

SAVE TIME. TEACH WELL.

# Logic Puzzles & Word Games

**160**

brain game  
questions

**30 COPIABLE  
WORKSHEETS**

Foster critical thinking  
and reasoning

Teach your students language  
and knowledge

Save time with low prep sponge activities for  
upper beginner to advanced levels

Deepen student knowledge and understanding of words

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rhymes • syllables • lists • ordering • word ladders  
homophones • compound words • sound and sort

**BY ROB WHYTE B.A. M.SC.**

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# INTRODUCTION

As a battle-hardened veteran of South Korea's EFL industry, I've managed to pick up a few nuggets of truth about English language instruction.

First, effective teachers manage classroom pace. By that, I mean the ability to rhythmically vary the flow of content and activities in response to the students' (usually) unarticulated emotional quotient. It's an innate sensibility akin to what Malcolm Gladwell called withitness.

Second, instructors need stimulating and instructional sponge activities to manage pace and sustain interest. Like any skilled carpenter, accomplished teachers own a collection of tools which have taken years to assemble and even longer to master. Vocabulary drills, conversation drivers and classroom jigsaws, not to mention a few coping devices, are a few of the tools that teachers need to collect and sharpen in order to sustain student interest in an era of diminishing attention spans, ubiquitous multimedia and dopamine drops caused by temporary Smartphone withdrawal.

## EFFECTIVE TEACHING

Sustained interest is a necessary but insufficient reason to dedicate valuable class time to logic puzzles and word games. Effective teachers search for another layer, something that contributes to student learning.

In that regard, evidence suggests logic puzzles and word games are a positive teaching resource. Some years ago, a professor in Japan tied together pedagogical arguments and anecdotal evidence supporting the use of logic puzzles and word games in the classroom.(1) Here is a summary:

- Solving word games and logic puzzles - especially those that do not involve complex math - utilizes knowledge which students developed in their first language. Thus, problem solving in English links to prior knowledge, an attribute thought to be part of an effective teaching strategy.
- The design of logic puzzles is generally consistent with task based learning, an accepted teaching methodology.
- Puzzles promote vocabulary acquisition by activating deep processing, an essential element of learning that uses mental engagement to transform unknown words into known words.
- Short, well written puzzles are excellent tools to review and reinforce vocabulary.
- University students in Japan indicated logic puzzles contributed to their language learning and were also an enjoyable part of the course.

## CONTENT OVERVIEW

Helping English teachers build up their toolbox with low prep activities is what this ebook is about. Here you will find 160 logic puzzles, word games and general knowledge question sets that will add a jolt to your teaching repertoire.

This is not an ebook of lesson plans. It is a collection of resources to enhance student knowledge, reasoning and communication skills based on three high-interest principles:

- Vocabulary-rich worksheets that deepen knowledge through higher order thinking.
- Logic puzzles that go beyond rote learning to develop problem solving skills.
- Word games that activate creative thinking and self-expression.

Many of the puzzles in this ebook might be considered classic. So, don't be surprised if your students already know the answers. That's not the point. The fundamental objective is to develop the language skills required to communicate complex ideas.

Word games are also an essential part of the worksheets. They create deliberate awareness of sounds, spelling and meaning. Table 1 describes the types of word games used in this ebook.

Table 1  
Types of Word Games

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■ anagrams	■ palindromes	■ vowel recognition
■ compound words	■ prefixes	■ word ladders
■ double meanings	■ rhymes	■ word lists
■ homophones	■ syllable recognition	■ word puzzles

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### Readability

Readability was a priority for this ebook because I wanted students to focus on problem solving rather than text comprehension. To that end, readability was evaluated and adjusted based on two scores: Flesch Reading Ease and Flesch-Kincaid Grade Level.

The Flesch Reading Ease score measures text difficulty, with scores between zero and 100. The higher score, the easier the read. All of the worksheets in this ebook measure 80 or higher, with one exception (worksheet #27, which scored 64). To put those numbers into context, Reader's Digest (a US mass market magazine) averages 65.(2) In terms of the Flesch-Kincaid Grade Level, all worksheets (with one exception at grade 6) scored between grade 1 and 4 (US elementary school standards).

## High Frequency Words

The vocabulary set required to understand the questions and generate typical answers was compared with the 2818 words in the New General Service List.(3) Based on this comparison, students who complete all 30 worksheets will learn and/or review 811 key words - approximately 30% - in the New General Service List.

## Suggested Answers

Answers for all problems are at the back of the ebook. To simplify the teacher's work, suggested key vocabulary and problem solving hints have been included, where appropriate.

## HOW TO USE THIS EBOOK

This ebook is designed for English instructors who want to add a little *oomph* to their classroom learning experience. The exact usage of these materials is quite flexible.

- Ice breakers at the beginning of a class or sponge activities at the end of a period.
- Stimulating content to give the class a change of pace.
- Learning material for private tutorials.
- Homework assignments.

