



Notes to accompany Paul Stephenson's ATM 2012 Conference Session

More details at: atm.org.uk/conf2012

Session: G7

Title: Symmetry Corner

Time: 16.00 - 17.30, 4.4.12, and throughout the conference

Place: the Workshop

The workshop itself

In Symmetry Corner you will find 12 boxes of equipment and 12 things children in the middle-school age range can do with them. The activities are graded by colour code:

Red: KS2.

Red/green: KS2/3.

Green: KS3.

Blue: KS-you: this doesn't mean they are more advanced but it does mean they haven't been tested in the classroom, e.g. The (Line) Dance of the 7 Friezes and 2-D extensions thereof.

3 cover centred patterns,
3, friezes,
3, wallpaper patterns and tilings,
3, spherical patterns and polyhedra.

The materials will let you explore the standard symmetry operations and how they are related.

I shall run the programmed session and be in attendance at other times.

Links and References

Centred patterns

Bob Burn: 'Sorting by Symmetry: Patterns with a Centre', ATM (2005)

Lesley Jones: 'Hubcap Symmetry, Mathematics in School', vol. 20, no. 2 (March 1991)

Paul Stephenson: www.magicmathworks.org/masterclasses/symmetry.pdf

Friezes

Bob Burn: www.atm.org.uk/resources/friezes.html

Bob Burn: 'Friezes with LOGO', *Micromath* 11, 1 (1995)
Heather McLeay & Jan Abbas:
'Algorithms for the Seven Distinct Frieze Types',
Mathematics in School, vol. 20, no. 2 (March 1991)
'The Seven Frieze Types - Some Classroom Experiences',
Mathematics in School, vol. 20, no. 3 (May 1991)

Wallpaper patterns and tilings

Bob Burn: www.atm.org.uk/resources/friezes/ATM-Wallpaper-and-Tessellations.pdf

Spherical patterns and polyhedra

Marjorie Gorman: 'Temari Balls', *Mathematics Teaching*, 134 (March 1990)

Paul Stephenson: www.magicmathworks.org/masterclasses/the-cube-symmetry-workshop.pdf

Your contributions

A magnetboard will be used to display the 12 activities. This makes it possible to add your own suggestions for the benefit of all who follow. *Feel free to send me ideas ahead of the conference.*

Paul Stephenson
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