

Why puzzles are important

Puzzles of various kinds are getting very popular, from number puzzles in the newspaper to handheld computer games. In terms of brain power, it is a widely held view that we should “use it or lose it” and while it’s true that some puzzles are better than others in how much they stretch the brain, it has to be better to try solving anything than none at all.

If we look at what happens to our brain when we’re presented with a puzzle, it can tell us a lot about how we approach real-life problems. Some people relish the challenge while the reaction of others is that the mental shutters come down and they don’t want to know.

Puzzles can be annoying to some because they are designed to - well, puzzle! They deliberately lead our minds into the wrong way of thinking, frequently by emphasizing the information we **don’t** have.

The trick is to stay calm and reason with the information we **do** have. Take the age-old riddle:

*“A man without eyes saw plums on a tree.
He neither took plums nor left plums - now how can that be?”*

At face value, it can’t **be** at all - a man without eyes cannot see anything! But the riddle is telling us he did, so there must be another way to interpret what we’re reading. The key is in the plural words: a man with **one** eye does not have **eyes** (plural) but would be capable of seeing a tree with plums. If instead of saying “plums” in the plural, we say he saw **more than one** plum, perhaps then we think that the smallest number to satisfy this would be two. Then the man is able to fulfill the requirements of the riddle and not take **more than one** plum and not leave **more than one** plum by taking one and leaving one.

One puzzle was made famous in the film “*Die Hard With A Vengeance*”. Bruce Willis and Samuel L. Jackson are confronted with the problem of measuring four gallons using only containers which measure three and five gallons. In the classic way, our brains tend to focus on what we cannot do - we **can’t** measure four. The characters in the film had the added pressure of believing that a bomb would go off if they didn’t solve the problem correctly. So how do we solve this? We have to find out what information we need. A good question would be: what is the difference between four and three or four and five? That answer is easy: one. So if we could measure three **plus** one or five **minus** one we **would** be able to measure four. So we need to find a way of measuring one with the information we have. The difference between three and five is obviously two but the difference between **two** threes and five will give us the one we need. So we fill the 3 gallon container and put it into the five. Fill the 3 again and fill up the five with 2 gallons, leaving the all important one gallon in the 3. Empty out the 5, pour the one gallon from the 3 into the five and then simply add another three gallons. Bomb defused! (For the purists, there is another way of solving this starting with filling the five gallon container and ending up with a one gallon **space** in the three gallon container.)

Puzzles known as “dingbats” used to be a popular feature of the game pages in newspapers. The correct term for this kind of puzzle is a “rebus” (perhaps that’s why Ian Rankin used that name for his detective.) They are the pictorial representations of a well known phrase or saying, similar to the ones used on the TV programme “Catchphrase”. The host of that show used to give good advice with his own catchphrase: “Say what you see”.

Take this example:

MAN
BOARD

How could we describe what we see? The word “man” is on the word “board” but “man on board”, while it makes sense, is hardly a well known phrase or saying. So we recognise we need another way of phrasing it. “Above board” is a saying but doesn’t take “man” into account. Soon we’ll arrive at the word “over” as another way of describing it and “man overboard” will be the cry. The lessons here are firstly not to panic when it makes no initial sense and secondly, to keep trying new ways if the first ones don’t work. Exactly the approach taken by inventors like Edison who claimed he was the best person to solve the problem of making a working light bulb because he knew **hundreds** of ways of **not** making them work!

Here’s a second example:

STAND
I

This looks similar to the first one, so our brain will tend to follow the model that worked before and try “Stand over I” - not the answer. Annoying things puzzles! We worked out a successful solution to the last one which looks just like this and now it doesn’t work! So instead of synonyms for “over”, how about looking at it differently and describing where the letter “I” is - that way will soon lead to “I understand”, in more ways than one.

Puzzles are, without doubt, good exercise for the brain but we can learn even more from the way we approach them, for how we should tackle real life problems:

Firstly, we need to focus on the information we **do** have and how we can use it to find out what we need to know and not be blinded by the way the puzzle is deliberately misleading.

Secondly, if the first approach yields no results, we should keep trying different ways until we find a solution, staying flexible in the way we think.

Thirdly, don’t rely on what worked last time: things may have moved on and old methods we’ve used successfully in the past don’t necessarily give us what we need now.

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