Teachers with access to a classroom computer and projector might appreciate the time-saving quality of this ebook. Put the ebook on a USB and you have a portable resource that eliminates time-consuming photocopying.

## ABOUT THE FORMAT

This ebook has been formatted for printing on A4 paper (210 mm by 297 mm), the standard office document size in Asia. In North America, letterhead (also known as 8.5 by 11 inch) is the comparable document size.

So what's the difference? A4 is a little longer. Letterhead is a little wider. The width shouldn't be a problem if you are printing on letterhead. To compensate for different document lengths, I increased the bottom margin of this ebook to 45 mm. That should resolve potential printing problems for North American readers.

## FAIR USE

With your purchase of this ebook, you are free to use the content for non-commercial educational purposes.

As a professional courtesy, I would kindly ask you not to redistribute this ebook out of respect for the hundreds of hours required to research, write and produce this product. In this age of rapid sharing and mega uploads, I know that's a huge request. But, after examining *160 Logic Puzzles and Word Games*, I'm sure you'll appreciate the amount of time required to complete this project.

And teachers, if nothing else, are highly respectful of other people's time.

Enjoy.

## Notes

(1) Kurtis McDonald, "Teaching L2 Vocabulary Through Logic Puzzles," *Estudios de Lingüística Inglesa Aplicada* 7 (2007): 149-163.

(2) Wikipedia, *Flesch–Kincaid readability tests*, [http://en.wikipedia.org/wiki/Flesch%E2%80%93Kincaid\\_readability\\_tests](http://en.wikipedia.org/wiki/Flesch%E2%80%93Kincaid_readability_tests) (July 1, 2014).

(3) A New General Service List, <http://www.newgeneralservicelist.org/> (May 2, 2014).

# 01 ANIMALS

## 1. MONKEY IN THE WELL

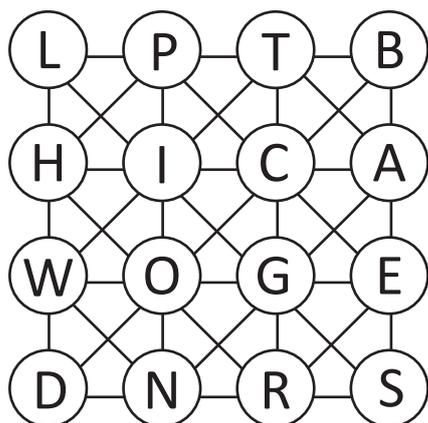
There is a monkey at the bottom of a well. The well is 30 meters deep. Each morning, the monkey climbs up three meters. Every evening, the monkey slides down two meters.

There is no water in the well and there are no tools. How long will it take the monkey to get out of the well?



## 2. ANIMAL MAZE

The names of nine animals are in the maze. Start at any letter. Move along any line to join letters and make a word. Can you find all nine animals?



## 4. WHAT AM I TALKING ABOUT?

An eagle and an elephant have two each. A tiger, moose and bear have one each. But humans and gorillas don't have it. What am I talking about?

## 5. FIND THE ANIMALS

Read the sentences below. Look carefully and you will see groups of letters that make animal names.

Can you find the animals?

For example, "I'll **be** eleven next week" has the word BEE.

- He will go at six o'clock.
- It's nice to do good work.
- Please bring some soap and a big bag.
- The construction workers will need to use a ladder.
- The students came late to class.
- Tell me if I should start now.

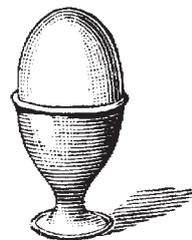
## 3. HOW MANY DOGS?

Walking in the park one day I saw a group of dogs. I saw a dog in front of two dogs, a dog behind two dogs and a dog between two dogs.



How many dogs did I see?

## 02 FOOD & COOKING



### 6. HOMOPHONES

A homophone is a word that has the same pronunciation as another word but a different meaning and usually different spelling. For example, **sun** and **son**. Write one homophone for each word below.

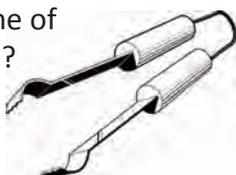
- a. tea \_\_\_\_\_ b. steak \_\_\_\_\_ c. flour \_\_\_\_\_  
d. bean \_\_\_\_\_ e. sweet \_\_\_\_\_ f. pear \_\_\_\_\_

### 7. POTATO CHIPS

One bag of potato chips weighs 89.4 grams. How many tonnes would a million bags of chips weigh?

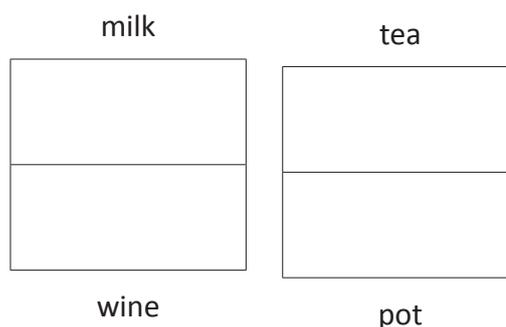
### 8. EIGHT QUESTIONS

- What do we call a dried grape?
- Name four ways to cook an egg.
- What is the outside of an egg called?
- What is the yellow part of an egg called?
- What do we call the white part inside an egg?
- Which food gave Popeye energy?
- What are French fries made from?
- What is the name of this kitchen tool?



