



Hello, I am a Robot Scientist in the University of Bath. But someone has erased my memory! Can you help me to remember my work?

Gender _____ Prefer not to say

1. Which of these colours of light are in the right order? I don't know yet.

- | | |
|------------------------------------------|------------------------------------------|
| A Red, Cyan, Green, Blue, Yellow, Orange | B Red, Orange, Yellow, Green, Cyan, Blue |
| C Blue, Yellow, Green, Cyan, Red, Orange | D Orange, Blue, Red, Green, Yellow, Cyan |

2. Which ones are primary colours of light? I don't know yet.

- | | |
|-------------------------|-----------------------|
| A Pink, Mauve, Black | B Red, Green, Blue |
| C Orange, Yellow, White | D Purple, Cyan, Brown |

3. If you add red, green and blue light together, what colour do you get? I don't know yet.

- | | |
|----------|----------|
| A Yellow | B Orange |
| C Black | D White |

4. What is light made of? I don't know yet.

- | | |
|----------|-------------|
| A Air | B Photons |
| C Gluons | D Molecules |

5. Can you mix red light and red light to get blue light? I don't know yet.

- | | |
|----------------------------------------------------|---------------------------------------|
| A Never | B Yes, it happens all the time |
| C Yes but only if you use a lot of red laser light | D Yes, but only if you use blue paint |

6. A lens does which of the following? I don't know yet.

- | | |
|----------------------------------|---------------------------------|
| A Changes the direction of light | B Makes an object appear larger |
| C Makes an object appear smaller | D All of the above |

7. Which of these is NOT true about laser light? I don't know yet.

- | | |
|---------------------------------------|------------------------------------------------|
| A It has very little spread | B It is made of different things than sunlight |
| C It is all precisely the same colour | D It travels in a straight line |

8. The colours in a rainbow are ordered because... I don't know yet.

- | | |
|----------------------------------------------|--------------------------------------------|
| A they can smoothly go from one to another. | B they are complementary. |
| C light in each colour vibrates differently. | D they travel at different speed in space. |

9. What do we use metamaterials for? I don't know yet.

- | | |
|--------------------------------------------|----------------------------------------------|
| A To trick light into doing unusual things | B To 3D print objects with laser light |
| C To make materials stronger | D For new car engines, driven by laser light |

10. Scientists who work with light use...? I don't know yet.

- | | |
|----------------|---------------------------------------------|
| A screwdrivers | B objects made of glass: mirrors, lenses... |
| C metal rods | D All of the above |

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Just a few more questions and I will be OK!

11. What is the colour of the Sun?

- A White
- C Red

- B Yellow
- D Orange

I don't know yet.

12. Which one IS true about humans?

- A We can see colours such as they really are.
- C Only some people don't recognize colours.

- B Everyone can fail to recognize a colour.
- D Only red and green are hard to recognize.

I don't know yet.

13. What do we call "chiral objects"?

- A Those that look the same in a mirror.
- C Those that look different in a mirror.

- B Those that cannot be seen in a mirror.
- D Those from which mirrors are made.

I don't know yet.

14. What is a "metamaterial"?

- A A material with human-made, "fake" atoms
- C A material with super small atoms

- B A material with super heavy atoms
- D A material with all the same atoms

I don't know yet.

15. The colours of light are like what in music?

- A rhythm
- C notes

- B volume
- D silence

I don't know yet.

16. "Reflection" happens when light strikes a surface and then ...

- A breaks the surface.
- C slides along the surface.

- B goes through the surface.
- D bounces off the surface.

I don't know yet.

17. How many types of crystals are there in Nature?

- A 14
- C 256

- B 918
- D More than 1000

I don't know yet.

18. A cubic crystal is what?

- A see through.
- C made of cubic atoms.

- B always precious.
- D made of atoms arranged in cubes.

I don't know yet.

19. How can we make light?

- A Using only a wire and a battery
- C Using only a bulb and a battery

- B Using a wire, a bulb and a battery
- D All of the above

I don't know yet.

20. Which one is true?

- A I could be a scientist if I wanted to.

- B I could never be a scientist.

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