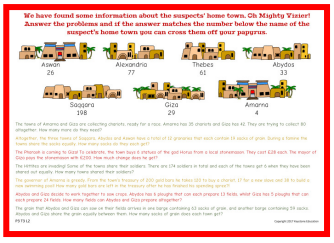
WORDED PROBLEMS WHODUNNIT PUZZLES

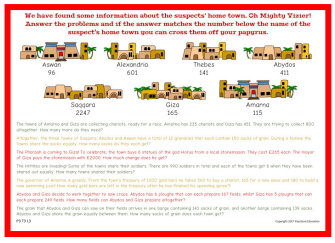
INFORMATION SHEET

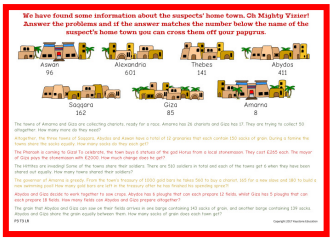
What are the **WORDED PROBLEMS WHODUNNIT PUZZLES**? They are a collection of 14 puzzles that form the basis of a systematic, whole-school approach to teaching worded problems. Set during the reign of the mighty Pharaoh Keveses in the realm of Ancient Egypt, they are colourful and cartoon-based to enthuse your children when they practise worded problems.

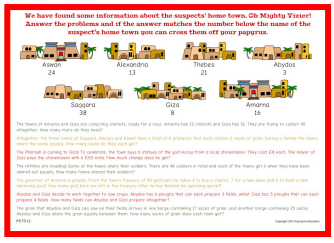
Each of the puzzles is made up of three tasks which the children have to complete to eliminate suspects who may have perpetrated a crime, such as the theft of the Sphinx's beard or the revealing of the whereabouts of King Tutankhamun's tomb.

The tasks within each puzzle are differentiated at three or four levels. However, all of the tasks look identical. This means that within the class four levels of work can be taking place, yet all of the children are working to solve the same puzzle which is massively motivating for children who find worded problems difficult since they can actually finish at the same time, what appears to be, the same work as their peers.









These four tasks all look identical but they are actually differentiated at four different levels!

Each of the tasks has a definite answer, which the teacher will know. This is fabulous for creating careful, independent learners... The children all want to be the first to finish each task, but if they make a mistake the teacher can just tell them they are wrong and leave them to find their own mistakes - much more effective than lots of crosses in a book that they only discover the next day! In addition, marking is massively cut down, allowing the teacher to analyse mistakes and work out next steps for children who got the task wrong.

The types of questions in the WORDED PROBLEMS WHODUNNIT PUZZLES have been meticulously researched to ensure that they match the challenges the children will face in their Key Stage Two SATs. The puzzles have all been written by an outstanding maths teacher with twenty years of experience teaching throughout Key Stage Two... And rigorously tested by his Year Six class who are desperate to be the first to solve the puzzles!

Mighty Vizier, before the artefacts were stolen the suspects all made us less suspicious by visiting the temple. We have some information about their visits. Answer each of the questions and look at the answer next to it. If it is correct the person whose name is in brackets is not guilty and you can cross them off your papyrus.

Tanpesi visited the temple after an arduous journey from Thebes. She started out with 50 men, but lost many en route. 13 were taken sick after drinking from a fetid swamp, 11 were bitten by mosquitoes and got malaria and another 17 were hospitalised with sun stroke. How many of Tanpesi's men made it to the temple? — 9 (Tanpesi)

Two of the suspects wanted to treat their wives when they met them at the temple. Simenta bought 4 faras that were worth £28 in total. Pomeneq bought 2 necklaces and 5 faras that were worth £47 in total. What is the cost of a necklace? — £8 (Pomeneq)

Safmepi, Mahotep and Minhoti traveled to the temple together. They stayed in the 'Stalking Scorpion' inn at Qina, where they ran up a bill of £34. The next night they stayed at Amah's premier hostelry, 'The Camel and Caravan' where the bill was £53. They shared the cost equally between them. How much did they each pay? — £27 (Safmepi)

