

E1 Functional Maths – Halloween

Introduction

Name _____ Date _____

The questions are about the work Dot and Sam do in October.
Dot works in a supermarket. Sam works in an after-school club.

Check you can read and understand these words.

Maths words

altogether	above	bottom	calculation	change
cheapest	check	drop below	expensive	how many (more)
large	medium	most	sale	small
tick	top	total	working (out)	



Discuss the maths words with a friend or your teacher.



You might want to highlight the maths words in the worksheets.

Halloween words

after-school club	carve	costume	display	giant
munchkin	pumpkin	sale	shelf	spider
spotty	stock	stripy	supermarket	witch



Work in pairs.

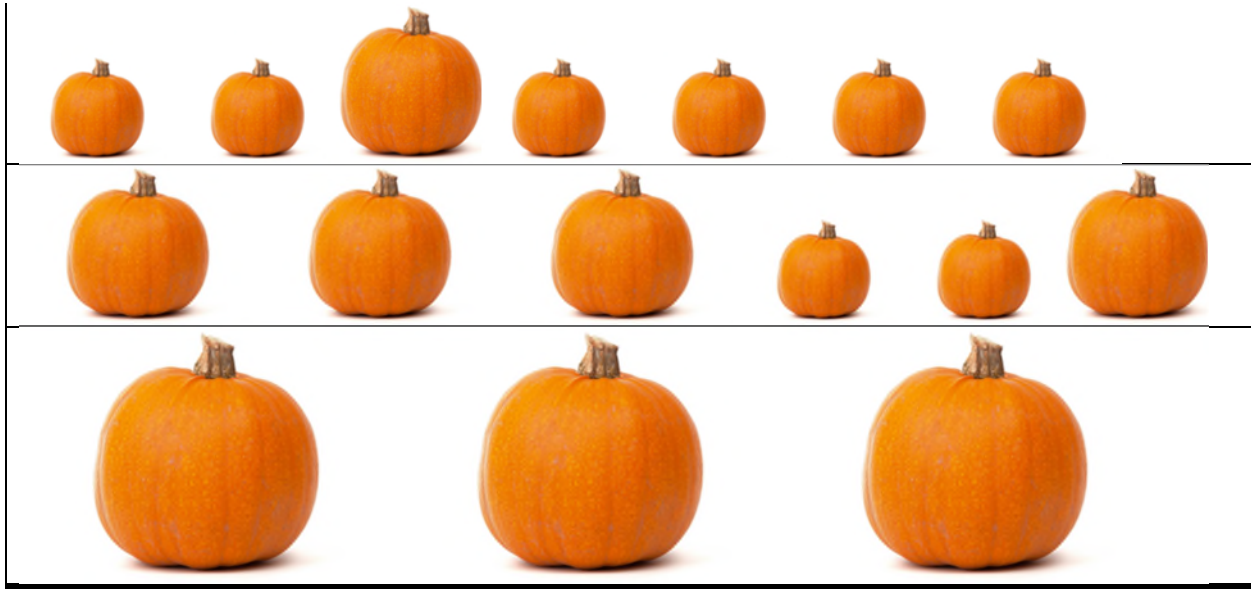
- Choose a Halloween word.
- Don't tell your partner the word.
- Describe it to your partner without saying the word.
- Your partner has to guess the word.
- Now swap roles.

E1 Functional Maths – Halloween

Non-calculator section

Name _____ Date _____

 You must show your working out.  Do not use a calculator.



1. Sam works in an after-school club. He takes the children to a pumpkin farm.

a. How many pumpkins are on the top shelf?

(1 mark)

b. How many pumpkins are on the bottom shelf?

(1 mark)

c. How many pumpkins are there altogether?

(1 mark)

2. The farm sells small, medium and large pumpkins.

a. How many medium pumpkins are there?

(1 mark)

b. How many small pumpkins are there?

(1 mark)

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Non-calculator section

Name _____ Date _____

 **You must show your working out.**  **Do not use a calculator.**

3. Sam needs to carve 12 pumpkins.

He carves 7 pumpkins.

a. **How many more pumpkins does Sam need to carve?**

Show your working and your answer in the box.

(2 marks)

b. **Show how you can check your answer to question 3a.**

(1 mark)

4. Dot checks the stock of pumpkins in the supermarket.

There are 5 types of pumpkin.

a. **How many munchkin pumpkins are there?**

<u>Pumpkins</u>	
<i>Giant</i>	<u>10</u>
<i>Large</i>	<u>4</u>
<i>Medium</i>	<u>6</u>
<i>Munchkin</i>	<u>13</u>
<i>Organic</i>	<u>7</u>

(1 mark)

b. Dot tries to keep the numbers of each type of pumpkin at 8 or above.