### 9. WORD LADDER

Move down one step and change one letter. Make a new word on each step.



### 10. FAMILY DINNER

June and three cousins ordered a 12-slice pizza with pepperoni and anchovies. When the pizza arrived, they ate quickly. June ate  $\frac{1}{3}$  of the pizza, Barry ate  $\frac{1}{6}$ , Kevin took  $\frac{1}{4}$  and Julie ate  $\frac{1}{6}$ .

How many slices did each person eat?  
How many slices were left?

## 30 MAX GENIUS PUZZLES

### 155. LIGHT SWITCH

Upstairs, there is a room with one light, one door and one chair. Downstairs, there are three light switches - A, B and C. One switch is connected to the light in the upstairs room.



How can you find out which switch is connected to the upstairs light? You can enter the upstairs room one time. There are no windows and it is impossible to see inside the room unless you open the door. Turn the switches on and off as much as you like.

### 156. THROW AWAY FOOD

To eat this food, you first throw away the outside, then cook the inside. Then, eat the outside and throw away the inside. What is this food?

### 158. ROLL A DIE

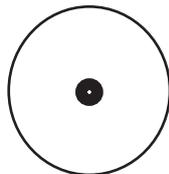
You have a die. If you roll the die one time, which of these sentences has the smallest chance of happening?

1. Roll an odd number.
2. Roll a number larger than 3.
3. Roll a number smaller than 3.

### 157. DOT AND CIRCLE

Here is a circle with a dot. Can you draw the same picture by following three rules?

- a. Use one pencil (or pen).
- b. Don't lift your pencil off the paper.
- c. Don't use an eraser.



### 159. ABOVE AND BELOW

Look at the numbers above and below the line. Do the numbers 9 and 10 go above or below the line? Why?

1 2 6
-----
3 4 5 7 8

### 160. GYM CLASS

24 students are in a gym. The physical education teacher wants to put the students in lines. He asks the students to make 6 lines with 5 students in each line. How did he do that?

## 01 ANIMALS

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### 1. Monkey in the Well

#### **Key Vocabulary**

a well, deep, climb up, slide down, get out

#### **Hint**

Students might say 30 days. Suggest it's possible to get out faster.

#### **Answer**

28 days. After 27 days and 27 nights, the monkey is 27m high. On the morning of the 28th day, the monkey climbs up 3m so it reaches 30m, which means it can get out of the well.

### 2. Animal Maze

#### **Key Vocabulary**

maze, join letters

#### **Hint**

These are everyday animals.

#### **Answer**

Bat, cat, cow, dog, hog, horse, lion, pig, tiger.

### 3. How Many Dogs?

#### **Key Vocabulary**

Prepositions of location: in front of, behind and between.

#### **Answer**

Three dogs.

### 4. What am I Talking About?

#### **Key Vocabulary**

moose

#### **Hint**

The answer is in the names.

#### **Answer**

The letter E.

### 5. Find the Animal

#### **Hint**

Look at the letters at the beginning and end of words.

#### **Answer**

- goat
- dog
- panda
- seal
- camel
- fish

## 02 Food & Cooking

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### 6. Homophones

#### **Vocabulary**

homophones

#### **Answer**

- tee
- stake
- flower
- been
- suite
- pair

### 7. Potato Chips

#### **Hint**

How many grams are in a kilogram? How many kilograms are in a tonne?

#### **Answer**

89.4 tonnes of chips.

$(89.4 \times 1,000,000 \text{ grams}/1000 = 89,400 \text{ kg.}$   
 $89,400/1000 = 89.4 \text{ tonnes).}$

### 8. Eight Questions

#### **Answer**

- raisin
- boiled, fried, scrambled, steamed, poached
- shell
- yolk
- the white
- spinach
- potatoes
- tongs

### 9. Word Ladder

#### **Answer**

Milk - mile - mine - wine.

Tea - pea - pet - pot.

### 10. Family Dinner

#### **Vocabulary**

anchovies, fractions, pepperoni, slice

#### **Hint**

Multiply 12 (the number of slices) by the fractions.

#### **Answer**

June = 4

Barry = 2

Kevin = 3

Julie = 2

Total is 11 slices. So one slice was left over.

# Get your students thinking!

## with 160 Logic Puzzles & Word Games

“A welcome addition to every teacher’s collection of educational games and activities.”



- ◉ Easy prep. Just copy and go.
- ◉ 30 worksheets generate hours of smart talk time.
- ◉ Great for large classes, small groups, tutorials and homework.
- ◉ An intelligent way to review vocabulary.
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