

Science Picture Quiz
4th Grade and Under Division
IAC Nationals 2025

Instructions – Mark your answers on the scantron provided. Correct answers are worth 2 points. Incorrect answers are worth –1 point. Questions left blank are worth 0 points. Write the answer to your tiebreaker question in the box at the top of your scantron.

1. What basic building block of genetics is seen in this picture?
   A. cell membrane
   B. mitochondria
   C. vacuole
   D. DNA

2. This illustration shows the location of what organ inside the human body?
   A. liver
   B. heart
   C. stomach
   D. appendix

3. This image shows what type of plant trapping an insect?
   A. pitcher plant
   B. corpse flower
   C. Venus flytrap
   D. monkey cup

4. What man, pictured here, became the first human in outer space in 1961?
   A. Yuri Gagarin
   B. Alan Shepard
   C. Neil Armstrong
   D. Buzz Aldrin

5. This picture shows what element, the only metal that is liquid at standard temperature and pressure, being poured into a container?
   A. silver
   B. copper
   C. aluminum
   D. mercury

6. What scientist, pictured here, won the 1921 Nobel Prize in Physics?
   A. Pierre Curie
   B. Albert Einstein
   C. S.N. Bose
   D. Arthur Eddington

7. The microscopic image here shows what type of plant tissue that transports nutrients and water up from the roots?
   A. xylem
   B. muscles
   C. capillaries
   D. bronchi

8. The famous 'Blue Marble' photograph of the Earth was taken by astronauts traveling to which of these in the 1970s?
   A. Skylab
   B. the International Space Station
   C. Mars
   D. the Moon

9. Geirangerfjord in Norway was created by the action of which of these?
   A. a volcano
   B. a river
   C. a glacier
   D. an earthquake

10. Chameleons like the one seen here use which of these to evade predators?
   A. sharp spines
   B. color-changing camouflage
   C. venomous teeth
   D. extreme speed

11. This image shows the cone of what type of tree?
   A. willow
   B. laurel
   C. birch
   D. pine

12. What famous three-horned dinosaur's skeleton is shown here?
A. velociraptor
B. tyrannosaurus rex
C. triceratops
D. stegosaurus

13. The right-triangle theorem of what notable Greek mathematician is depicted here?
A. Xeno
B. Pythagoras
C. Marcus Aurelius
D. Herodotus

14. Ada Lovelace, pictured here, wrote what is considered to be the very first of which of these in 1843?
A. computer programs
B. books
C. newspapers
D. poems

15. Andromeda, shown here, is an example of which of these in astronomy?
A. solar system
B. black hole
C. asteroid belt
D. galaxy

16. What central part of an animal cell is shown in blue on this electron microscope image?
A. cell wall
B. nucleus
C. endoplasmic reticulum
D. heart

17. Marie Curie, shown in a 1920 photograph, won a Nobel Prize in physics and later in what other science for discovering the elements radium and polonium?
A. Economics
B. Medicine
C. Anatomy
D. Chemistry

18. What new space vehicle shown here was launched into orbit for the first time by the US in 1981?
A. the Space Shuttle
B. the Saturn V
C. the V2
D. Crew Dragon

19. Magma becomes lava, shown here emerging from a volcano in Iceland, when which of these things happens?
A. it kills humans or animals
B. it reaches the surface, like in this eruption
C. it melts other rocks
D. it cools off and becomes metamorphic rock

20. Which type of basic solid polyhedron is shown here?
A. pyramid
B. torus
C. cube
D. sphere

21. Scientists and engineers often use a tunnel like the one seen here to test resistance to what natural force?
A. gravity
B. water pressure
C. wind
D. rain

22. What destructive weather event is seen here approaching a town in Manitoba, Canada?
A. hurricane
B. tornado
C. landslide
D. earthquake

23. What famous astronomer, pictured here, spent almost a decade under house arrest for defending the idea that the Earth revolves around the sun?
A. Isaac Newton
B. Alfred Nobel
C. Galileo
D. Edwin Hubble

24. Plasma, one of the four fundamental states of matter, is often seen on earth in the form of what phenomenon seen here?
A. lightning
B. wind
C. rain
D. clouds

