

# STOPS E1 - Lesson Plan

Name

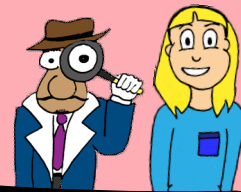
STOPS E1 - Toy Shop Patterns

Learning Intention

to solve problems by finding a pattern

Resources

Large or IWB copies of the patterns on the sheet. It may be useful to cut them into strips so that children see each one separately. Children may need cut-out animals for the extension if they make their own patterns.



## Teaching notes

Ask children what a pattern is and establish that it must be repeated. Ask if they can see any patterns in the room or at their home. Show a large version of the whole sheet and ask what patterns they can see. (You may need to check that they know what each of the animals are.)

Show each pattern one at a time (either by cutting a paper copy or using a 'snipping' software tool on the computer). Discuss what the pattern is showing and how it repeats. Establish what the next object would be and ask the children to guess what the fifteenth object will be.

If children are able, record the number in the sequence below each object in the pattern and ask children to describe it. Establish that all the odd numbers will be donkeys and all the even numbers are tigers. Establish what the 15th object will be by drawing the rest of the pattern or reasoning about the numbers, for example: 15 is an odd number and all the odd numbers are donkeys so the fifteenth object must be a donkey.

Allow children 10-15 minutes to look at the other patterns (these can be separated or kept together on the sheet). Ask children to report back on the patterns they have found, what they think the next object is and what the 15th is. Focus on mathematical reasoning where possible, for example in pattern 4 they might observe that the mouse is on every multiple of 3 so the 15th object must be a mouse as 15 is a multiple of 3.



## Key Questions

- What patterns can you see?
- What will be next?
- What will be after that?
- What will be in fifteenth position?
- Can we use the patterns to help us make a prediction? What predictions can you make?

## Differentiation:

Higher: STOPS Early Solvers

Lower: STOPS E2

Extension: Can you make your own pattern with four different animals?

Lower: Only ask children to comment on the next object, not the fifteenth.

## Solutions:

Next objects for each line:

Orange tiger, brown donkey ...

Brown donkey, orange tiger ...

Cow, raccoon ...

Sheep, sheep ...

Mouse, orange tiger ...

Fifteenth objects will be:

Donkey

Cow

Raccoon

Mouse

Raccoon