

• SPRINGBOARD 4 •
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PART 3

UNIT
6

MAKING DECISIONS

Unit 6

• SESSION 1 •

TOTAL TIME

30
MINUTES

OBJECTIVES

- Choose and use appropriate operations (including multiplication and division) to solve word problems.
- Explain methods and reasoning orally.

VOCABULARY

add
subtract

RESOURCES

two hoops;
word problems 1 (resource sheet 10);
0–100 number lines and 1–100 number grids available in case children need them

HOMEWORK

Write questions for *Subtracting Snakes and Adding Ladders*

STARTER

5
MINUTES

Put two hoops on the table, one labelled 'add' and the other 'subtract'. Read the word problems cut out from the resource sheet. Ask the children to decide which hoop you should put each problem in.

KEY QUESTION

Which words give you clues about whether to add or subtract?

MAIN ACTIVITY

20
MINUTES

Choose a few of the problems from resource sheet 10 and ask the children what the necessary calculation is. Start with an addition question. Ask the children the answer to this calculation, and then the answer to the question. Then ask them to read the question again and see if the answer makes sense. Repeat with one of the subtraction questions. Spell out the four steps of the process you have just gone through.

- Work out what calculation you need to do
(it may help to look to see if there are key words which help you).
- Work out the calculation.
- Answer the question.
- Read the question to see if the answer makes sense.

Ask the children to choose a word problem to work on in pairs. After they have found the answer, they should prepare to tell the other children how they worked it out. Ask each pair to explain how they worked out the answer, including whether they did the calculation in their head or used a number line/grid to help them.

Explain Activity Sheet 6.1, which the children will have to complete before the next session.


KEY QUESTIONS

- What calculation is necessary? Which words give you a clue? What's the answer to the calculation? What's the answer to the question? Does the answer make sense?

PLENARY


5
MINUTES

Talk the children through the following two-step word problem, which involves addition and subtraction. Ask them to explain how they would solve the problem.

The supermarket has a special offer on yoghurts.

If you buy two yoghurts at 21p each you get 5p off the total price. *How much will you pay for two yoghurts?*

Unit 6

SESSION 2

TOTAL TIME

30
MINUTES

OBJECTIVES

- Choose and use appropriate operations (including multiplication and division) to solve word problems.
- Explain methods and reasoning orally.

VOCABULARY

multiply
divide

RESOURCES

two hoops;
word problems 2
(resource sheet 11)

STARTER

5
MINUTES

Put two hoops on the table. Label one 'multiply' and the other 'divide'. Read the word problems cut out from the resource sheet. Ask the children to decide which hoop you should put each problem in.

KEY QUESTION

- How did you decide which hoop was the right one for each problem?

MAIN ACTIVITY

20
MINUTES

Choose a few of the problems from resource sheet 11 and ask children what the necessary calculation is, for example:

Six tripods flew to the moon. Tripods have three legs. How many moon boots will they need? Establish that the calculation involved is 3×6 . Ask the children the answer to this calculation, and then the answer to the question – 18 moon boots. Then ask them to read the question again and see if it makes sense. Repeat with one of the division questions. Spell out the four steps of the process you have just gone through.

- Work out what calculation you need to do
(it may help to look to see if there are key words which help you).
- Work out the calculation.
- Answer the question.
- Read the question to see if the answer makes sense.

Ask the children to choose a word problem to work on in pairs. After they have found the answer, they should prepare to tell the other children how they worked it out. Ask each pair to explain how they worked out the answer.



Explain Activity Sheet 6.2, which the children will have to complete before the next session. Write one word problem together to model this activity.

**KEY QUESTIONS**

- **What calculation is necessary? Which words give you a clue? What's the answer to the calculation? What's the answer to the question? Does the answer make sense?**

PLENARY**5**
MINUTES

Tell the children that five tripods (three legs each) and seven bipods (two legs each) are going to the moon. Ask them how you could find out how many moon boots they will need. Establish that this is a multi-step problem. First they must find out how many boots the tripods will need and then how many the bipods will need, then these answers should be added together to find the total number of boots.

Name

Date

Dear Parents/Carers,

We are learning about solving word problems in our mathematics lessons, including deciding whether a problem needs us to add or subtract. Please help your child by helping to answer the questions below.

Thank you for your help.

Your child's teacher

Subtracting Snakes and Adding Ladders

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

Make up two addition questions and two subtraction questions about this board game. For example, 'You are on 35 and you roll a 5. Which number do you land on?' or 'You land on a snake's head on 95. You have to go back 30 squares. What number will you land on?'

