

# Light and Optical Systems - Section 1.0 - Quiz

Our knowledge about light and vision comes from explanations, inventions and investigations.

Student Name \_\_\_\_\_

Class \_\_\_\_\_

## 1.1 The Challenge of light

1. **Aristotle's** plan to sink the enemy war ships demonstrated his understanding of this principle of light ...
  - A. Light travels in straight lines
  - B. Light can be reflected
  - C. Light can be bent
  - D. Light is a form of energy
2. **Pythagoras'** thoughts about light were proven wrong because it was impossible to see ...
  - A. the light beams
  - B. dark objects
  - C. in the dark
  - D. shiny objects
3. When light is shone into a mirror, the angle of the incoming beam is equal to the angle of the outgoing beam. This understanding of light was suggested by ...
  - A. Ptolemy
  - B. Aristotle
  - C. al-Haytham
  - D. Euclid
4. **Sir Isaac Newton** is well known for many things. One thing that he showed was that white light is actually a mixture of different colors. He was able to demonstrate this by shining a light through ...
  - A. prism
  - B. water
  - C. glass
  - D. mirror
5. **Albert A Michelson** was able to accurately measure the speed of light by using mirrors on a mountain top. This was a refined measurement of the work of ...
  - A. Albert Einstein
  - B. Ole Romer
  - C. Euclid
  - D. Isaac Newton

## 1.2 Optical Devices

6. Any technology that uses light is called ...
  - A. a reflecting telescope
  - B. a refracting telescope
  - C. an optical device
  - D. a lens and mirror
7. **Antonie van Leeuwenhoek** used a simple microscope and discovered, what he called ...
  - A. little animalcules
  - B. tiny cells
  - C. miniature vacuoles
  - D. bacteria armies

8. **Microbiology** - the study of micro-organisms, began with the invention of these ...

- A. binoculars
- B. telescopes
- C. mirrors
- D. microscopes

9. In 1608 **Hans Lippershey** manufactured the very first telescope. This scientist used the discovery of the telescope to discover mountains and craters on the Moon, small objects circling Jupiter, and Venus had phases – just like the Moon. This scientist was ...

- A. Edwin Hubble
- B. Galileo Galilei
- C. Sir Isaac Newton
- D. Alessandro della Spina

10. The type of telescope that collects light from distant objects and focuses it in the eyepiece is called ...

- A. retracting
- B. reflecting
- C. refracting
- D. resisting

11. Binoculars are optical devices and are built using two of these types of prisms ...

- A. retracting
- B. reflecting
- C. refracting
- D. resisting

12. The properties of light include all of the following EXCEPT ...

- A. Light can go around a corner
- B. Light can bend
- C. Light can be reflected
- D. Light is a form of energy

Label parts of the following: (*Illustration 1 – Binoculars* ..... *Illustration 2 – Refracting telescope*)

