Box Geometry

8th Grade Math & Drama

CORE SUBJECT AREA
Math

ART FORM + ELEMENTS
Drama
Tableau

MSCCR STANDARDS
8.G.6 Explain a proof of the Pythagorean Theorem and its converse.

8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real work and mathematical problems in two and three dimensions.

MSCCR CREATIVE ARTS STANDARDS
Cr2.1.8 Organize and develop artistic ideas and work.

DURATION
2 days

OBJECTIVES
Students will prove the Pythagorean Theorem

MATERIALS NEEDED
Tape measurer, pencils, paper, formula sheets

VOCABULARY
Pythagorean Theorem, triangles, tableau

LESSON SEQUENCE
Show them this video https://www.youtube.com/watch?v=Rjtb6ueo5ak

Put students in groups of 4 or 5 and give them their room to measure.

1. Put students in groups of 4 or 5.
2. Review Pythagorean Theorem by having them do practice questions.
3. Review tableau: frozen picture of their answers.
4. Let students go to their specific area to measure (i.e. different size rooms throughout the school); each group will get a different room.
5. Students will come back and each group will scale their answers down and create a tableau of each room.

SOURCES
Adapted Box geometry from Art Edge

TIPS + FREQUENTLY ASKED QUESTIONS
The rooms that they are measuring need to be close to each other. Have all materials ready ahead of time. Remind the students to have fun and be creative in their depictions.