Construction Robot Project

**Materials Needed**

1. Robot Packet
2. Compass
3. Straightedge
4. Glue Stick
5. Crayons, markers, or colored pencils
6. Large poster paper
7. Scissors
8. Pencil

Robot Head

1. Construct an equilateral triangle inscribed in each of the provided circles. These will become the Robot’s eyes.
2. Construct a median from the top vertex of the triangle provided. This will be the Robot’s nose.
3. Cut along the dotted line. Your Robot’s head is now complete.

Robot Body

1. There are two points (E and D) on the top of the body paper. These points will be used for the neck of the Robot, therefore, they should represent the top of the body. Bisect the two angles at the bottom corners of the paper. Be sure to extend the angle bisectors until they intersect. Where these angle bisectors intersect, draw the Robot’s heart.
2. In the circle provided, construct an inscribed, regular hexagon. This will be the Robot’s belly button.

Assembly

1. Cut out the two triangles that are provided. These will be the Robot’s feet.
2. Lay the head at the top of the poster paper. Lay the body such that there are about 1.5 boxes between the head and the body. Lay the feet so that there are at least 3 boxes remaining at the bottom of the poster paper.
3. Get approval from your teacher to glue your Robot onto the poster paper.

Finishing Steps

1. Construct a line perpendicular to the base of the head and that passes through point E on the top of the Robot’s body. Repeat these steps for point D on the top of the body. The two perpendicular lines that you constructed will represent the Robot’s neck.
2. Using the top vertex of the left, triangular foot, construct an altitude. Repeat these steps for the right, triangular foot.
3. Draw in 2 legs that connect the body to the feet, be creative.
4. Draw in 2 arms and hands.
5. Draw in any finishing details (mouth, hat, ears, etc) that you would like.
6. Color the Robot.

Bonus Point (only if you have “*time*”)

-Draw a watch on one of the Robot’s wrists. The face of the watch should be a square that is inscribed in a circle.

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|  | 3 | 2 | 1 | 0 |
| Construction of equilateral triangles. | Complete and correct. | Minor errors evident. | Attempted but major errors evident. | Missing. |
| Construction of median. | Complete and correct. | Minor errors evident. | Attempted but major errors evident. | Missing. |
| Construction of angle bisectors. | Complete and correct. | Minor errors evident. | Attempted but major errors evident. | Missing. |
| Construction of inscribed regular hexagon. | Complete and correct. | Minor errors evident. | Attempted but major errors evident. | Missing. |
| Construction of perpendicular lines. | Complete and correct. | Minor errors evident. | Attempted but major errors evident. | Missing. |
| Construction of altitudes. | Complete and correct. | Minor errors evident. | Attempted but major errors evident. | Missing. |
| Overall Presentation. | Complete and correct. | Minor errors evident. | Attempted but major errors evident. | Missing. |

SAMPLE:

