ELA Listening & Speaking (2009 Adoption)

K.22 Students speak clearly and to the point, using the conventions of language. Students continue to apply earlier standards with greater complexity. Students are expected to share information and ideas by speaking audibly and clearly using the conventions of language.

1.27B / 2.28B / 3.29B / 4.27B / 5.27B follow, restate, and give oral instructions that involve a short related sequence of actions.

ELA Foundational Skills (2017 Adoption)

K.1C share information and ideas by speaking audibly and clearly using the conventions of language;

1.1C share information and ideas about the topic under discussion, speaking clearly at an appropriate pace and using the conventions of language;

2.1C share information and ideas that focus on the topic under discussion, speaking clearly at an appropriate pace and using the conventions of language;

3.1C speak coherently about the topic under discussion, employing eye contact, speaking rate, volume, enunciation, and the conventions of language to communicate ideas effectively;

4.1B follow, restate, and give oral instructions that involve a series of related sequences of action;

5.1B-C follow, restate, and give oral instructions that include multiple action steps; (C) give an organized presentation employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively;

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

www.YouCanDoTheCube.com
Procedure:

1) Organize the class up into groups of two and assign each group a stage of the solution:
   1. Meeting the Cube
   2. Reading Algorithms
   3. Layer 1 – Making a Cross (Plus Sign)
   4. Layer 1 – Permuting the Cross
   5. Layer 1 – Solving the Corners
   6. Solving Layer 2
   7. Layer 3 – Making a Cross
   8. Layer 3 – Permuting the Cross
   9. Layer 3 – Permuting the Corners
  10. Layer 3 – Orienting the Corners

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

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 1.5s – 3 minutes.
How To Videos

Partner’s name:

Stage assigned:

☐ Meeting the Cube
☐ Reading Algorithms
☐ Layer 1 – Making a Cross (Plus Sign)
☐ Layer 1 – Permuting the Cross
☐ Layer 1 – Solving the Corners
☐ Solving Layer 2
☐ Layer 3 – Making a Cross
☐ Layer 3 – Permuting the Cross
☐ Layer 3 – Permuting the Corners
☐ Layer 3 – Orienting the Corners

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?