

**Room Temperature Boiling Water.**

**Chemical available:** None

**Materials for demonstration provided in kit:** Syringe, bottle for water carrying.

**Materials used for multiple demos to add in**: None

**Materials you must grab immediately before:** Water

**Procedure for in class demo**:

Complete on document camera so the students are able to see.

Fill the syringe approximately a quarter of the way with water.

Remove all air from syringe. You’ll need to flick syringe as needed to dislodge and move air bubbles to the top and remove by pushing plunger.

Cover tip firmly with finger or used supplied stopcock. The important part is not to allow any air in.

Pull back plunger slowly. Allow plunger to very slowly move back to position. You’ll see some additional air bubbles, carefully remove them. *(Note, this looks like its “boiling”, but its mainly just the air coming out of solution due to the vacuum.*

Pull back plunger slowly again. Release plunger carefully, allowing it to be pulled back quicker and harder. Don’t release it completely or it can break the syringe

Pull plunger back again slowly. The water is now “boiling”. *(Note, that because syringes are not air tight it will not continue to boil. If there is a strong interest we can set up a vacuum pump system to allow continually boiling water. This is a bit in-depth to do without knowing first if there is an interest. )*

**Waste:**  .