

Colors & Shapes in Nature

Colors & Shapes · Answer Key · 15 Questions

1. Why do wild flamingos have pink or reddish feathers?

- A) They absorb UV light from the sun
- B) Their diet is rich in carotenoid pigments**
- C) It is a result of genetic mutation
- D) They bathe in mineral-rich clay

2. What geometric shape forms the individual cells of a honeybee comb to maximize storage space while using minimal wax?

- A) Hexagon**
- B) Pentagon
- C) Triangle
- D) Octagon

3. Underneath their white-appearing translucent fur, what color is a polar bear's skin?

- A) Pink
- B) White
- C) Black**
- D) Grey

4. What shape do cooling basaltic lava flows frequently form, as seen in structures like the Giant's Causeway?

- A) Round spheres
- B) Hexagonal columns**
- C) Perfect cubes
- D) Triangular pyramids

5. What is the biological term for the bright warning coloration used by toxic animals, like poison dart frogs, to deter predators?

- A) Aposematism**
- B) Crypsis
- C) Countershading
- D) Biomimicry

6. The striking metallic blue color of a Morpho butterfly's wings is caused by which mechanism?

- A) Blue chemical pigments
- B) Microscopic structural light reflection**
- C) Bioluminescent chemical reaction
- D) UV light fluorescence

7. Most adult sea stars (starfish) exhibit which type of geometric symmetry?

- A) Bilateral symmetry
- B) Asymmetry
- C) Pentaradial symmetry**
- D) Spherical symmetry

8. Seeds on the head of a sunflower are arranged in interconnected spirals that follow which mathematical pattern?

- A) Fibonacci sequence**
- B) Pascal's triangle
- C) Prime number sequence
- D) Pythagorean theorem

9. What pigment gives squid and octopus ink its characteristic dark brown or black color?

- A) Carotene
- B) Melanin**
- C) Chlorophyll
- D) Hemocyanin

10. Which color of bioluminescent light is most commonly produced by deep-sea marine animals because it travels farthest through water?

- A) Red
- B) Yellow
- C) Blue-green**
- D) Purple

11. Water ice crystals in standard snowflakes naturally form with how many distinct points or sides?

- A) Four
- B) Five
- C) Six**
- D) Eight

12. Three-toed sloths often appear green in the wild because of what living in their fur?

A) Moss

B) Green algae

C) Fungal spores

D) Lichen

13. What shape name is given to the distinctive circular, eye-like markings found on a peacock's tail feathers?

A) Ocelli

B) Spiracles

C) Rosettes

D) Tessellations

14. Specialized pigment-containing cells that allow animals like chameleons and cuttlefish to change skin color are called what?

A) Melanocytes

B) Chromatophores

C) Keratinocytes

D) Osteocytes

15. What color does the coat of an Arctic fox change to during the warm summer months to blend into tundra rocks?

A) Bright white

B) Brown or grey

C) Yellowish orange

D) Dark black