

# CORRECTING FOR TECTONIC TILT

## **Purpose**

To determine the original direction of linear sedimentary features prior to folding.

## **Instructions**

Place the protractor flat on the bedding plane surface with the straight edge at the top and horizontal.

Mark on the protractor with a water based felt tip pen the direction of the linear feature.

Keep the straight edge in the same position but turn the protractor so that its surface is horizontal. This is equivalent to unfolding the rock so the bedding surface is once again horizontal.

Use the compass to measure the orientation of the mark on the protractor.

## **Requirements**

Large rock slabs with linear features

Wooden blocks or books to hold the slabs so that the bedding surfaces are dipping steeply

Protractor

Compass

Water based felt tip pen

## **Notes**

Desks often have metal frames which will cause the compasses to give erroneous readings. This activity works best if the slabs are at an angle greater than  $45^\circ$  and the linear features are at about  $45^\circ$  to the strike of the slab. This is when the difference between the apparent and true directions is greatest. This is a good activity to do before going into a field area with folded rocks with flutes and grooves.

## **Time**

5 minutes per sample