Minhoti and Simenta are very competitive! When they visited the temple they both brogged to the priests that they had brought the most valuable offering. Simenta was correct! He brought 6 bags of gold, each of which is worth £9. Minhoti only brought 7 bags of silver, each of which is worth £7. How much more is Simenta's gold worth? — £6 (Minhoti)

Pomeneq wanted to make an offering at the temple of £100. He brought with him 3 golden war spears worth £7 each, 5 bronze shields worth £6 each and 4 iron helmets worth £9 each. How much extra cash does he need to give the temple to reach his target of £100? — £15 (Tanpesi)

Hatshep and Tanpesi visited the temple and brought an array of glittering offerings. Hatshep brought 3 faras that altogether cost £18 whilst Tanpesi brought 4 amulets that altogether cost £16. How much more does a fara cost than an amulet? — £2 (Hatshep)

Mahotep had a rather tricky journey from Hurghada to the temple – he forgot to take his money with him! He had to ask his 7 guards to each lend him £9 for the expenses of the trip. How much did the entire trip cost? — £65 (Mahotep)

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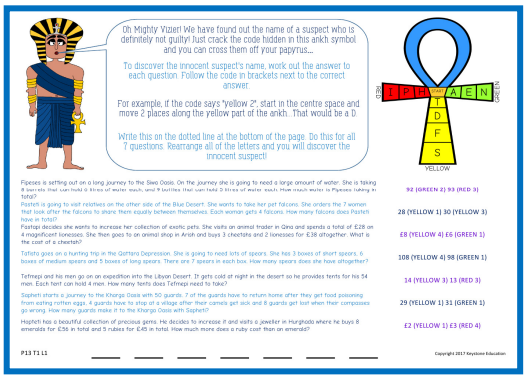
The puzzles are designed to systematically introduce new types of worded problems throughout Key Stage Two, ensuring that when your children eventually get to the SATs they are ready to produce outstanding results in this key area of the curriculum. For a list of the types of worded problems, and when they are introduced, click on the document called "Types of Worded Problems" on the website.


Oh Mighty Vizier! We have found out the name of a suspect who is definitely not guilty! Just crack the code hidden in this ankh symbol and you can cross them off your papyrus...

To discover the innocent suspect's name, work out the answer to each question. Follow the code in brackets next to the correct answer.

For example, if the code says 'Yellow 2', start in the centre space and move 2 places along the yellow part of the ankh. That would be a D.

Write this on the dotted line at the bottom of the page. Do this for all 7 questions. Rearrange all of the letters and you will discover the innocent suspect!

RED: I P H A E N — GREEN; T D F S — YELLOW

Pipesas is setting out on a long journey to the Siwa Oasis. On the journey she is going to need a large amount of water. She is taking 8 barrels that can hold 6 litres of water each, and 9 bottles that can hold 3 litres of water each. How much water is Pipesas taking in total? — 92 (GREEN 2) 93 (RED 3)

Pastehi is going to visit relatives on the other side of the Blue Desert. She wants to take her pet falcons. She orders the 7 women that look after the falcons to share them equally between themselves. Each woman gets 4 falcons. How many falcons does Pastehi have in total? — 28 (YELLOW 1) 30 (YELLOW 3)

Fastapi decides she wants to increase her collection of exotic pets. She visits an animal trader in Qina and spends a total of £28 on 4 magnificent lionesses. She then goes to an animal shop in Arish and buys 3 cheetahs and 2 lionesses for £36 altogether. What is the cost of a cheetah? — £8 (YELLOW 4) £6 (GREEN 1)

Tafista goes on a hunting trip in the Qattara Depression. She is going to need lots of spears. She has 3 boxes of short spears, 6 boxes of medium spears and 5 boxes of long spears. There are 7 spears in each box. How many spears does she have altogether? — 108 (YELLOW 4) 98 (GREEN 1)

