



Animal Flash Facts[®]



9190 Crestwyn Hills Drive | Memphis, TN 38125 | foundation@aalas.org | kids4research.org



Game Play Instructions

Animal Flash Facts[®], developed by the American Association for Laboratory Animals Science Foundation, is an educational game designed to help students in grades five through 12 understand how animals have helped scientists achieve medical discoveries that helped both people and animals.

Game Play:

Each game flash card contains two descriptions of how an animal has helped scientists achieve a major medical discovery. Students must correctly identify the animal being described.

There are 32 medical discovery descriptions contained in the set of flash cards. Each discovery description contains hints to help guide the student to correctly identify the correct animal. (Teachers should use additional hints to help lead students to the correct answer.)

The first student to correctly identify the animal for each description, earns an “Animal Flash Facts” trading card of the animal. There are three trading cards for each animal.

The first student who wins each animal trading card should read out loud the “fun facts” printed on the trading card—sharing this educational information with his/her classmates. Alternatively, the teacher/game facilitator may read the “fun facts” to the class.

How to Win:

Once all Animal Flash Facts descriptions have been answered, the student who has earned the most trading cards during game play is the winner.

Obtaining Additional Trading Cards

Additional trading cards are available for downloading and printing at www.kids4research.org or by contacting aalasfoundation@aalas.org.



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Can you guess the animals I'm describing that helped scientists achieve a major medical discovery? Don't worry, I'll provide helpful hints!

1.

Found on the slimy skin of this creature, scientists have identified a protein-building block that can increase the release of insulin—a hormone lacking in people with diabetes. While you can only find this particular species in the Amazon, other versions may be found in your back yard.

- Hints:
- *This amphibian likes to leap.*
 - *This animal goes "ribbit"*
 - *If you follow the fairy tale, a kiss from a lady may turn this animal into a prince.*

Answer: Frog

.....

2.

Without a single bone in its body, extract made from cartilage of this predator has been found to shrink cancerous tumors in animal models.

- Hints:
- *Seeing the fin of this animal in the water means it's time to get ashore!*

Answer: Shark



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3. The blue blood of this species is the most effective way to test for bacteria. By taking their blood and then releasing them back into the ocean, scientists are able to test the safety of intravenous drugs, vaccines, and medical devices.

- Hints:**
- *This animal gets its name from the shape of its body.*
 - *While the long pointy tail of this animal looks scary, it is not used as a weapon, but to help the animal turn over if a wave flips it on its back.*
 - *This animal lives in the water, looks prehistoric, and has a hard outer shell.*

Answer: **Horseshoe Crab**

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4. Through studies with this animal, scientists first discovered insulin. This research, which resulted in a Nobel Prize in 1920, helped pave the way for insulin replacement, a treatment used by some 24 million individuals in the U.S. today who have diabetes.

- Hints:**
- *A close relative of the wolf, this animal has been man's pet for more than 14,000 years.*
 - *This animal is often referred to as "man's best friend."*

Answer: **Dog**



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5. Thanks to this creature, scientists have identified genes responsible for the development of tumors that grow in the brain, lung, kidney, skin, and other organs. With clinical trials now underway, this animal could help doctors treat cancer-related diseases.

- Hints:**
- Most of these insects have red eyes and are about 1/8" in length.
 - These tiny creatures are often found flying around ripened fruits and vegetables.

Answer: Fruit Fly

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6. For years, heart valves from this animal have been used to replace damaged heart valves in humans. While they are often thought of as messy animals, the physical structure of their organs is so similar to that of humans, that they make for pretty "neat" animal models.

- Hints:**
- These animals have no sweat glands so they roll around in the mud to cool their skin.
 - This farm animal has hooves and a snout.
 - This animal may also be referred to as a hog or swine.

Answer: Pig



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7. Venom from this animal is known to interact with channels that communicate pain to our brain. By studying these toxins, scientists hope to engineer a new painkiller that would have no side effects.

- Hints:**
- *These animals are florescent under ultraviolet light.*
 - *This arthropod's sting does not come from its claws or fangs but from its tail.*

Answer: Scorpion

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8. The genes of this insect are much like the genes we find in humans. Scientists are using this similarity to help understand learning and memory-related diseases such as Alzheimer's, Parkinson's and autism.

- Hints:**
- *Most of these insects have red eyes and are about 1/8" in length.*
 - *These tiny creatures are often found flying around ripened fruits and vegetables.*

Answer: Fruit Fly



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9.

The transparent embryos (eggs) of this small animal give scientists a clear window to study genetically related diseases and the effects medical treatments have on development.

- Hints:**
- They share part of their name with a striped animal that lives in Africa.
 - These animals live in the water, lay eggs every day, and are between 1" to 1 1/2" in length.

Answer: Zebrafish

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10.

This animal, which is almost completely covered by a hard outer shell, helped scientists develop a vaccine for leprosy, a disease associated with open sores on the skin.

- Hints:**
- This animal is only found in warmer climates and has a long sticky tongue to grasp insects.
 - When this animal is frightened it curls up into a ball.

