

From IMaGes 5,
November 2008



**Infinity
without a repeat**

The Penrose Patterns activity during Incredible Science day at the University of Auckland in July involved 2,000 kite and arrowhead shaped perspex tiles in five colours.

With these two simple shapes, primary and intermediate students could create kings and queens, suns, stars, birds and worms, and learn why some patterns could go on infinitely without ever repeating. Hugh Gribben had the idea and got the tiles made. Each tile had a hole in one corner and there were two simple rules - the corners with holes had to go next to another corner with a hole, and the long edges had to go next to other long edges. Hundreds of students took part, most starting their own small patterns separately all over the room. "Kids who could hardly speak could put tiles together," said Dr Isabel Hubbard, who ran the project. "But at one point we got stuck, because it can be impossible to join lots of small groups of tiles." Hubbard changed the colours on one section with lots of symmetries and told the children how to resolve the problem. "Then it was big enough that people could add tiles all around the edge and not get stuck." Photos: Tiger Tiger.

