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Curriculum Units by Fellows of the National Initiative  
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## **Making Connections in Symmetry**

Guide for Curriculum Unit 10.04.08, published September 2010  
by Katie Radcliff

Making Connections in Symmetry is designed to explore symmetry at a deeper level for upper elementary math students. I have noticed that symmetry does not occupy a great deal of the math curriculum in my state, so it is my hope that this unit provides a deeper understanding of the importance of symmetry in geometry, as well as an understanding of the connection it has to the world around us. This unit uses a variety of strategies to reach all levels of learners. There is a focus on vocabulary development as well as hands-on activities and exploration. Students use diagrams to classify and categorize polygons. Through the unit, students will be provided opportunities to connect symmetry to other components of geometry as well as to their everyday lives. Students are asked to not only explore symmetry in polygons, but also transform figures to create symmetrical patterns. After the students have learned about the different kinds of symmetry, they are asked to articulate appropriate proofs when analyzing symmetries of patterns and figures. There is also a research report component to this unit to integrate reading and writing into this math curriculum. This unit is geared towards students in fifth grade, but could be used in geometry classes from third through sixth grade.

(Developed for Math and Geometry, grade 5; recommended for Math and Geometry, grades 3-6)

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