introduction**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 5 min | * "Kool" Kayoubi (Tuesday) | * Milk and food coloring demo |  |

**Development**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 5 min | * Johnson's video |  |  |
| 15 min | * Kahoot | * Questions designed based on material from last class | * Kahoot tracks rights and wrongs |
| 10 min | * Notes on Ka/Kb expression | * Have students notice the how the K expression corresponds to the strength of the acid |  |
| 10 min | * Inquiry question | * Have students come up with ideas to answer the following question: Which solution will conduct more electricity?  What is the conflict here? How would you make solution 1 more conductive than solution 2? How would you make solution 2 more conductive than solution 1? (2 ways) How could you quantify how many ions are in each solution? |  |
| 5 min | * Discussion on response | * high concentration vs. strong acid/base | * Check if students can point out the dilemma |
| 15 min | * Notes on how to write Ka expression and the appropriate chemical reaction | * Stronger the CA, weaker the CB value * Using the chemical reactions and the Ka values * Summary relating acid strength, conductivity, Ka values and CB strength |  |
| 15 min | * Work on writing these chemical equations and constants | * Students use white boards to practice |  |
| 5 min | * Video? | * If time - show video |  |

**Closure**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 5 min | * Check in with the class | Structure of next class:  Group work: tutorial style - group hands in solved problems at end of class = quiz mark  Good idea to practice questions assigned | **HWK**  Rest of worksheet 4-2 |