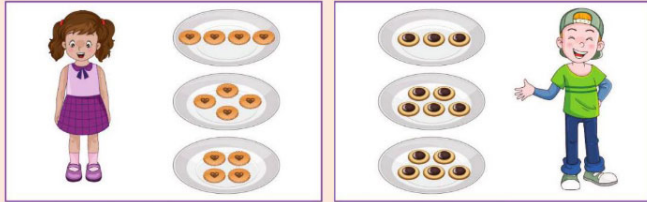


Developing Fact Fluency- What to LOOK for in a textbook?

#1 How is the conceptual understanding for the operation developed?


- Is there meaningful representation for the structures within the operation?

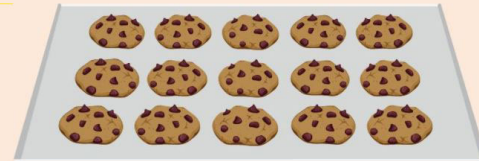
Anchor Task



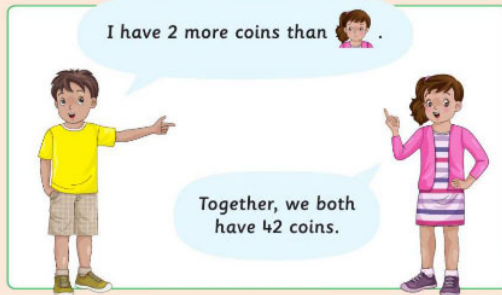
Who made equal groups?
How can we tell?

Anchor Task

Find different ways to tell
the total number of .



Anchor Task



Together, we both
have 42 coins.



Together, we both
have 42 coins.

Draw bar models for each situation.
How are they different?

Early Multiplication Structures:

- 1) Equal-Group Problems
- 2) Comparison Problems
- 3) Array and Area Problems

#2 Is the Learning Progression Developmentally Appropriate?

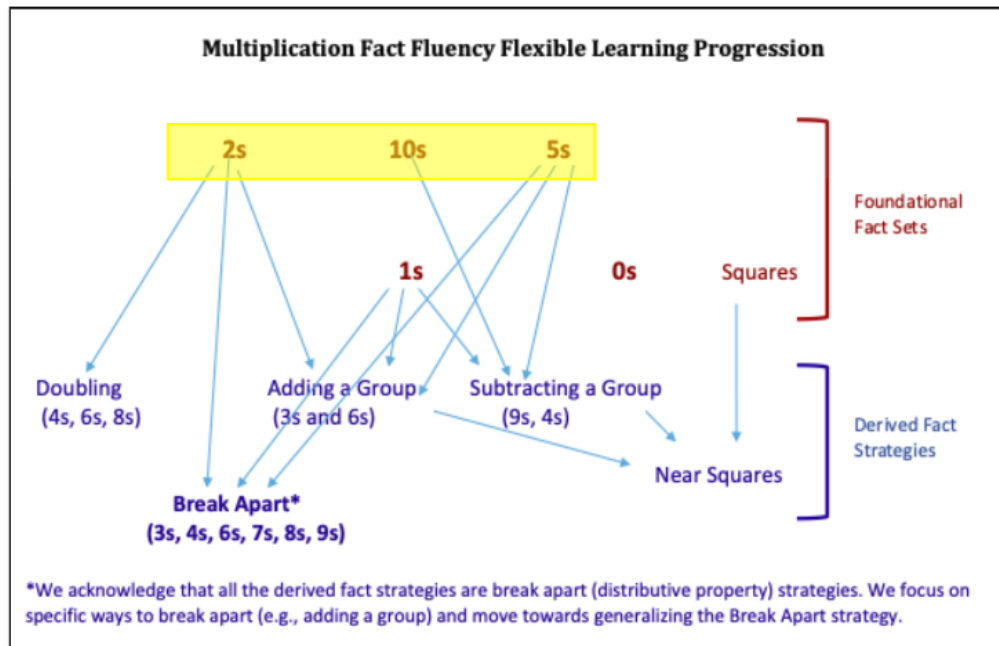
Chapter 4

Multiplication

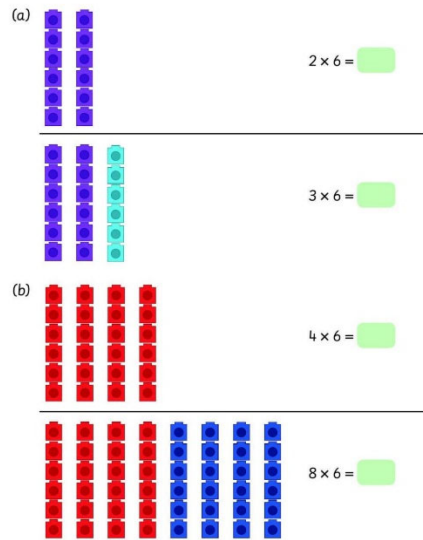
- 1 Making Equal Groups
- 2 Adding Equal Groups
- 3 Making Equal Rows
- 4 Multiplying 2
- 5 Finding Doubles
- 6 Multiplying 5
- 7 Multiplying 10
- 8 Multiplying 3 and 4
- 9 Solving Word Problems

Multiplication and Division

- 1 Multiplying 0 and 1
- 2 Dividing by 1
- 3 Multiplying 3 and 4
- 4 Multiplying 6
- 5 Dividing by 6
- 6 Multiplying 7
- 7 Dividing by 7
- 8 Multiplying 4 and 8
- 9 Dividing by 8
- 10 Multiplying 9
- 11 Dividing by 9
- 12 Solving Word Problems
- 13 Solving Word Problems

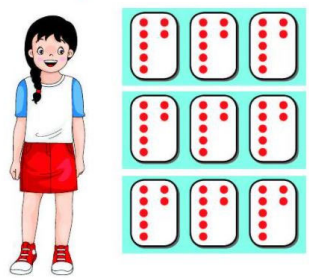


#3 What support is given for students in learning and applying the strategies?



Number Choice
Visual Representation
(Adding a group and doubling)

Use $3 \times 7 = 21$
to figure out 9×7 .



Metacognitive Thinking
(sentence strands)

