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Christmas Tree Decorating…Math Style!

Usually there are lights, angels, stars, and ornaments that decorate Christmas trees – but how about putting a twist on it and use construction paper, felt, and sequins to decorate mathematical Christmas trees? Students in grades 6-8 did just that in Dr. Patricia Gainey's computer-and-math applications class at Raymond Park Middle School as they decorated trees – math style!

First, students made a graphic organizer of polygons where they organized by color and shapes so that triangles were on one tier of the tree; trapezoids and parallelograms were on the second tier; trapezoids, parallelograms, and additional quadrilaterals on the third; and various regular and irregular polygons (like hexagons) were on the bottom rung. Add a few sequins and glitter-yarn garland, and you've got a **polygon-tree graphic organizer**!

Don't let your tree-decorating end there, though, because there are other ways to address the geometry standards with trees! Students made 3-D shapes using math materials like plastic *Polydrons* ® to form the five Platonic solids. They then designed, cut, decorated, and glued together nets to form **3-D shapes to put on a class-size tree.**

Last but not least, to address the math measurement standard, students sewed **fractional measurement trees.** With green felt cut into isosceles triangles, they positioned buttons and sewed them in a triangular formation so that the top button was 1 7/8" from the top, another row of two buttons were 1 ¾" below that and so on. Around the edges, they sewed stitches that were ¼" apart. The sewed a jingle bell at the top of the tree, added ribbon and/or fabric glue and celebrated the joyous "forest of trees" when they were all finished!

So December may be the time to "deck the halls with boughs of holly," but at RPMS, it's also a time to "deck the math class" with different kinds of mathematical Christmas trees – fa-la-lala-la-la-lala!