

Out of Box Thinking

The Right Answer Quiz

The answers to this quiz appear on the bottom of this sheet, but don't peek until you have written out your own responses.

1. What is the highest mountain in the world?
2. How many states are there in the United States?
3. What number is next in the sequence that follows and why: 1, 4, 9, 16, 25, 36, 49?
4. Define: cleave, sanction, moot, and oversight.
5. How long did the Hundred Years' War last?
6. In which country are Panama hats made?
7. From what animal do we get catgut?
8. In which month do Russians celebrate the October Revolution?
9. Of what are camelhair brushes made?
10. After what animal are the Canary Islands named?
11. What was King George VI's first name?
12. What color is the purple finch?
13. From what country do Chinese gooseberries come?
14. How long did the Thirty Years' War last?
15. Which is the southernmost state?
16. Which is the easternmost state in the U.S., Maine or New York?
17. When is 12:00 A.M.?
18. When is 12:00 P.M.?
19. What is 30 divided by $\frac{1}{2} + 10$?
20. Who is the most quoted person in the English language?

Check your answers with those on the reverse side. How did you do? Although, I did use some tricks to make my point, the purpose of this exercise was not to trick you, but rather to demonstrate that the right answer is not always the right answer and, that in life there are few right answers. Rather, there may be several right answers or none. Success in the 21st century will be a factor of how well we are able to evaluate knowledge and how well we can see possibilities in that knowledge.

For too long education has focused on the right answer to the exclusion of critical and creative thinking. I'm not suggesting that a body of knowledge isn't important, only that it be seen in its proper perspective. Knowledge represents only what is and what has been. Critical thinking is needed to evaluate that knowledge, and creative thinking is needed to discern what can be.

How many of you hated The Right Answer Quiz? I suspect many of you did because you may have felt set-up for failure. In a way you were, but my intention was not to show you up; rather, it was to show you that right answers aren't always what they appear to be, and that the concept of the right answer is a significant limitation of traditional education.

I am not against learning a body of knowledge; in fact, I believe it is more essential today than learning the trivium and quadrivium – the precursors of the liberal arts – were in earlier, more structured times. However, I'm not ready to pledge allegiance to the E.D. Hirsch, Jr. crowd either; for learning a body of knowledge is, after all, learning what is and what has been. I want students to envision what can be.

Generating alternatives is seminal to creative thinking. The basic premise of generating alternatives is that any particular way of looking at things is only one from among many other possible ways. What students should be doing in school – in my opinion – is discovering new alternatives, not just remembering old ones. Don't re-invent the wheel, like most platitudes, contains limited wisdom. If Goodyear hadn't re-invented the wheel and discovered vulcanized rubber, cars would have iron-banded wooden wheels. If Dunlop hadn't invented the first pneumatic tire, cars would still have solid tires: no flats, but a bumpy ride with little traction. If Goodrich hadn't invented the first clincher tire and the first tubeless tire, safety and reliability would be considerably less than they are today. If the Michelin brothers hadn't re-invented the wheel, cars would still have bias-ply tires that cornered badly and gave poor gas mileage. I contend that the essence of being human is to continuously re-invent the wheel, because best is the enemy of better.

Some Right Answers

The highest mountain in the world is Everest, McKinley, or Mauna Kea, depending how you measure. McKinley has more vertical height than Everest because it rises out of a low plain, only about 1500 feet. Everest's base is at 17,000'. Mauna Kea, however, rises out of the ocean – and although its height above sea level is only 13,796' – if we use the ocean floor as its base, it is the highest.

There are 46 states: Pennsylvania, Massachusetts, Virginia, and Kentucky are commonwealths.

64, but for at least two different reasons: the sequence advances by two (3,5,7,9,11,13), but the number is also the square of its place in the series (4 is the second number and is the square of 2).

They are paradoxical words and accordingly have opposite meanings. Cleave, for example, means to split and also to cling to.

The Hundred Years' War was waged for 116 years, from 1337 to 1453.

Panama hats are made in Ecuador.

Catgut comes from sheep and horses.

November. The Russian calendar was 13 days behind ours.

Camel hair brushes are made from squirrel fur.

Their Genoese discoverers named them Insularia Canaria, Islands of the Dogs.

Albert. He respected Queen Victoria's wish that no future English king should be named Albert, so he changed his name.

The purple finch is distinctively crimson.

Chinese gooseberries come from New Zealand.

The Thirty Years' War lasted 30 years, of course.

Chile. You may have assumed I meant in the United States; however, state means any politically organized body that has a defined boundary.

Alaska is the easternmost state. You may have assumed you had to choose between New York and Maine, but the question asks which is the easternmost state in the United States.

And Alaska reaches across into the Eastern Hemisphere.

There is none. AM stands for ante meridian or before mid-day. 12 AM would be mid-day.

There is none. PM stands for post meridian or after mid-day. 12 PM would be mid-night.

Thirty divided by $\frac{1}{2}$ is 60, add 10, and you have the sum of 70.

Most people answer Shakespeare, but Oscar Wilde or George Bernard Shaw is generally reputed to be the most quoted person in the English language.

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