

Student Task Sheet

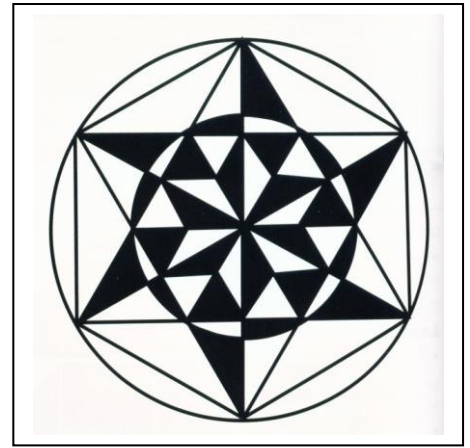
Year 7

DEADLINE:

Focus:

To be able to draw and describe the symmetry of geometrical designs based upon regular polygons inscribed within circles.

Explore the geometrical properties of religious symbols.



GEOMETRICAL PATTERNS

People have used different forms of meditation for thousands of years.

One way of becoming calm is to concentrate your mind on a given object. In Hindu tradition a Yantra is used for this purpose. Yantras are based on geometrical patterns constructed within circles and have some form of symmetry.

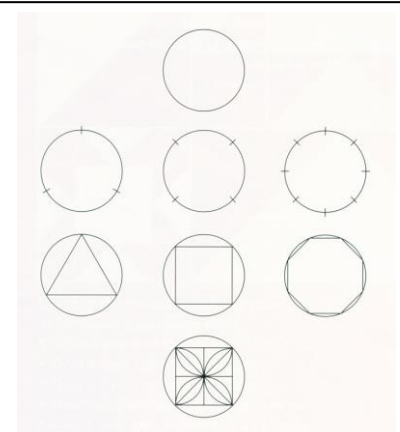
Explore the history of Yantras and examples of different designs.

Then you must choose one of the following tasks:

1. Design an A3 or A4 poster of your design.
2. Write a report about the symmetry in Yantras.
3. Use ICT to create your own Yantra pattern.

To draw your Yantra design:

1. First draw a circle.
2. Divide the circumference of the circle into equal parts (between 3 and 8).
3. Join the points to make a regular polygon inscribed (means that its corners touch the circle) within the circle.
4. Use the polygon to construct a symmetrical design.
5. Colour your design symmetrically.



Extension Task:

Explore the geometrical (symmetry) properties of symbols and designs from other religions. Present these in a poster or a PowerPoint.

Design more complex Yantras by starting with two or more concentric circles.

Research Islamic Patterns.

Suggested ways to use ICT: You could look at:

Use of drawing software.

The Internet for examples and information on religious symbols and Yantras.

