

Objectives

Year 2

- Begin to recognise line symmetry.

NNS Framework

Section 5: Pages 84-85 *Pupils should be taught to recognise line symmetry in simple cases.*

Year 2

- Recognise and sketch a line of symmetry; for example, in pictures of insects, road signs, flags testing where appropriate with a mirror.
- Complete a symmetrical pattern by drawing or making the other 'half'.

Vocabulary

line of symmetry

mirror line

symmetrical

reflection

match

You will need

Mirrors

Arrive Alive – A Highway Code for Young Road Users
KS1 Symmetry worksheets 1, 2, 3 and 4

Road Signs Flash Cards (if available)
Road Signs Poster

Mental skills

Ask the children to look at a diagram of a line, so that whatever is in the box on one side must equal that on the other side. (Draw on board on OHT for whole class.)

Change the numbers and calculations used depending on the level required and ability of your students (e.g.: you may want to concentrate on reviewing additions up to 10).

Example:

5 + 2	3 + 4
	6 + 2
2 + 1	
3 + 5	
	3 + 1 + 1

Teaching notes

What is symmetry? In Year 2, introduce the idea of reflections using painting patterns, or creating patterns by folding and cutting paper, giving one line of symmetry.

Activity 1

Use *Symmetry worksheet 1* or/and *2* (differentiated) to develop the ideas of reflective symmetry on paper.

Ask children to work in pairs using mirrors to work out and draw the lines of symmetry.

Encourage discussion and use of correct vocabulary. (More able students should be encouraged to look for more than one line of symmetry, for example the flag in Activity 1 on *worksheet 2*.)

Ask the children about their ideas of symmetry. Discuss any examples of symmetry that they have come across already – for example, in nature, or in other topics.

Activity 2

Introduce the children to the different road signs, using the Road Sign Flash Cards as examples. *Where have they seen the signs in the neighbourhood? What do they mean?* Discuss why you need road signs.

Use Activity 2 to look at symmetry in road signs. Develop the discussion of symmetry in road signs by asking the children to look at pages 24-25 of the *Arrive Alive* booklet or the *Road Signs* poster or flash cards. Encourage more able students to look for other road signs with one or more lines of symmetry.

Worksheets 3 and 4 can be used as an extra resource with further activities, extension work, or homework.

Activity 3

Activity 3 develops the understanding of line symmetry (the work is differentiated for *worksheets 3 and 4*). Students should sketch in the other 'half' or reflection of each shape, using a mirror to help them if needed.

Again, students should be encouraged to 'research' the road signs to check for correct colours.

Activity 4

This is an activity for more able students, to test whether they understand the principle of 'no' lines of symmetry.

Plenary

Discuss with the children the different lines of symmetry they have found looking at the road signs.

What other images and everyday objects can they think of that are symmetrical? What terms have they learnt that relate to symmetry – can they demonstrate an understanding of line symmetry if you produce a symmetrical pattern or picture?

KS1: Symmetry 1

Name:

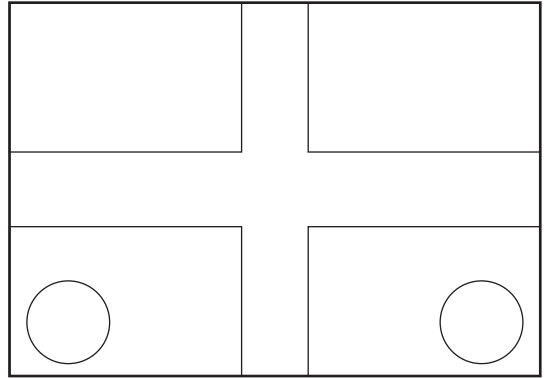
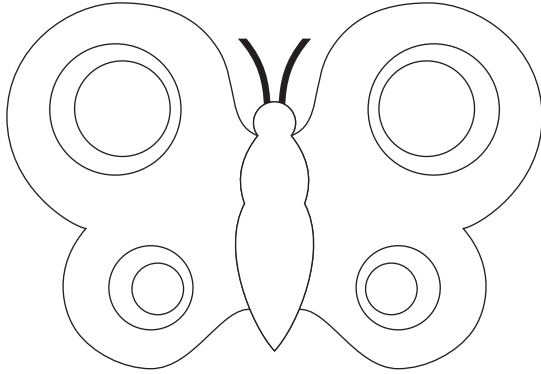
Activity 1



Draw on the line of symmetry for each picture.



