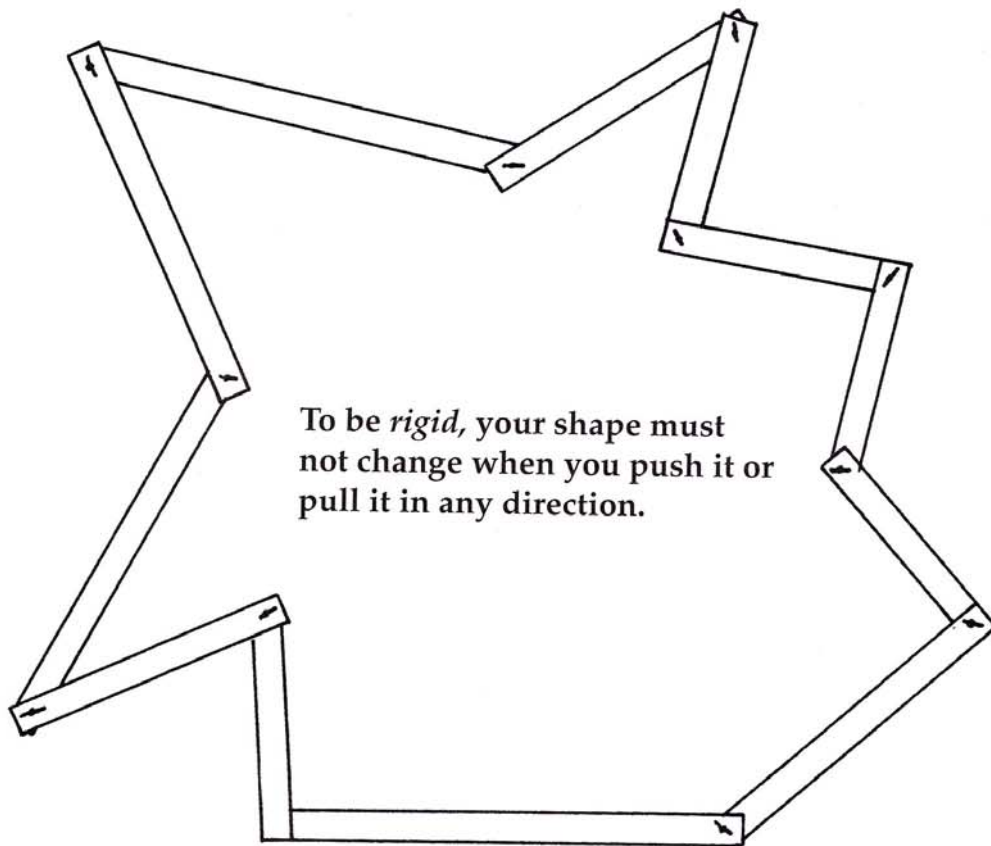


Wood, a strong material, can be made even stronger by being fitted together in a rigid shape. You can find out more about rigid shapes.



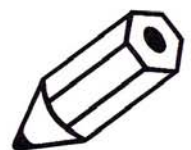
### WHAT TO DO:

Use paper fasteners to fit together 12 geo-strips to make a 12-sided closed shape. Now challenge your work partner to add as many more geo-strips as she needs to make the shape *rigid*.



### RECORDING YOUR WORK:

1. Draw the rigid shape and show where the extra geo-strips have been added. Colour in any triangular areas that you see in the shape.
2. Can you make a shape using any number of geo-strips which does not need any extra geo-strips to make it rigid?



Look out for triangular shapes in the structure of your school.

**A TRIANGLE IS A VERY POWERFUL SHAPE.**



A constructional joint is a way of joining material together. These joints are often used to join wood together in making furniture.

### WHAT TO DO:

Study the constructional joints drawn on this sheet. Working with a partner, look inside, behind and underneath any wooden furniture in your classroom to see if any of these joints have been used in making it.

BUTT JOINT	WHERE SEEN

BUTT AND BLOCK JOINT	WHERE SEEN

TONGUE AND GROOVED	WHERE SEEN

REBATE JOINT	WHERE SEEN

DOWELLED JOINT	WHERE SEEN

HOUSING JOINT	WHERE SEEN

DOVETAILED JOINT	WHERE SEEN

MITRED JOINT	WHERE SEEN