1 Module 12

ORIGO STEPPING STONES 2.0

Core Focus

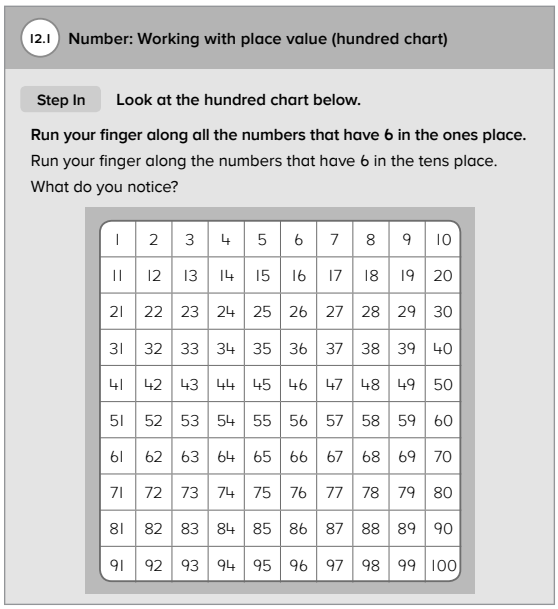
- Number: working with place value and counting sequence to 120 using a hundred chart
- Subtraction: Taking multiples of 1 or 10 from any two-digit number using a hundred chart
- Measurement: Capacity and mass

Ideas for Home

- Practice skip-counting to 120 when passing the time traveling or waiting.
- Practice reading two- and three-digit numbers on apartments, houses, street signs, and highway exit signs.

Number

- A hundred chart helps students understand the base-ten system. Students use this model to recognize vertical patterns of +10 and -10, and horizontal patterns of +1 and -1.



12.1 Number: Working with place value (hundred chart)

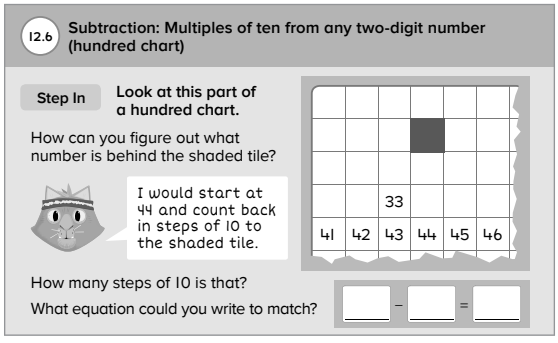
Step In Look at the hundred chart below.

Run your finger along all the numbers that have 6 in the ones place.
Run your finger along the numbers that have 6 in the tens place.
What do you notice?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Subtraction

- Students practice counting forward and backward by tens *on the decade* (10, 20, 30) and *off the decade* (27, 37, 47) with help from the hundred chart.

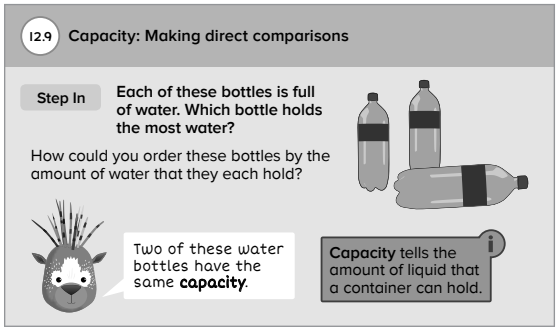


In this lesson, students start at any two-digit number off the decade and count in steps of ten, e.g. 44, 34, 24, 14.

Module 12

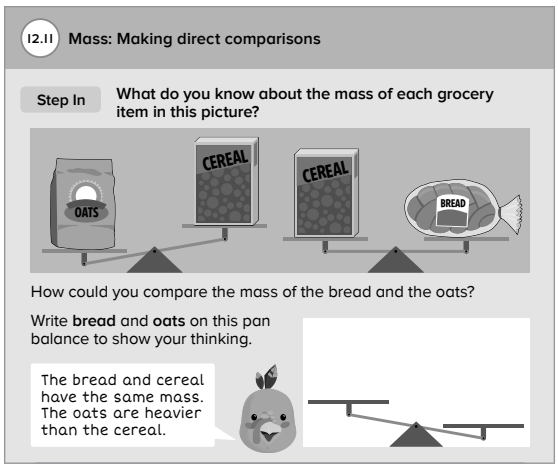
Measurement

- Language associated with capacity and **mass** (or **weight**) is explored in this module. Expressions like *full*, *empty*, *half-full*, *nearly full* describe capacity, or the amount a container can hold. For mass, the language includes *heavy*, *heavier*, *light*, etc.



In this lesson, students fill bottles with water and then compare and order capacities.

- Counting non-standard units (for example, the number of same-size cubes, or equal-size scoops of water) is foundational to exploring capacity and comparing weight.



In this lesson, students count and record the number of uniform non-standard units (cubes) to compare the masses of objects.

Ideas for Home

- Explore capacity by asking, "Which container seems the right size for these leftovers?" or, "Which glass will hold more milk — the tall, skinny one, or the short, fat one?"
- Use marbles, beans, or cups of water to measure the capacity of different-sized containers.
- Ask questions, like, "Can a hairbrush fit into your backpack?" or "Can a garden shovel fit in the kitchen cabinet?"
- Create a coat hanger balance scale. Place objects in plastic bags and hang them from the ends of the hanger. Ask, "How many pennies does it take to balance the mass of a pencil?"

Glossary

- **Mass** and **weight** are not the same thing. However, for students in earlier grades, it is acceptable to use the two terms interchangeably, especially when most students hear *weigh* and *weight* more often in everyday conversation. The distinction between *mass* and *weight* will be addressed in later grades.