

- Read the problem to the children. Ensure that the children understand what the problem is asking them to find out. Help them to identify the information contained in the problem that will help them to solve it.
- Stick the enlarged set of alien cards on the board. Instruct one of the children to use the cards to find a solution to the problem. Ask the rest of the children to say whether they think the answer is correct and why.
- Remind the children of the counting strategy you modelled earlier in the lesson, by asking questions such as: *Why has Amelia grouped the aliens with two eyes together at the beginning? Or: Can you show Lily how she could have sorted the aliens to make it easier to add up the total number of eyes?*
- Organise the children to work in groups of three or four. Give each group some alien cards, a long strip of paper and some Blu-Tack. Ask the children to work together to find a solution to the problem. Tell each group to record their answers by sticking the alien cards onto the strip of paper.
- Gather the children together. Check each group's answer. Are any of the answers the same? Encourage the children to notice that it is much easier to identify repeats if the aliens are ordered in a line with the two-eyed aliens and one-eyed aliens grouped together.
- Invite the children, in their groups, to find all the possible combinations of aliens that Spaceman Sid may have seen. Tell them to record each answer on a separate strip of paper. Remind the children to check their work carefully so that they do not repeat any answers.
- Talk to each group about what they are doing. Show the children how to organise the answers they have found to help them decide whether they have found all the possibilities:
 $2 + 2 + 2 + 2 + 1$
 $2 + 2 + 2 + 1 + 1 + 1$

Ask: *Which strip of aliens comes next?*

Drawing together

- Ask each group to say how many answers they have found. Choose a group who showed good understanding of systematic recording to stick their answers, in order, on

the board. Ask them to explain to the rest of the class how, by organising their answers in this way, they were able to recognise when they had found all the possibilities.

- End the lesson by referring back to the problem and concluding that there are four possible answers.



Support

Provide the number of two-eyed aliens for each combination, asking them to work out the number of one-eyed aliens.

Extension

Ask the children to record each possibility as a number sentence.

Further idea

Ask: *How many different ways can you pay for a toy that costs 8p, using a combination of 1p and 2p coins?*