Answer: Armadillo



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11. Rabies is a disease that causes the brain to swell and affects all mammals. Thanks to this animal, a rabies vaccine for our pets, as well as treatment for humans, is now available.

- Hints:**
- *These animals are most active at night and can chew through anything that is softer than their teeth.*
 - *The tail of this animal is as long as its body.*
 - *While these animals will eat almost anything, according to popular culture their favorite food is cheese.*
 - *This animal was the inspiration behind the first and most famous Disney character of all time.*

Answer: Mouse

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12. By studying this animal in the early 1900s, scientists discovered that vitamin C was essential to the human diet. To date, this animal's contributions to research have led to over 23 Nobel Prizes in medicine.

- Hints:**
- *Although they share part of their name with a large farm animal, this creature is about the size of a rat.*
 - *This animal sports a furry coat and can grow between 8"-10" long.*
 - *Unlike many other members of the rodent family, this one has no visible tail.*
 - *The offspring of this animal are called pups, and are born with fur and their eyes open.*

Answer: Guinea Pig



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Can you guess the animals I'm describing that helped scientists achieve a major medical discovery? Don't worry, I'll provide helpful hints!

13. Have you ever had stitches or had a cavity filled? If so, you have this animal to thank for helping scientists develop local anesthesia, the numbing agent that helps make these types of procedures much less painful.

- Hints:**
- *This animal has long sensitive ears that can be turned in any direction.*
 - *This animal is known for hopping and can jump 3 ft. or higher.*
 - *The foot of this animal is often thought to bring good luck.*
 - *These animals eat any vegetation, but according to popular culture their favorite food is carrots.*

Answer: Rabbit

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14. Along with goats and dogs, this farm animal helped scientists develop and perfect hip replacement surgery, a procedure that is conducted on approximately 200,000–300,000 patients every year.

- Hints:**
- *These animals hang in flocks and their babies are called lambs.*
 - *The hair of this animal is called wool.*

Answer: Sheep



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15. With a little engineering, scientists have created a clear-skinned version of this amphibian, allowing them to more easily study the progress of cancer and the aging of internal organs.

- Hints:**
- *This amphibian likes to leap.*
 - *This animal goes "ribbit".*
 - *If you follow fairy tales, a kiss from a lady may turn this animal into a prince.*

Answer: Frog

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16. Research with this animal in the 1950s helped in the creation and refinement of the first heart-lung machine, which in turn, led to the first open heart surgery.

- Hints:**
- *This animal cools itself by panting.*
 - *A close relative of the wolf, this animal has been man's pet for more than 14,000 years.*
 - *This animal is often referred to as "man's best friend."*

Answer: Dog



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17.

The flexible glue that holds together the shell of this animal has many wound healing properties (antimicrobial, non-toxic, hypoallergenic). Because of this, scientists use the glue to create absorbable stitches and dressings for burns and surface wounds.

Hints:

- *This animal gets its name from the shape of its body.*
- *While the long pointy tail of this animal looks scary, it is not used as a weapon, but to help the animal turn over if a wave flips it on its back.*
- *This animal lives in the water, looks prehistoric, and has a hard outer shell.*

Answer: Horseshoe Crab

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18.

Asthma affects over 23 million people in this country—7 million of whom are children. This animal played a crucial role in the development of inhaled asthma medication.

Hints:

- *Although they share part of their name with a large farm animal, this creature is about the size of a rat.*
- *This animal sports a furry coat and can grow between 8"-10" long.*
- *Unlike many other members of the rodent family, this one has no visible tail.*
- *The offspring of this animal are called pups, and are born with fur and their eyes open.*

Answer: Guinea Pig



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19. Smallpox, an infectious human disease, was believed to have killed more than 300 million people in the 20th century. Thanks to scientists' work with this grass-grazing animal, a smallpox vaccine was created, and by 1977 the disease no longer existed.

- Hints:**
- *These animals graze for about 8 hours a day and have a stomach with 4 compartments to help digest grasses and grains.*
 - *This animal lives on the farm and has utters.*

Answer: Cow

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20. Thanks to monkeys and this animal, scientists have developed drugs to greatly improve the quality and length of life for those infected with HIV. Today the average life expectancy for someone living with this virus is almost 24 years, compared to only 7 years in 1993.

- Hints:**
- *These animals are most active at night and can chew through anything that is softer than their teeth.*
 - *The tail of this animal is as long as its body.*
 - *While these animals will eat almost anything, according to popular culture their favorite food is cheese.*
 - *This animal was the inspiration behind the first and most famous Disney character of all time.*

Answer: Mouse



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21. A compound found in the venom of this arachnid is currently being studied by scientists for its ability to reduce the spread of cancerous cells. By itself this animal's venom could kill humans but thanks to animal research, this sting could be life-saving.

- Hints:**
- *These animals are florescent under ultraviolet light.*
 - *This arthropod's sting does not come from its claws or fangs but from its tail.*

Answer: **Scorpion**

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22. CT or CAT scans are special x-rays that help doctors look inside the body without surgery. Developed using this animal model, these scans have helped doctors identify broken bones, cancers, blood clots, signs of heart disease, and internal bleeding.