Colour each picture so that it is symmetrical.



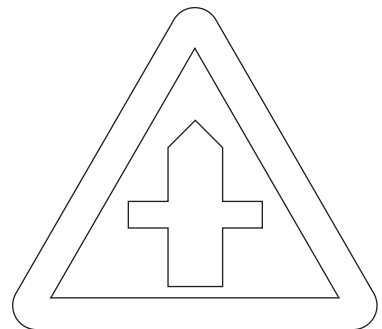
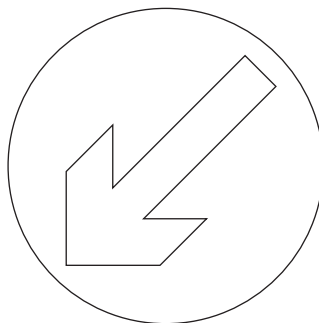
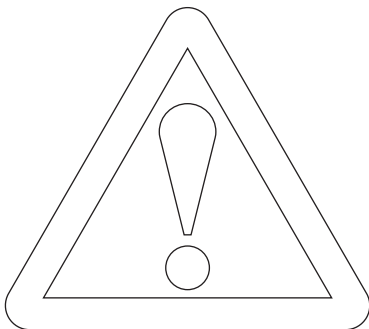
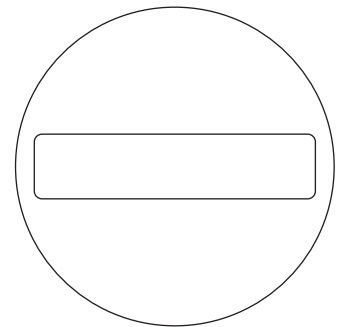
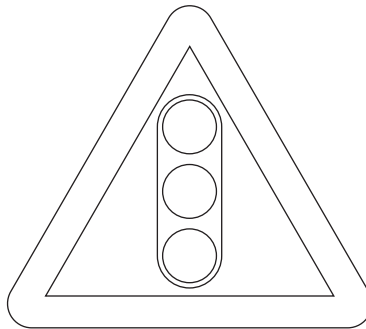
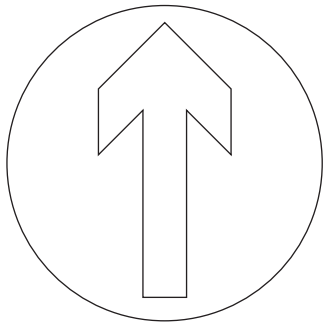
Activity 2



**Mark the *line of symmetry* (or mirror line) for each sign.
Check with a mirror.**



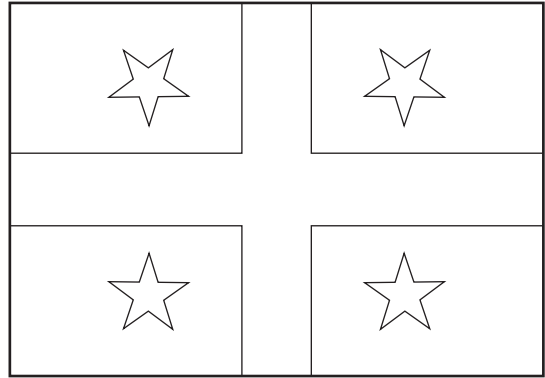
Colour in each sign correctly.



Activity 1

 Draw on the line of symmetry for each picture.

