

## Vertex Form of Parabola -- Teacher

In this activity we will investigate the vertex form of quadratic equations.

*Pass out one vertex card per student. Students will use this card to complete the following steps.*

**Step 1:** Record the equation from your card below.

Your equation: \_\_\_\_\_

**Step 2:** Enter the equation into Y1 in the activity center.

**Step 3:** Get into a group with others that have your same vertex. Take your card with you.

*Help students get into groups by clicking on the vertex of the parabolas in the activity center. This will highlight 4 graphs. Make sure you are showing names. The 4 students highlighted will be in a group together.*

**Step 4:** Record your group members' quadratic equations below.

Equation 1: \_\_\_\_\_ (rewrite yours)

Equation 2: \_\_\_\_\_

Equation 3: \_\_\_\_\_

Equation 4: \_\_\_\_\_

**Step 5:** Find the vertex for your group's quadratic equations.

(\_\_\_\_\_, \_\_\_\_\_)

**Step 6:** In your group, discuss similarities and differences in the equations above. Record your group findings below.

*Answers may vary*

**Step 7:** Based on your findings, describe how to find a vertex given an equation.

**Check for Understanding:** The following are released TAKS question/s to check for students understanding of the lesson.

Which graph shows a function  $y = x^2 + c$  when  $c < -1$ ?