- Hints:**
- *These animals have no sweat glands so they roll around in the mud to cool their skin.*
 - *This farm animal has hooves and a snout.*
 - *This animal may also be referred to as a hog or swine.*

Answer: **Pig**



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23.

Thanks to research with this furry creature, scientists were able to identify how to prolong the storage of donor blood, making blood transfusions a widely available life-saving procedure.

Hints:

- *This animal has long sensitive ears that can be turned in any direction.*
- *This animal is known for hopping and can jump 3 ft. or higher.*
- *The foot of this animal is often thought to bring good luck.*
- *These animals eat any vegetation, but according to popular culture their favorite food is carrots.*

Answer: Rabbit

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24.

This animal played an essential role in the creation of cardiac pacemakers, heart transplant surgery, and the canine distemper vaccine, helping save the lives of millions of humans and animals.

Hints:

- *This animal cools itself by panting.*
- *A close relative of the wolf, this animal has been man's pet for more than 14,000 years.*
- *This animal is often referred to as "man's best friend."*

Answer: Dog



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25. This animal played an essential role in the development of chemotherapy treatments for leukemia, the most common cancer affecting children. Now, thanks to this and other advances, the survival rate for leukemia patients has skyrocketed from 30% to 80% today.

- Hints:**
- These animals are most active at night and can chew through anything that is softer than their teeth.
 - The tail of this animal is as long as its body.
 - While these animals will eat almost anything, according to popular culture their favorite food is cheese.
 - This animal was the inspiration behind the first and most famous Disney character of all time.

Answer: Mouse

.....

26. Stepping on a rusty nail is no longer deadly thanks to the tetanus vaccine. Developed in studies with horses and this animal, the tetanus vaccine was first used on the battlefield in World War II.

- Hints:**
- Although they share part of their name with a large farm animal, this creature is about the size of a rat.
 - This animal sports a furry coat and can grow between 8"-10" long.
 - Unlike other many other members of the rodent family, this one has no visible tail.
 - The offspring of this animal are called pups, and are born with fur and their eyes open.

Answer: Guinea Pig



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27. This animal has nine eyes, two of which have some of the largest eye parts of any animal on the planet. This feature made it an excellent model for research that led to great advances in our understanding of human vision.

- Hints:**
- *This animal gets its name from the shape of its body.*
 - *While the long pointy tail of this animal looks scary it is not used as a weapon, but to help the animal turn over if a wave flips it on its back.*
 - *This animal lives in the water, looks prehistoric, and has a hard outer shell.*

Answer: Horseshoe Crab

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28. Burn victims have this animal to thank for the development of skin grafts. In severe cases, the skin of this animal may be used as a temporary cover for open wounds until a more permanent solution can be found.

- Hints:**
- *These animals have no sweat glands so they roll around in the mud to cool their skin.*
 - *This farm animal has hooves and a snout.*
 - *This animal may also be referred to as a hog or swine.*

Answer: Pig



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29.

This small creature was responsible for the development of penicillin, an antibiotic used to treat infections. Today, penicillin is the most widely used antibiotic saving thousands of lives every day.

Hints:

- *These animals are most active at night and can chew through anything that is softer than their teeth.*
- *The tail of this animal is as long as its body.*
- *While these animals will eat almost anything, according to popular culture their favorite food is cheese.*
- *This animal was the inspiration behind the first and most famous Disney character of all time.*

Answer: Mouse

.....

30.

Cystic fibrosis is an ailment that affects the lungs and digestive tracts of children and adults. Today, researchers are working with this animal to see if gene replacement therapy can prevent the disease and become a treatment for human patients.

Hints:

- *This animal has long sensitive ears that can be turned in any direction.*
- *This animal is known for hopping and can jump 3 ft. or higher.*
- *The foot of this animal is often thought to bring good luck.*
- *These animals eat any vegetation, but their favorite food is supposedly carrots.*

Answer: Rabbit



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31. A hundred years ago, tuberculosis (TB) was one of the most common causes of death. Nobel Prize-winning research with this animal led to the first antibiotics effective against this deadly disease.

- Hints:**
- Although they share part of their name with a large farm animal, this creature is about the size of a rat.
 - This animal sports a furry coat and can grow between 8"-10" long.
 - Unlike other many other members of the rodent family, this one has no visible tail.
 - The offspring of this animal are called pups, and are born with fur and their eyes open.

Answer: Guinea Pig

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32. The young of this mammal were the first successfully treated with a substance to help the lungs more easily inflate and deflate. Today, nearly 90 percent of the premature babies born with lung distress issues survive thanks to scientists work with this animal.

- Hints:**
- This animal has long sensitive ears that can be turned in any direction.
 - This animal is known for hopping and can jump 3 ft. or higher.
 - The foot of this animal is often thought to bring good luck.
 - These animals eat any vegetation, but according to popular culture their favorite food is carrots.

Answer: Rabbit