Tefmepi and his men go on an expedition into the Libyan Desert. It gets cold at night in the desert so he provides tents for his 54 men. Each tent can hold 4 men. How many tents does Tefmepi need to take? — 14 (YELLOW 3) 13 (RED 3)

Sophetti starts a journey to the Kharga Oasis with 50 guards. 7 of the guards have to return home after they get food poisoning from eating rotten eggs. 4 guards have to stop at a village after their camels get sick and 8 guards get lost when their compasses go wrong. How many guards make it to the Kharga Oasis with Sophet? — 29 (YELLOW 1) 31 (GREEN 1)

Hoptefi has a beautiful collection of precious gems. He decides to increase it and visits a jeweler in Hurghada where he buys 6 emeralds for £36 in total and 5 rubies for £45 in total. How much more does a ruby cost than an emerald? — £2 (YELLOW 1) £3 (RED 4)

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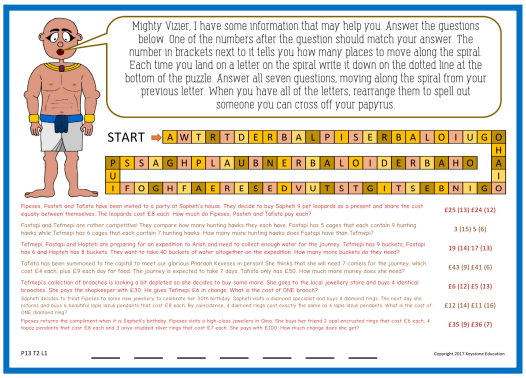
As the quantity of the types of worded problems increases, so does the complexity of the wording. Just take a look at the two examples on the website. Puzzle One is ideal for using with children at the bottom of Key Stage 2 - the language is fairly simple, but the problems are challenging for children of that age. Puzzle 12, on the other hand, is designed with children at the end of Year Six in mind; all of the question types are revised and the language and vocabulary has increased complexity - perfect for preparing the children for the most complex, three mark questions in the SATs papers.


Mighty Vizier, I have some information that may help you. Answer the questions below. One of the numbers after the question should match your answer. The number in brackets next to it tells you how many places to move along the spiral. Each time you land on a letter on the spiral write it down on the dotted line at the bottom of the puzzle. Answer all seven questions, moving along the spiral from your previous letter. When you have all of the letters, rearrange them to spell out someone you can cross off your papyrus.

START ⇒ A W T R T D E R B A L P I S E R B A L O I U G O H A I

P S S A G H P L A U B N E R B A L O I D E R B A H O U I F O G H F A E R E S E D V U T S T G I T S E B N I G O

Pipesas, Pastehi and Tafista have been invited to a party at Sophetti's house. They decide to buy Sophet 9 pet leopards as a present and share the cost equally between themselves. The leopards cost £8 each. How much do Pipesas, Pastehi and Tafista pay each? — £25 (13) £24 (12)

Fastapi and Tefmepi are rather competitive! They compare how many hunting hawks they each have. Fastapi has 5 cages that each contain 9 hunting hawks while Tefmepi has 6 cages that each contain 7 hunting hawks. How many more hunting hawks does Fastapi have than Tefmepi? — 3 (15) 5 (6)

Tefmepi, Fastapi and Hoptefi are preparing for an expedition to Arish and need to collect enough water for the journey. Tefmepi has 9 buckets, Fastapi has 6 and Hoptefi has 8 buckets. They want to take 40 buckets of water altogether on the expedition. How many more buckets do they need? — 19 (14) 17 (13)

Tafista has been summoned to the capital to meet our glorious Pharaoh Kewaseq in person! She thinks that she will need 7 camels for the journey, which cost £4 each, plus £9 each day for food. The journey is expected to take 7 days. Tafista only has £30. How much more money does she need? — £43 (9) £41 (6)

Tefmepi's collection of brooches is looking a bit depleted so she decides to buy some more. She goes to the local jewellery store and buys 4 identical brooches. She pays the shopkeeper with £30. He gives Tefmepi £6 in change. What is the cost of ONE brooch? — £6 (12) £5 (13)

