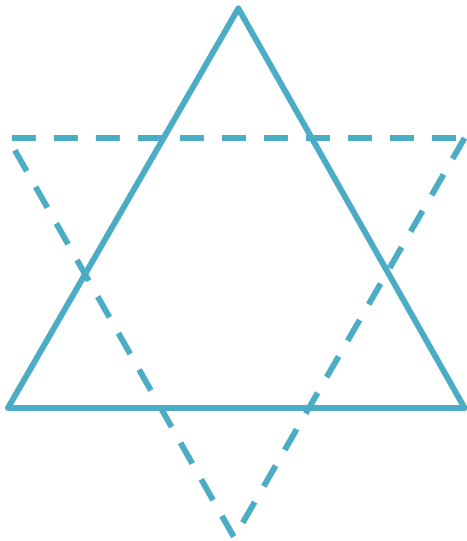


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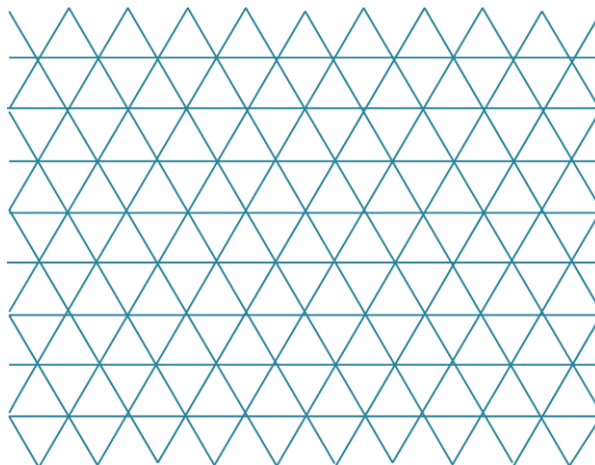
Star of David Tessellation



The Star of David is known as a 'hexagram' shape. This means it's made from two equilateral triangles – one placed on top of the other. An equilateral triangle has three equal sides and angles, hence its name. Why not measure the sides and angles here to see for yourself?

Now it's time to make a tessellated pattern from one of the star's equilateral triangles.

- Cut out the triangle with the dotted line from the star above and make a stiff template by gluing it onto card and cutting it out.



- On a fresh sheet of paper, draw around the triangle many times to make a pattern similar to the example shown above.
- Next try turning the triangle template any way you like, even overlapping if you want to. The idea is that you create your own unique design.
- When you've finished, colour your artwork with shades of blue just like the Star of David.

