

Lesson 110 **ALGEBRA**

Counting patterns and multiples on the hundred square

CURRICULUM ALIGNMENT

ALG.PRR.3a

identify rules that describe the structure of a pattern and use these rules to make predictions.

NUM.OPS.3

understand and apply flexibly the four operations; and the relationships between operations.

INTERACTIVES **Hundred Square** · challenge, display, explore

WHAT THIS LESSON TEACHES

A multiple is a number you land on when you count on in equal jumps from zero. Shading those landing spots on the hundred square shows the counting pattern.

- 10 is a multiple of 5 because you land on it when you count 5, 10.
- The multiples of 2 up to 10 are 2, 4, 6, 8, 10.

MODEL THIS ON THE BOARD

MULTIPLES OF 5 ON THE HUNDRED SQUARE

- 1 Begin at zero and make equal jumps of 5.
- 2 You land on **5**, then **10**, then **15**, then **20**.
- 3 These landing numbers are the multiples of **5**.
- 4 Shade **5**, **10**, **15** and **20** to see the fives pattern.

DISCUSSION STARTER

REFLECT Which multiple pattern was easiest to see on the hundred square? Why?

ANSWER KEY

Scaffold: visual check on the page**Q1:** 15**Q2:** Yes**Q3:** 10, 20

Spot: Multiples of 5 end in 0 or 5 only, not 6. He should shade 5, 10, 15, 20, 25, 30... (the two straight columns on the hundred square).

EXTENSION SHEET · STRETCH ANSWERS

S1: 36 is a multiple of 4 ($9 \times 4 = 36$). 38 is not.**S2:** 35, 65 and 95. They end in 5; multiples of 10 end in 0.**S3:** 6, 12, 18, 24, 30**S4:** 20

S5: Yes. Every multiple of 10 ends in 0, so it is even, and the even numbers are the multiples of 2.

Investigation: Where do the patterns meet? — open-ended; scan pupils' working for valid solution paths rather than a single answer.