If the numbers drop below 8, she must order some more.

Which pumpkins must Dot order more of?

(2 marks)

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Name _____ Date _____

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5. Sam looks for toy spiders at the after-school club.
Sam finds 9 spiders in a box, 4 spiders on the floor and 6 spiders in the garden.
a. **Sam needs to know the total number of spiders.**

Put + or – in the correct boxes to complete his calculation.

$$9 \square 4 \square 6 = 19$$

(1 mark)

- b. Sam has 19 spiders. He has to throw away 5 broken spiders.
How many spiders does Sam have left?

Show your working and your answer in the box.

(2 marks)

6. Sam needs to add 14 and 6.
How can Sam add 14 and 6?

Tick (✓) the correct answer.

$$6 - 14$$

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$$14 - 6$$

()

$$6 = 14$$

()

$$14 + 6$$

()

(1 mark)

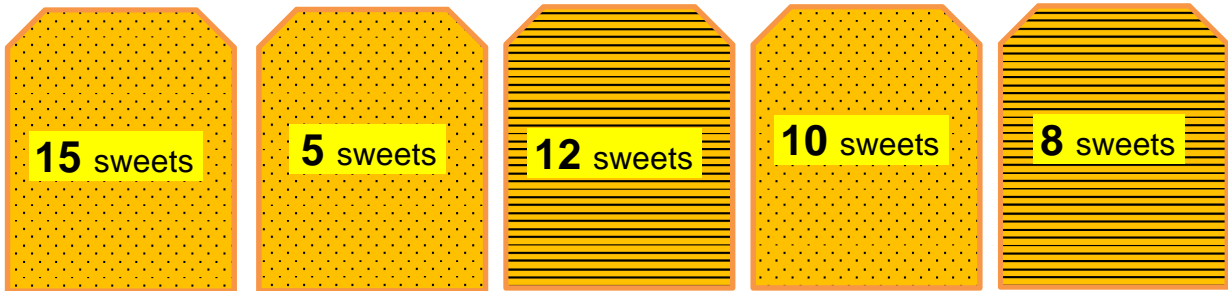
E1 Functional Maths – Halloween

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Name _____ Date _____

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7. Dot is making a display of Halloween sweets at the supermarket.
A customer wants the pack with the most sweets in it.



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()

()

()

a. How many sweets are in the pack that Dot gives to the customer?

(1 mark)

b. Tick (✓) the pack with the smallest number of sweets.

(1 mark)

c. The packs of sweets are stripy or spotty.
How many packs are stripy?

(1 mark)

d. Sam buys both stripy packs. How many sweets does Sam have?

Show your working and your answer in the box.

(2 marks)

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Non-calculator section

Name _____ Date _____

 You must show your working out.  Do not use a calculator.

8. Dot is tidying up the display of Halloween costumes.

 £12	 £10	 £9	 £19	 £14
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a. Tick (✓) the most expensive costume.

(1 mark)

b. Put the costume prices in order. Start with the cheapest.

(1 mark)

c. There are 16 witch costumes on the display. The next day there are 8 left.
How can you work out 16 take away 8?

Tick (✓) the correct answer.

$16 + 8$	$8 + 16$
$16 - 8$	$8 - 16$

(1 mark)

d. Dot puts 20 cat costumes on the display. The next day there are 6 cat costumes.
How many cat costumes have been sold?

Show your working and your answer in the box

(2 marks)

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 You must show your working out.  Do not use a calculator.

9. Sam goes to the supermarket. He buys a bat costume for £9.
This is how he works out his change from a £10 note.
 $10 - 9 = 1$

Sam can check his answer another way.
Show how Sam can check his answer.

(1 mark)

10. After Halloween the supermarket has a sale.

<p>Now only £5</p> 	<p>Now only £4</p> 	<p> Now only £3</p>	<p>Now only £9</p> 	<p> Now only £6</p>
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- a. Sam has £20. He buys as many **different** costumes as possible.
What does Sam buy? How much does it cost?

Show your working and your **two** answers in the box.

(3 marks)

- b. **How much change does Sam get from a £20 note?**
Show your working and your answer in the box.

(1 mark)

E1 Functional Maths – Halloween Curriculum mapping

Teaching notes:

Specifically written to focus on the reformed Entry Level 1 'Number' content, this resource draws on the different question styles used by the major awarding organisations (AO) and can be used for diagnostic assessment and revision.