Sophet decides to treat Pipesas to some new jewellery to celebrate her 30th birthday. Sophet visits a diamond specialist and buys 4 diamond rings. The next day she returns and buys 6 beautiful lapis lazuli pendants that cost £8 each. By coincidence, 4 diamond rings cost exactly the same as 6 lapis lazuli pendants. What is the cost of ONE diamond ring? — £12 (14) £11 (16)

Pipesas returns the compliment when it is Sophet's birthday. Pipesas visits a high-class jewellers in Qina. She buys her friend 2 opal encrusted rings that cost £6 each, 4 lapis pendants that cost £8 each and 3 onyx studded silver rings that cost £7 each. She pays with £100. How much change does she get? — £35 (9) £36 (7)

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	1	2	3
A	A	I	Q
B	B	J	R
C	C	K	S
D	D	L	T
E	E	M	U
F	F	N	V
G	G	O	W
H	H	P	Y

The fate of the Pyramids is in your hands Oh Mighty Vizier! We have found out some information about the suspects' gangs. Work out the answer to each problem and it should match one of the answers next to it. Use the code in brackets after the correct answer to find a letter in the grid to the left. Answer all of the questions and write the letters on the dotted line at the bottom of the page. When you have all of the letters, rearrange them to spell out the name of one of the suspects. Cross them off your papyrus.

Tefmepi decides that he wants to buy some new tents for his gang. He buys 7 tents from a tent shop in Qena, plus another 5 for the same price in Bahria. He pays with £80 and gets £8 in change. What is the cost of ONE tent? — £5 (1,2) £6 (2,2)

Pipesas needs to get her gang to the pyramids. She purchases 3 new chariots and 6 new wagons. The cost of all of the new chariots is the same as the cost of all of the new wagons. If a wagon costs £8, how much does a chariot cost? — £18 (3,3) £16 (3,3)

Hoptefi bought 5 swords at a total cost of £40 for some of his gang members. He then bought another 4 swords and a chariot for a total of £41. What is the cost of 1 chariot? — £9 (1,2) £7 (1,1)

Pomeneq started the summer with 40 gang members. 9 left to join Hoptefi's rival gang, 5 left after they got sick, and 7 got lost during a sandstorm in the Qattara Depression and were never seen again! How many people were in Pomeneq's gang by the autumn? — 19 (2,1) 21 (1,3)

Tefmepi and Tafista have decided to join forces. Tefmepi has 4 chests that each contain 7 gold pieces, whilst Tafista has 5 chests that each contain 8 gold pieces. How many gold pieces do Tefmepi and Tafista each have if they share the gold pieces equally between themselves? — 33 (2,2) 34 (1,3)

When Fastapi's gang arrives at a camp site for the night there are 6 chariots that contain 4 ruffians and 7 wagons that contain 5 ruffians. Fastapi has tents that can hold 5 people. How many tents does he need to use to ensure everyone gets a good night's sleep? — 12 (3,1) 11 (2,1)

Pastehi has £200 to pay her gang. She has 8 archers who she spends £4 on each, 5 swordsmen who she spends £5 on each and 6 horsemen who she spends £6 on each. How much money does she have left when she has paid her gang? — £109 (3,3) £107 (3,3)

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The WORDED PROBLEMS WHODUNNIT PUZZLES are ideal for use with the whole class, since they are so flexible and adaptable. However, they are also great for working with individual children who have not grasped certain methods for solving worded problems, and who need more input.

The WORDED PROBLEMS WHODUNNIT PUZZLES are also ideal for homework. It is motivating for the children, extremely easy to differentiate, and requires very little marking - a cursory glance will do the trick!

In short, the WORDED PROBLEMS WHODUNNIT PUZZLES are the ideal solution if you want to ensure that your children actually enjoy learning how to solve worded problems and prepare for the SATs tests thoroughly with a smile on their faces.