

Making Coloured Squares: Following and Giving Instructions

Aims

To create a colourful paper blanket while following and writing instructions. To practise measuring and drawing right-angles. To begin to think about tessellation.

Note: Use the **Blanket Knitting Campaign: Class or Assembly Script**, and/or the **Better Healthcare for Mothers and Babies: Understanding the Problem** lesson ideas to set the scene for this lesson. If it is used as a stand-alone activity, you should omit the parts relating to the blanket knitting campaign and the Extension activity.

Curriculum links

England	Scotland	Wales
Mathematics – Understanding shape; Measuring. Literacy – Speaking; Listening and responding. Art & Design – Investigating pattern.	Mathematics – Designing and making; Measuring; Range of shapes. English Language – Listening (listening for information and instructions); Talking (conveying instructions); Writing (functional writing).	Mathematics – Shape, space and measures. English – Oracy; Reading; Writing. Art – Making and Investigating (pattern and shape).

What you will need

A blanket or the photo of a blanket (included) made of connected pieces of square fabric

Coloured paper, scissors, protractors, pencils for the whole class.

(You can print out protractors on transparencies, here: www.ossmann.com/protractor)

Copies of the **Making Coloured Squares** sheet (one per pupil).

What to do

Tell pupils that they are going to do some more work about blankets, which are not only useful for keeping warm or sleeping under, but also interesting because of the way pieces are sometimes fitted together to make them. Show them the blanket or photo. What sort of shapes have been put together to make this blanket? Can pupils think of any other things that are made of similar shapes together? Prompts could include pavement or patio slabs, mosaics, bathroom tiling.

Tell them they are going to make their own class blanket out of squares of coloured paper. If you like, you can say that this will be displayed to remind the children about the blanket that is being made to show how much we want mums to have better healthcare in poorer countries (see Extension for a link back to the blanket knitting campaign, once the blanket has been made).

Activity 1

1. Tell them that they will be given a sheet with instructions about how to make squares for the blanket. It is important that they read the instructions carefully to themselves and then follow them exactly. If there is anything they don't understand, they should ask you (their teacher) not other children.
2. They will need to have a protractor or another way of measuring rightangles for their squares (assuming they have covered right-angles already), as well as coloured paper, scissors and a pencil. Hand out the equipment.
3. Hand out the **Making Coloured Squares** sheet. The children should put their square on the table in front of them and put their hand up when they're finished so you can check their work.
4. When everyone has finished, there will be lots of coloured squares in the classroom.

Activity 2

1. Tell the class that now they have practised following instructions, they are going to try and write their own instructions for the class to make the squares into a 'blanket' somewhere in the classroom.
2. If you have a floor space suitable or want them put up on the wall, tell the children where they should be trying to get all the squares.
3. The children need to write a list of instructions that you would be able to read out to the class. They need to think about the best way for everyone to get their squares into the right place without there being a stampede. (Maybe people should get up in alphabetical order? Or one table at a time?). They should consider how to manage taping squares together or pinning them up. (Should one child be given charge of sticky tape or pins, or should everyone do their own?) Will someone need to be in charge of ensuring that the squares are put together so that they make a regular shape? Which face of the square should be upwards? What should happen if there are odd squares left over?

4. When they have finished, ask for volunteers to read out their instructions. You can comment on each one and ask the class whether they think those instructions would work, and why.
5. If you want to, you can ask the children to test out following different instructions and see whether they work. Choose a set of decent (or interesting!) instructions and have the class follow them all the way through so that you make the 'blanket'.

Plenary

Conclude the lesson by reflecting on what makes instructions work. What do people need from instructions? What makes them useful? Draw out ideas about being clear, thinking through what people need to know, and keeping things as simple as possible.

Extension

Global Citizenship: If you are getting involved in the blanket knitting campaign, you might want to do further work using the coloured square blanket. Children could add a smiley face to their coloured square if they or their families knit a square towards the Oxfam blanket – keeping track of how many knitted squares the class have contributed. They could add additional coloured squares for every knitted square they contribute. Alternatively, if other classes are also involved, you might want to use the squares to create a big mural in the assembly hall, perhaps decorated with posters about the importance of healthcare for Mums and babies.

If you have not already done so, you could use the **Beliefs and Changing the World** lesson plan to introduce pupils to the idea of campaigning.

Mathematics

Pupils could use the 'blanket' to do some maths exercises, finding the area of the blanket, working out how many 15cm squares would be needed to cover, for example, Wembley football pitch (105 metres long and 68 metres wide). You could also use the coloured squares to investigate square numbers.

Making coloured squares

Please follow these instructions carefully.

1. Draw a square with sides that are **15 cm** in length. Use the protractor to make sure that each angle is **90 degrees**.
 2. Mark the angles in each corner on **one side** of your square. In the middle write the total number of degrees in the angles of a square.
 3. Cut your square out carefully with the scissors. Write your **first name** in the middle of the square on the side that **does not** have the angles written on it.
 4. When you have finished, put your square in front of you on the table and put your hand up. Your teacher will come and check your work.
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