

## Islamic patterns challenge: part 1

This lesson introduces the learners to Islamic patterns and the concept of tessellation.

### Support notes

Introduce the learners to Islamic pattern using the [Pattern in Islamic Art website](#) which demonstrates examples of Islamic patterns in architecture. It has images and slideshows and that show how an Islamic pattern is constructed on triangular isometric paper.

The [Tiling search website](#) has a slideshow of Islamic patterns.

Discuss the concept of tessellation and how this is the basis for Islamic patterns:

- Tessellation is a pattern of shapes that fit perfectly together.
- A Tessellation (or Tiling) is when you cover a surface with a pattern of flat shapes so that there are no overlaps or gaps.
- A regular tessellation is a pattern made by repeating a regular polygon.
- There are only 3 regular tessellations: Triangles, Squares and Hexagons.

After the discussion allow the learners to experiment with patterns.

In this [tessellation website](#) you will find various tessellation grids which can be printed out. The learners may use these grids to experiment and develop their own Islamic patterns. From the [David Collection museum website](#) you can print Islamic patterns, and there is a selection of outline patterns also available. This allows learners to become familiar with various common patterns and see how colour can change the appearance of the shapes within the pattern.

Talk to the class about shape vocabulary in French. Point out that this vocabulary is similar because of its Latin origins Explain to the learners that you wish them to describe the patterns they have created in French. They need to describe the shapes and their colour:

e.g. ' Il y a les carres rouges' 'Il y a les étoiles jaunes' ' les triangles sont bleus'

You may wish to display the [shape vocabulary sheet](#) to help with this task.

Review with the class the concepts they have learned.

## Islamic patterns challenge: part 2

This session helps the learners to consolidate what they have learnt about tessellation and practise using shape vocabulary in French in conjunction with colour adjectives.

### Support notes

Begin the session by asking the learners questions about what they have learned about Islamic patterns and tessellation. Discuss the common shapes and colours and their names in French.

Explain to the learners that they are now going to create their own Islamic patterns. Distribute squared and triangular isometric paper or use the [grids on the tessellation website](#). Introduce the terms for protractor: le rapporteur and compass: le compas in French. Demonstrate a simple Islamic pattern using these instruments.

Throughout the demonstration speak in French.

- 'Utilisez le rapporteur pour dessiner les angles.'
- 'Utilisez le compas pour dessiner les cercles'
- 'Dessinez une ligne droite'

Learners can work independently or in pairs creating Islamic patterns or similar tessellations. For those who find this complex they may create simpler patterns by colouring patterns using the outlines of the triangular isometric paper. In doing this they may create new shapes within the equilateral triangle tessellation.

Bring the class together to discuss the different methods they have used to create Islamic patterns. Ask the learners to describe the shapes in their work in French. The tessellations can be used to create a wall display.