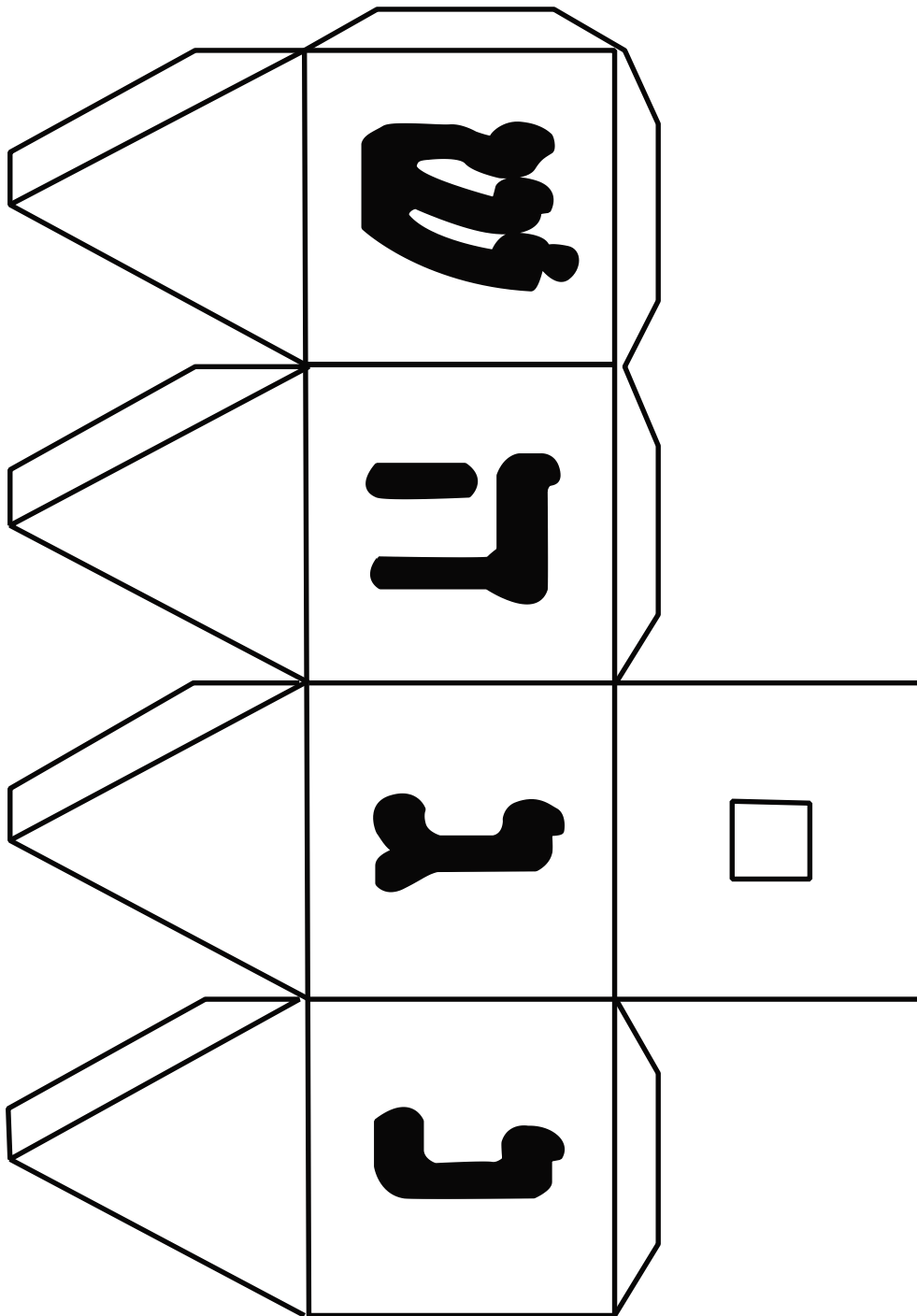
Star of David – Teachers' notes

National Curriculum, Mathematics, Upper KS2

- Represent the position of a shape following a translation and know the shape has not changed.

Over two thousand years ago a Syrian king took over Jerusalem and tried to force Jewish people to worship Greek gods. A group of people called the Maccabees rebelled. They recaptured Jerusalem and rebuilt a temple that had almost been destroyed. Hanukkah is a time when Jewish people remember the Maccabees. They decorate their homes with blue and white decorations – the colour of the Israeli flag. The Star of David is a common Hanukkah decoration. For Jews, the Star of David symbolises that God rules over the universe and protects us from all six directions: North, South, East and West. In the activity here, children explore tessellation by deconstructing the Star of David into its component equilateral triangles. Before they begin, ensure they understand that tessellation is a repeated geometric design that covers a surface without gaps or overlaps. Show them real life examples of tiles, paving stones etc. as well as tessellated works of art which can be found on the internet. After the activity, extend children's understanding of tessellation by setting up activities which enable them to discover that only triangles, squares and hexagons tessellate by themselves and the reasons for this.

Make your own dreidel



Use the net above to make your own dreidel. When you've finished, research on the internet how to use it to play traditional Hanukkah dreidel.

Shin



Gimel



Hay



Nun



Dreidel probability

What are the chances of spinning a shin, or a nun or a gimel each time? Experiment with the idea of probability by filling in a tally as you play Dreidel with friends, and then answer the questions below.

Shin ש	Gimel ג	Hay ה	Nun נ

How many times did you spin a shin?

How many times did you spin a gimel?

How many times did you spin a hay?

How many times did you spin a nun?

Which symbol did you spin the most?

Which symbol did you spin the least?

Did everybody in your team have the same results?

Can you explain what has happened?

Dreidel – Teachers' notes

National Curriculum, Mathematics, Upper KS2

- Recognise, describe and build simple 3D shapes, including making nets.
- Develop an understanding of probability through classroom situations.

Dreidel is a traditional Hanukkah game played by Jews around the world. The dreidel itself is a four-sided spinning top with a Hebrew letter on each side. When children have made dreidels in the activity they could use it to play a children's version of the traditional game – instructions are readily available on the internet. Here children make dreidels in order to learn about nets. Before children make dreidels help them to understand the relationship between a 3D shape and the number of 2D shapes that make up its net. For example a cube has six square sides, so the net of a cube is made up of six squares. Give children some simple nets to make so that they understand this concept before they investigate the dreidel net.

Using the resource, make a dreidel as an example to show the children. Ask children to tell you which 3D shapes make up the dreidel, eliciting that the dreidel is comprised of a cube and a pyramid. Ask children how many triangles and squares they would expect the dreidel net to have, before showing them the net. Were they were right? Why or why not?