Common Core Standards:

Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience. (CCRA.SL.4)

Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations. (CCRA.SL.5)

Objectives:

1) Students will solidify their skills of solving a Rubik’s® Cube by teaching others.

2) Students will gain experience using technology by creating and editing a how to video.

Materials:

Rubik’s Cubes (possibly 1 per student)
Recording devices (iPads, smartphones, computers, etc.)
How To Videos worksheet

Procedure:

1) Organize the class up into groups and assign each group a stage of the solution:
   1. Get to Know Your Rubik’s Cube
   2. How to Read Algorithms
   3. Layer 1 – Create a Daisy
   4. Layer 1 – Create a White Cross
   5. Layer 1 – Solve the White Corners
   6. Solve the Middle Layer
   7. Layer 3 – Make a Yellow Cross
   8. Layer 3 – Orient the Corners
   9. Layer 3 – Position the Yellow Corners
   10. Layer 3 – Position the Yellow Edges

   If you don’t have enough students to make 10 groups you could have some work individually, assign some groups two stages (pair up 1 & 2, pair up 3 & 4), or omit stages 1 & 2. If you have more than 10 groups, assign some stages twice.

2) Groups should review the steps and algorithms needed to complete their assigned stage. Then they should develop a script using their How To Videos worksheets.

www.YouCanDoTheCube.com
3) Have groups check in after they have completed their scripts, and after they record take 1 of their video, so that you may give feedback.

4) If there is time after all the videos are complete, you could have a viewing party and let the class watch them all in order.

Notes to Teacher: Constructive feedback about their progress is very beneficial. If the videos turn out well enough, I save them and use them as a resource for my next group of students.

My students used iMovie. One great feature was that students were able insert text on top of the recording, which allowed students to have the algorithms displayed on the screen during their video.

The video lengths of each individual stage seem to range from 1.5-3 minutes.
How To Videos

Partner’s name:

Stage assigned:

☐ Get to Know Your Rubik’s Cube
☐ How to Read Algorithms
☐ Layer 1 – Create a Daisy
☐ Layer 1 – Create a White Cross
☐ Layer 1 – Solve the White Corners
☐ Solve the Middle Layer
☐ Layer 3 – Make a Yellow Cross
☐ Layer 3 – Orient the Corners
☐ Layer 3 – Position the Yellow Corners
☐ Layer 3 – Position the Yellow Edges

What algorithms/information is needed for this stage?

How many Rubik’s® Cubes are needed for video, and how should they be set up?

What things need to be said, and who is going to say each part?

Is every case covered? In other words, when the viewer gets to this stage, will this video walk them through the stage no matter what their starting point?