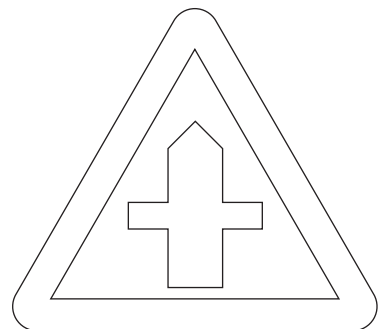
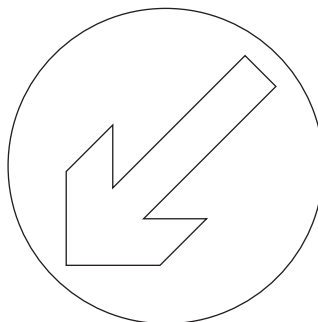
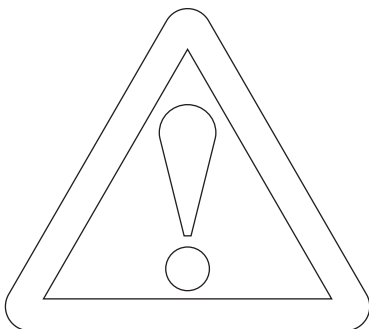
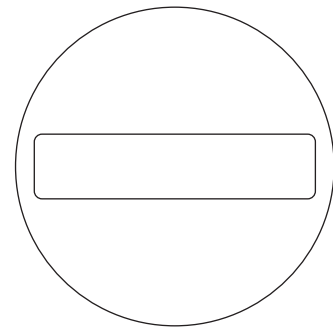
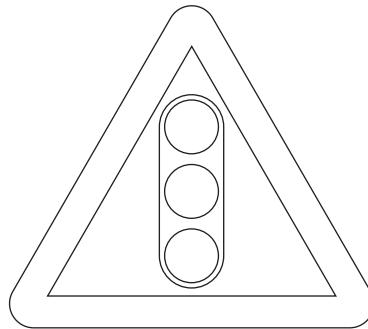
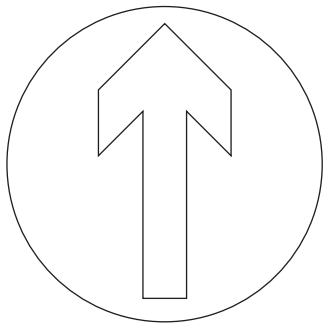
 Colour each picture so that it is symmetrical.



Activity 2

 Mark the *lines of symmetry* (or mirror lines) for each sign.
Check with a mirror. How many lines of symmetry does each sign have?

 Colour in each sign correctly.



What other road signs have lines of symmetry?

Activity 3

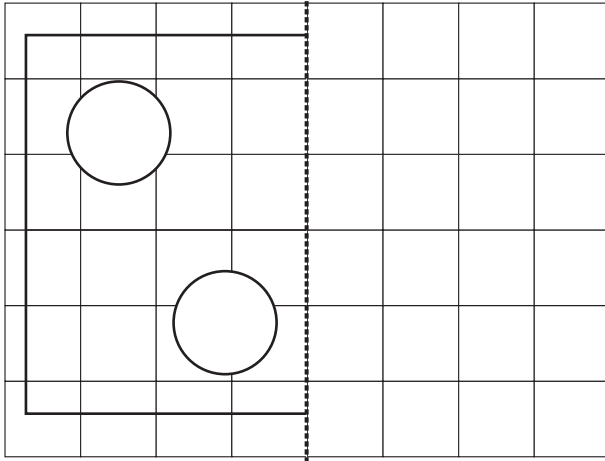


Complete these patterns by drawing the other 'half'.

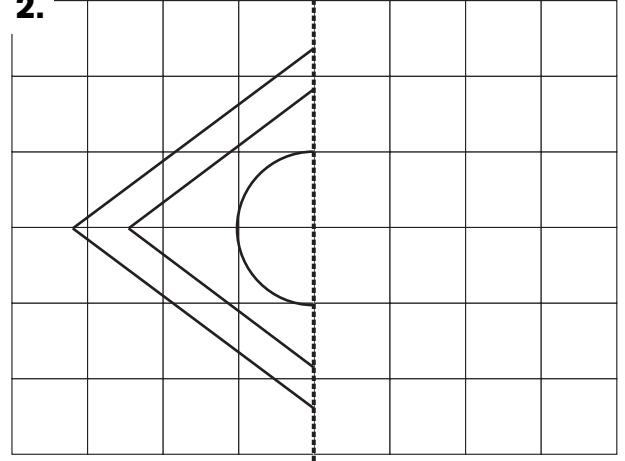


Colour each picture so that it is symmetrical.

