Objective:
The students will use and explore their knowledge of symmetry to create portraits inspired by Mark Mothersbaugh’s exhibition, Myopia, and his series, Beautiful Mutants.

DISCUSSION
Discuss Mark Mothersbaugh’s series Beautiful Mutants and his interest in exploring whether the human face is truly symmetrical.

Pose the discussion question: What is beauty? Ask the students why they think Mark Mothersbaugh titled this series Beautiful Mutants.

Discuss the idea of symmetry: explore the different examples of mathematical symmetry.

Brainstorm examples of symmetry in nature.

Ask the students if they feel the human face is symmetrical. Have the students explain their thoughts.
BEFOREHAND

Collect or take photos of the students. They should be looking directly at the camera and the photo should be centered on the student’s face.
Print the photos using a color printer.
Collect the materials needed to complete the project.

PROCEDURE

Take digital photos of each student’s face and print them or have the students provide a photo.
Have the students place a mirror on the photo to discover the line of symmetry.
Have the students use a straight edge to mark the line of symmetry for the photo.
Have the students cut the portrait along this line of symmetry and glue it to one side of a piece of drawing paper.
Have the students sketch the mirror image to recreate the portrait.
The students may add color and detail to their portraits.

EVALUATION

Have the students share their finished work. Discuss how the drawings compare to the images created by the mirror?
Did this project change your feeling about the symmetrical qualities of the human face?
Have students write their opinion about symmetry and beauty. Ask: Does a face have to be symmetrical to be beautiful? Encourage students to provide multiple reasons for their opinion, possibly citing the Mothersbaugh activity, observations, or facts from informational sources.

RESOURCES

Mark Mothersbaugh, Myopia Edited by Adam Lerner
www.mathsisfun.com/geometry/symmetry.html
www.scholastic.com
Symside by Excelltech, Inc (App that allows students to digitally alter images of their face to make it perfectly symmetrical.
Symmetry exercises for kids by Alexandria Minard (App)
STANDARDS

Math. 4. G.3: Recognize a line of symmetry for a two-dimensional figure such that the figure can be folded along the line into matching parts. Identify line symmetric figures and draw lines of symmetry.

ELA. K-5 and 6-12. W (Opinion-Writing) 1: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

ELA. K-12 SL (Speaking and Listening) 1: Prepare for and participate effectively in a range of conversations and collaborations, with diverse partners, building on others ideas and expressing their own clearly and persuasively.

Visual Art. 3. 3RE: Compare and contrast their opinions of a work of art with those of their peers.

Visual Art. 5. 1RE: Apply reasoning skills to analyze and interpret the meaning in artworks.

Visual Art. 8. 1PE: Identify how an artist’s choice of media relates to the ideas and images in the work.

Visual Art. HS Beginning. 4RE: Investigate the role of innovative technologies in the creation and composition of new media imagery.