4. G The Geometry of Letters

Task

Letters can be thought of as geometric figures.

A B C D E F G
H I J K L M N
O P Q R S T U
V W X Y Z

a. How many line segments are needed to make the letter A? How many angles are there? Are they acute, obtuse, or right angles? Are any of the line segments perpendicular? Are any of the line segments parallel?

b. We can build all of these letters from line segments and arcs of circles. Build all of the capital letters with the smallest number of "pieces," where each piece is either a line segment or an arc of a circle.

c. Which letters have perpendicular line segments?

d. Which letters have parallel line segments?

e. Which letters have no line segments?

f. Do any letters contain both parallel and perpendicular lines?
g. What makes the lower case letters "i" and "j" different than all of the capital letters?