# Mr. Kelley's Guide to
# Component Vectors

## The Problem

Sometimes we have to deal with vectors in 2-dimensions. We need a reliable way to add them. Consider the vector $\vec{V}$ that has magnitude 5 and points at an angle of 35° with respect to the positive x-axis.

## Materials

- Plastic Dish (1)

- Erlenmeyer flask (1)

- Candles (1)

- Matches

- Water (enough to fill the dish, but not drown the candle)

- Ice (optional)

## Procedure

1. Gather materials

2. Fix candle to bottom of dish

3. Fill dish with water, 3-4 cm

4. Light candle

5. Place erlenmeyer flask over burning candle, down to water

6. Observe phenomena

7. Repeat as desired

Is there anything about this that you can measure? What can you alter in order to test theories about what is going on? Discuss observations with your group members. Together, create a poster with words, pictures, formulas, or anything else that summarizes your explanation of what you observe. We will share these as a class.