

GENTLE.NEWS

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"The library is inhabited by spirits that come out of the pages at night."

— Isabel Allende

Hubble Telescope Finds a Galaxy With a Surprise

NASA's Hubble Space Telescope has spotted a very unusual galaxy. It is called NGC 4698. It sits about 55 million light-years away from Earth.

This galaxy belongs to a group of over a thousand galaxies. They are all held together by gravity. The group is called the Virgo Cluster. It is the nearest large cluster of galaxies to our own Milky Way.

Like our Milky Way, NGC 4698 is a spiral galaxy. It has beautiful curving arms made of stars, gas, and dust. The outer arms glow with bright blue young stars. Older, cooler stars fill the glowing center.

But this galaxy has a big surprise. Most spiral galaxies have arms that wind all the way to the center. This one does not. Its arms form a ring around the outside instead. Even stranger, its glowing center bulges outward at a right angle to the disk. Scientists say very few galaxies do this.

A giant black hole sits at the center of NGC 4698. It contains millions of times the mass of our Sun. Scientists believe it is still growing today. Hubble's beautiful image helps us learn more about the many wonders hiding in our universe.

Scientists Work to Keep America's Bison Strong

The American bison is one of nature's most amazing animals. These giant, shaggy creatures nearly disappeared 125 years ago. Thankfully, people worked hard to save them. Today, bison herds are alive and growing across the United States.

Now, scientists are doing important new work to keep bison healthy for the future. Researchers are studying the genes of bison herds. Genes are like tiny instruction books inside every living thing. They shape how healthy an animal is.

In Montana, scientists studied a herd of about 1,000 bison. They found wonderful news. These bison had rich, healthy genes. The herd showed no mixing with cattle from long ago. This means the animals are strong and true wild bison.

Scientists also studied bison in Yellowstone National Park. They used computers to test different ways of caring for the herd. They found that keeping at least 3,500 bison is best. This gives the herd strength to handle hard times like drought.

This research helps the people who care for bison every day. With good science, America's bison will keep roaming the plains for many generations to come. These magnificent animals are a living symbol of America's wild spirit and natural beauty.

Scientists Find Nine New Sponge Species in Alaska Waters

Scientists have discovered nine new kinds of sea sponges near Alaska. They were found in the Gulf of Alaska and near the Aleutian Islands. This brings the total number of known Alaska sponge species to 232. That is a wonderful find!

Researchers studied samples collected since 2012. The samples came from regular ocean survey trips. Scientists published their findings in two separate scientific papers. These discoveries show just how rich ocean life can be.

Sponges are amazing and ancient creatures. They have lived on Earth for more than 600 million years. They have no brain, no organs, and no complex body parts. Yet they survive and thrive on the ocean floor.

Sponges work like living water pumps. They filter huge amounts of seawater to find their food. They also build structure on the seafloor, just like trees in a forest. Fish and crabs use sponges as shelter and hiding places.

Young rockfish and crabs tuck inside tube- and barrel- shaped sponges to stay safe from danger. Scientists say the Aleutian Islands are now known as one of the best places on Earth for sponge variety. The ocean still holds many wonderful secrets waiting to be discovered.

Scientists Get Closest Ever Look at Tiny Electrons

Scientists have made an exciting discovery about how electronics work. A team at Lawrence Berkeley National Laboratory in California found a brand new way to watch electrons up close. Electrons are tiny particles that power all our gadgets and devices.

The scientists used special tools to see electrons moving inside thin materials called semiconductors. These are the materials found inside phones, computers, and televisions. Getting a clear look at electrons has always been very hard, because they are so incredibly small.

The team also built smart computer programs to help explain what they were seeing. Together, the tools gave researchers the clearest picture ever of how electrons behave. Their findings were published in the important science journal Nature.

What they learned will help engineers build better, smaller devices in the future. Scientist Mike Crommie said the work "opens the door to never-seen-before discoveries." That means our gadgets could one day become smarter and more powerful than ever before.

This kind of research helps make everyday life better for everyone. From hearing aids to medical tools, tiny electronics matter greatly. It is wonderful to know that curious scientists are working hard to improve the technology we all depend on.

America Invests Big in the Science of Tomorrow

The United States is making a huge push to discover new things that could change all of our lives. A group called the National Science Foundation is putting \$1.5 billion into a bold new program called NSF X-Labs.

This program brings together some of the brightest minds in the country. Scientists, engineers, and inventors will work side by side. Together, they will tackle some of the biggest questions in science and technology.

One exciting area is called Artificial Intelligence for Physical Systems. This means teaching computers to help with real-world tasks in smarter ways. Two more topics will be added soon, including one about how our bodies work at a very deep level.

The people in charge say that science is moving faster than ever before. They want to make sure America keeps leading the way. The X-Labs give researchers the freedom to try new ideas and learn quickly.

This is a ten-year effort. That means steady, long-term support for the best and brightest thinkers. The hope is that their discoveries will open a brand-new era of American invention and progress for everyone.

Activity Time - Word Search

Find the words below in the puzzle. Words go across or down only.

Words to Find:

ELECTRON

RESEARCH

SCIENCE

ALASKA

SPIRAL

HUBBLE

OCEAN