It is not recommended for the initial teaching of skills (underpinning). If used for this, ensure all the 'maths words' (p1) are covered in advance and supply learners with real-life materials such as counters (I use pasta or dried beans) and money. Halloween is a familiar context for most learners but the 'Halloween words' should also be discussed in advance.

I referred to SAMs (sample assessment materials) and practice texts from Pearson, City & Guilds, OCR, NCFE and Open Awards for inspiration! All such materials are available freely from the relevant AO web sites.

Note that some questions are not strictly 'simple mathematical problems' as they draw on knowledge from more than one mathematical area (1a 1b 2a 2b 7c) or include more than one step (10a). Consider these as extension tasks.

Marking guidance: Total marks = **30**. Suggested pass mark (if using for formal assessment) **22/30**. For most '2 mark' questions award 1 mark for a correct answer and the other *only* if a correct process (working out) is shown. Q4b: 2 marks for 3 correct pumpkin types, 1 mark for 1-2 correct types. Q10a: award 3 marks only if answer includes a list of items purchased (i.e. bat, cat, pumpkin & spider costumes), working out, and a total.

Subject Content: Reformed Functional Skills Mathematics – Entry Level 1 (Comes into effect September 2019)

Purpose (at all Entry Levels): to demonstrate a sound grasp of the underpinning skills and basics of mathematical skills appropriate to the level, and the ability to apply mathematical thinking to solve simple problems in familiar situations. Achievement of these qualifications can provide the skills for further study at Levels 1 and 2.

Learning aims and outcomes at Entry Level: enable students to become confident in their use of fundamental mathematical knowledge and skills, as described through the content; and indicate that students can demonstrate their understanding by applying their knowledge and skills to solve simple mathematical problems or carry out simple tasks.

✓✓ = main content and problem-solving skill(s) covered in this resource, although these will vary with the student group and how the resource is used by the teacher. ✓ = minor coverage. *Content at each level subsumes and builds upon the content at lower levels.*

Fundamental mathematical knowledge and skills. These must be demonstrated in their own right, **both with and without a calculator**, in addition to being used to solve problems or complete tasks.

Using numbers and the number system – whole numbers (N)

1 Read, write, order and compare numbers up to 20	4b 7a 7b 8a 8b	✓✓
2 Use whole numbers to count up to 20 items including zero	1a 1b 1c 2a 2b 7c	✓✓
3 Add numbers which total up to 20, and subtract numbers from numbers up to 20	3a 3b 5b 7d 8d 9 10a 10b	✓✓
Recognise and interpret the symbols +, – and = appropriately	5a 6 8c	✓✓

Using common measures, shape and space (MSS)

5 Recognise coins & notes and write them in numbers with the correct symbols (£, p), where these involve numbers up to 20.		
6 Read 12 hour digital and analogue clocks in hours.		
7 Know the number of days in a week, months, and seasons in a year. Be able to name and sequence.		
8 Describe and make comparisons in words between measures of items including size , length, width, height, weight and capacity.	2a 2b	✓
9 Identify and recognise common 2-D and 3-D shapes including circle, cube, rectangle (incl. square) and triangle.		
10 Use everyday positional vocabulary to describe position and direction incl. left, right, in front, behind, under, above.	1a 1b	✓

Handling information and data (HD)

11 Read numerical information from lists.	4a	✓
12 Sort and classify objects using a single criterion.	2a 2b 7c	✓
13 Read and draw simple charts and diagrams including a tally chart, block diagram/graph.		

Solving mathematical problems, carrying out simple tasks and decision making. E1 students are expected to be able to use the knowledge and skills listed above to recognise a simple problem and obtain a solution.

- A simple mathematical problem is one which requires **working through one step or process**. At E1 it is expected that students will be able to address individual problems each of which draw upon knowledge and/or skills **from one mathematical content area** (i.e. N, MSS or HD).
- Context** for simple problems at E1 should be familiar to all students and easily described.

Entry Level 1 students are expected to be able to:

a Use given mathematical information and recognise and use simple mathematical terms appropriate to E1	All questions	✓✓
b Use methods above to produce, check and present results that make sense	3b 9 (check), most Qs cover produce / present	✓
c Provide a simple explanation for those results.	4b 10a	✓

Source: Department for Education (Feb 2018), Subject content functional skills: mathematics pp6-7

<https://www.gov.uk/government/publications/functional-skills-subject-content-mathematics>