25. In this image of the structure of the earth, which of these numbers is the liquid layer known as the outer core?
A. 2
B. 3
C. 4
D. 5

26. Jane Goodall is considered the foremost expert on what primates that she has studied for more than 60 years?
A. lemurs
B. kangaroos
C. chimpanzees
D. pangolins

27. Many people have severe allergic reactions to the venom of what insect seen here?
A. wasp
B. bee
C. horsefly
D. red ant

28. The bee seen here is covered in what substance that is important to reproduction in flowers?
A. petals
B. pollen
C. sap
D. nectar

29. This microscopic image shows the interior of what green-tinted plant organelle?
A. chloroplast
B. Golgi apparatus
C. cilium
D. cnidocyst

30. Acorns like the ones seen here contain the seeds of what keystone species tree?
A. pine
B. willow
C. redwood
D. oak

31. In 2017, the Event Horizon Telescope captured this image, which was the first ever of which of these?
A. planet
B. black hole
C. star
D. moon

32. These shells belong to animals from what phylum, the second-largest phylum of animals on Earth?
A. tardigrades
B. sponges
C. segmented worms
D. mollusks

33. The animal pictured here is endemic to which of these countries?
A. Madagascar
B. Australia
C. the United States
D. Canada

34. Caterpillars like the one seen here turn into which of these as adults?
A. grasshoppers
B. crickets
C. butterflies or moths
D. spiders

35. The volcano pictured here is of what type, known for its tall, steep sides?
A. submarine volcano
B. crater volcano
C. stratovolcano
D. basement volcano

36. The center of a hurricane or cyclone, as seen in this photo, is named after what body part?
A. nose
B. eye
C. finger
D. foot

37. Herbivores, like the cow pictured here, are animals that eat a diet consisting of which of these as adults?
A. only milk
B. meat
C. both meat and plants
D. plants

38. Katherine Johnson, pictured here, was instrumental in calculating the flight plans for Mercury missions as a mathematician for what space agency?
A. Roscosmos
B. NASA
C. Blue Origin
D. SpaceX

39. What cell structure found in plants is shown in green here?
A. cell wall
B. chromatid
C. petal
D. xylem

40. Diamonds like the ones pictured here are a form of what element?
A. oxygen
B. hydrogen
C. carbon
D. nitrogen

41. In this simple model of an atom, the blue spheres represent which of these?
A. protons
B. neutrons
C. electrons
D. isotopes

42. What planet, home to Olympus Mons and Tharsis Montes, is seen in this image?
A. Venus
B. Neptune
C. Pluto
D. Mars

43. This image shows what large primate native to Africa?
A. spider monkey
B. capuchin monkey
C. orangutan
D. gorilla

44. The blowhole of the bottlenose dolphin seen here serves a similar purpose to which of these in a human?

A. ear
B. nostril
C. finger
D. toe

45. The white, leaf-like structures around this magnolia flower are known as which of the following?

A. petals
B. sepal
C. anther
D. carpel

46. What element, shown here, is used to give natural gas an unpleasant smell and was also used to make gunpowder?

A. lithium
B. sulfur
C. chlorine
D. iodine

47. Many animals in the phylum Echinodermata, like the one seen here, are known for resembling which of these?

A. a five-pointed star
B. a circle
C. a cube
D. a pyramid

48. What scientist, pictured here, was instrumental in discovering the double-helix structure of DNA?

A. Clara Barton
B. Rosalind Franklin
C. Dorothea Dix
D. Nellie Bly

49. Beavers like the one seen here are known for building which of these on lakes and streams for protection and as homes?

A. pyramids
B. treehouses
C. dams
D. nests

50. Voyager 1 took this image of what famous feature of Jupiter in 1979?

A. the Hurricane
B. the Great Red Spot
C. the Great Ice Storm
D. the Maelstrom

Tiebreaker

This question will only be scored if there is a tie for placement on the exam. **This is a required question, but there is no penalty for a wrong answer to this question.** Write your answer legibly in the space provided on your scantron.

According to the most recent figures, what is the total number of per cats owned by Americans?