Write your questions and answers on the back of this sheet.

Name

Date

Activity
sheet

6.1

1. Work out the missing operation, + or -

75 10 = 85

25 9 = 34

29 29 = 58

67 10 = 57

100 25 = 75

65 30 = 35

72 20 = 92

54 24 = 30

100 31 = 69

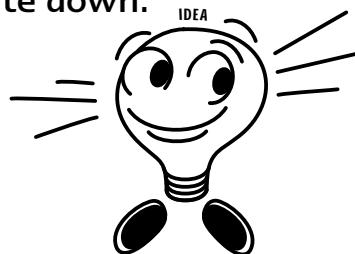
74 9 = 65

70 25 = 45

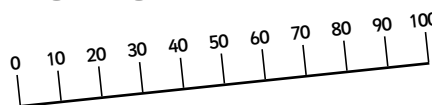
50 24 = 74

2. Look at the calculations above. Write down:

- two you would do in your head



- two you would do with a number line



- two you would do using a number grid

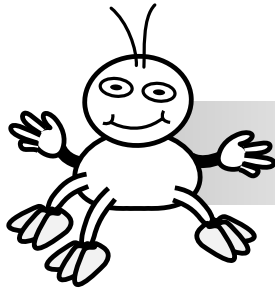
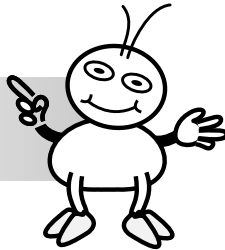
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Name

Date

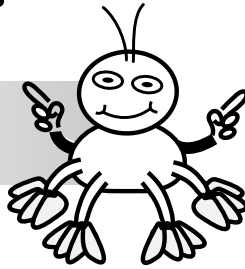
Activity sheet 6.2

Bipods have 2 legs
and 2 toes on each foot.



Tripods have 3 legs
and 3 toes on each foot.

Quadripods have 4 legs
and 4 toes on each foot.



Make up two multiplication questions and two division questions about these creatures. Make sure you also work out the answers!

Empty rounded rectangular box for writing a question and answer.

Empty rounded rectangular box for writing a question and answer.

Empty rounded rectangular box for writing a question and answer.

Empty rounded rectangular box for writing a question and answer.

Unit 6

RESOURCE SHEET 10

Sharanjit is 12 years old.
Her eldest sister is 9 years older.
How old is her sister?

Mrs Jones is 40 years old.
Her husband is 4 years younger.
How old is he?

You have saved £12 from your pocket money.
Auntie Shirley gives you £5 for your birthday.
How much money do you have altogether?

You've managed to save £20.
You decide to spend £5 on new books.
How much money will you have left?

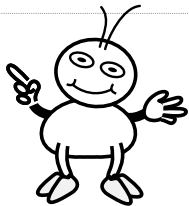
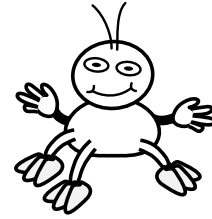
In a board game, you have landed on the square 49.
You roll the dice again and get a 5. You move on 5 spaces.
Which number do you land on?

In a board game, you land on the square 41.
It says 'Move back 10 spaces.'
What square will you land on?

Unit 6

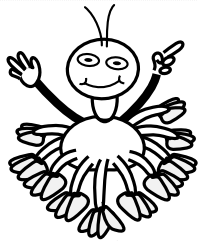
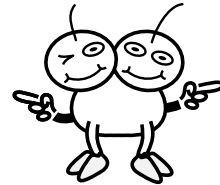
RESOURCE SHEET 11

Six tripods fly to the moon.
 Tripods have three legs.
 How many moon boots will they need?



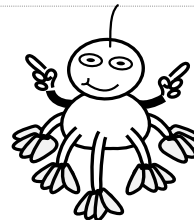
Some bipods want to fly to the moon.
 They have two legs.
 There are 16 moon boots available.
 How many bipods can go to the moon?

Duotops have 2 heads.
 To go outside their spacecraft they need to wear space helmets.
 There are 7 duotops.
 How many helmets will they need altogether?



Decipods have ten legs.
 They wear special space shoes when
 they go outside their spacecraft.
 There are 50 shoes available.
 How many decipods can go outside?

Quinipods have five legs.
 How many space socks will nine quinipods need?



Quinipods have five legs.
 There are 20 moonboots available.
 How many quinipods can fly to the moon?