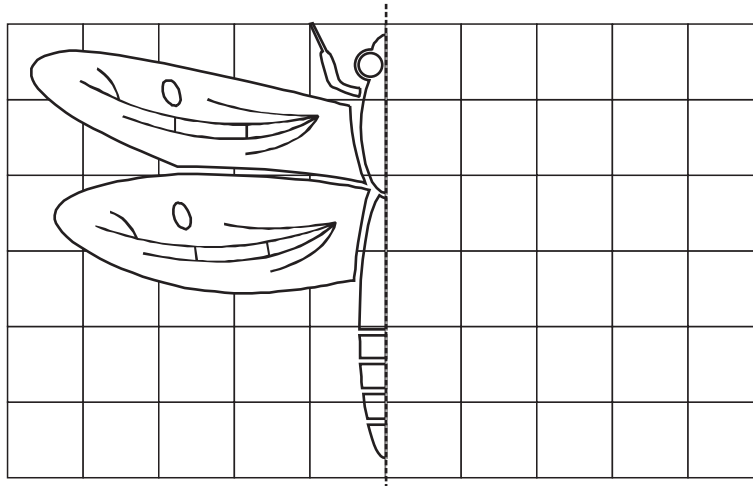
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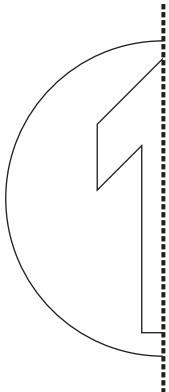
2.



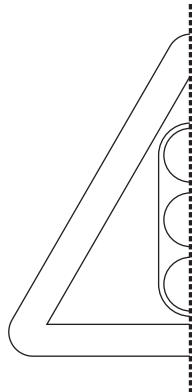
3.



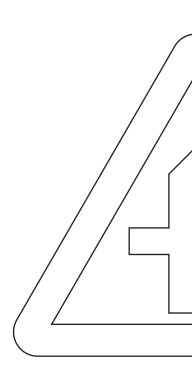
4.



5.



6.



Activity 3

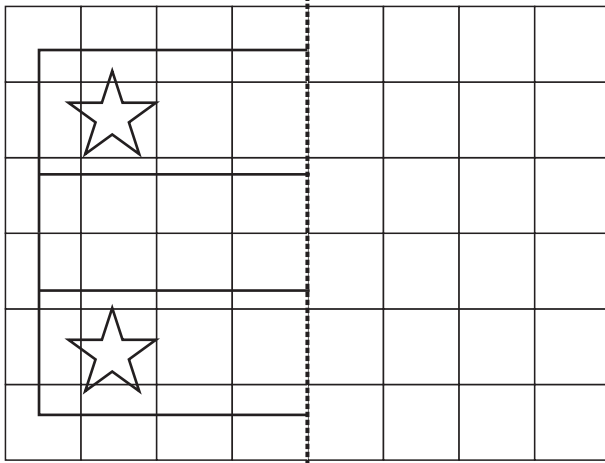


Complete these patterns by drawing the reflection.

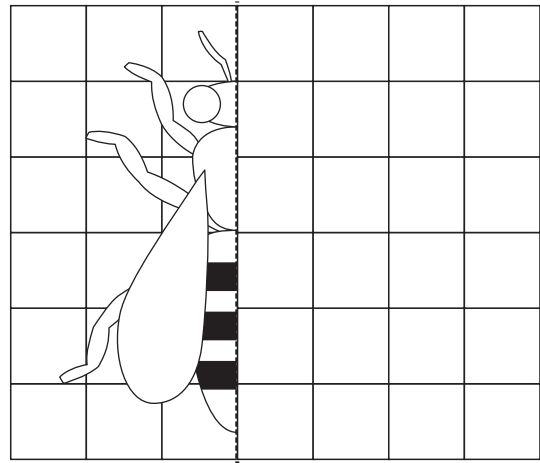


Colour each picture so that it is symmetrical.

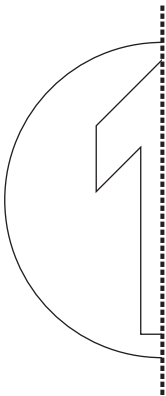
1.



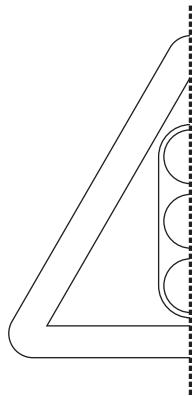
2.



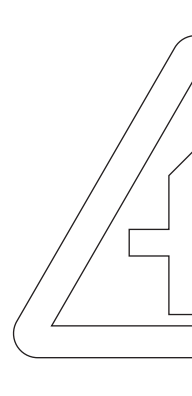
3.



4.



5.



Activity 4

Which of these signs have *no* lines of symmetry?

