Spider sums
Activity 1

Focus of activity: Adding 10 to 2-digit numbers.

Working together: conceptual understanding

- Show children a large 1-100 grid. Place a plastic spider (or card one cut out, see child instructions) on 4. *We're going to add 10.* Count on in ones. Point out that we end up on the number below 4. *We don't need to add 10 by counting on in ones, we can use Spider counting. Spider counts in 10s by moving down her thread on this grid.* Count in 10s from 4 to 94, moving Spider as you do so, asking children to join in as they hear the pattern.
- Ask a child to place Spider on a different number on the top row. They move Spider down a row at a time as together you count on in 10s. Repeat.
- Place Spider on 34. Write 34 + 10 =. *We could count on in ones to add 10, but it will be much quicker if we use Spider counting!* Move Spider to the number underneath, i.e. 44. *She's just added 10, wasn't she quick?!* Complete the addition: 34 + 10 = 44.
- Write 73 + 10 =. Ask a child to place Spider on 73, and then show Spider adding 10. Complete the addition.
- Repeat with children placing Spider on other numbers, and then using Spider to add 10. Write the matching addition each time.

Up for a challenge?

How do you think Spider subtracts 10? Show children how Spider just moves back up the grid to subtract 10 from 45. Write 45 – 10 = 35. Ask a child to place Spider on a number not on the top row and use Spider to subtract 10.

Now it's the children's turn:

- Children choose a Spider sum. They place Spider on the first number and use her to add 10, writing the answer in the sum. Repeat for as many sums as they can.
- Go round the group and mark their additions as they do them, e.g. initially after two examples. Make sure that they are not counting on in ones.

S-t-r-e-t-c-h:

If children cope well, ask them to choose a 2-digit number on the grid and help them to use Spider to subtract 10.

Things to remember

Remember that to add 10, we don't need to count in ones – it would take too long! We can use Spider, she helps us to count on in 10s. Ask children what they notice about the answers when Spider adds 10. If necessary, point out that the 1s digits stay the same.

You may want to add something that has emerged from the activity. This may refer to misconceptions or mistakes made.

Resources	Outcomes
• Large 1-100 grid • Plastic spider (or cut out card spider, see child instructions) • 1-100 grids for children to use (see child instructions) • Spider for each pair (see child instructions)	1. Children can use Spider to add 10 to 2-digit numbers. 2. Children begin to use Spider to subtract 10 from 2-digit numbers.

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Activity 1

Work in pairs

Things you will need:
- A 1-100 grid
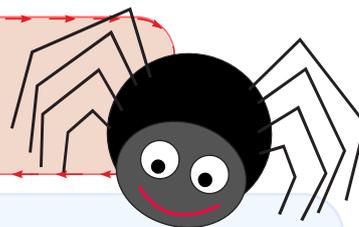- A spider
- Spider sums
- A pencil

What to do:

- Choose a Spider sum.

- Place Spider on the first number in the sum.

- Use Spider to add 10.
  Write the answer in the sum.

- Repeat for as many sums as you can.
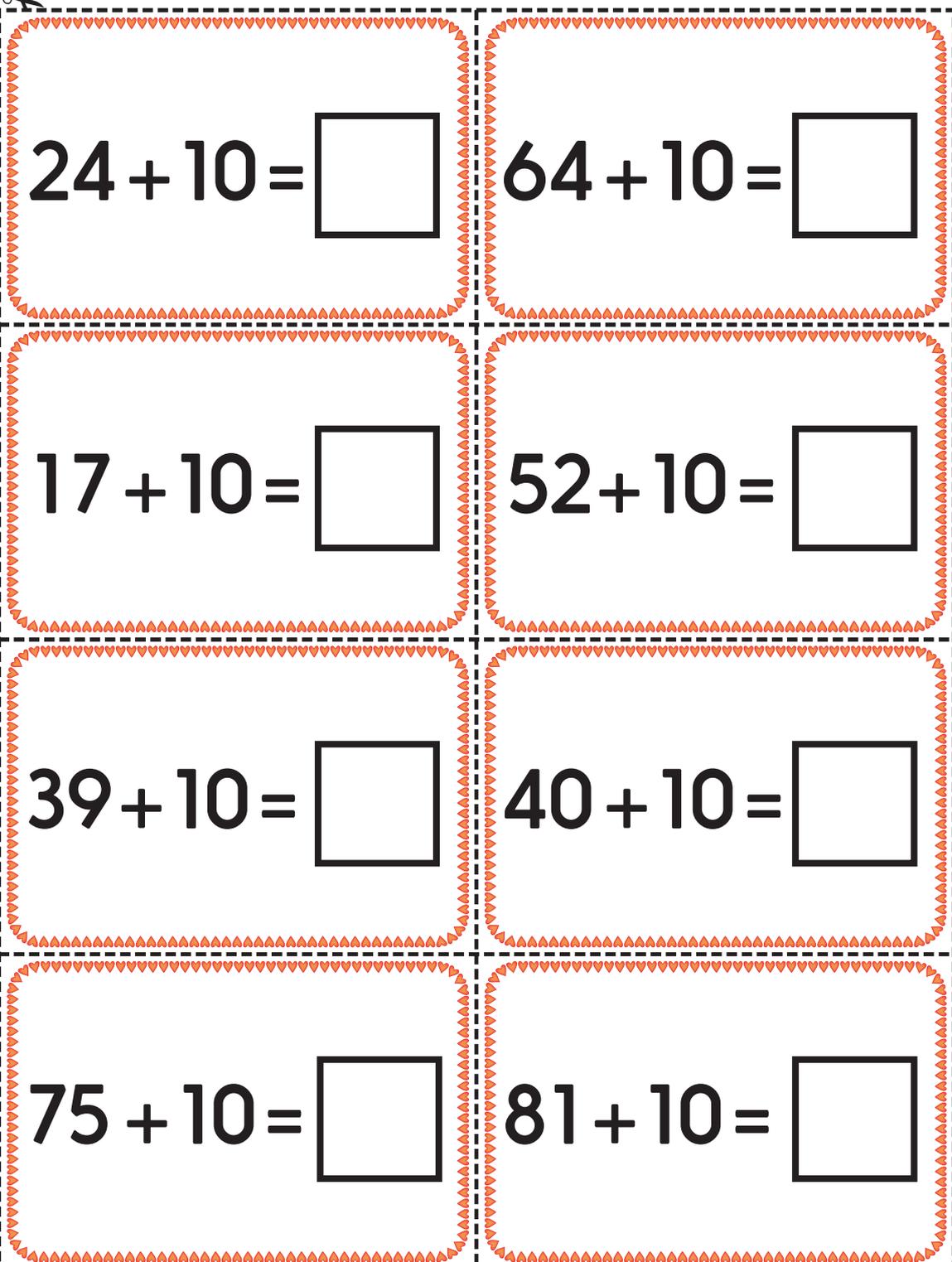
S-t-r-e-t-c-h:
Choose a 2-digit number on the grid.
Use Spider to subtract 10.

Learning outcomes:
- I can use Spider to add 10 to 2-digit numbers.
- I am beginning to use Spider to subtract 10 from 2-digit numbers.

24 + 10 = ☐

64 + 10 = ☐

17 + 10 = ☐

52 + 10 = ☐

39 + 10 = ☐

40 + 10 = ☐

75 + 10 = ☐

81 + 10 = ☐

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