



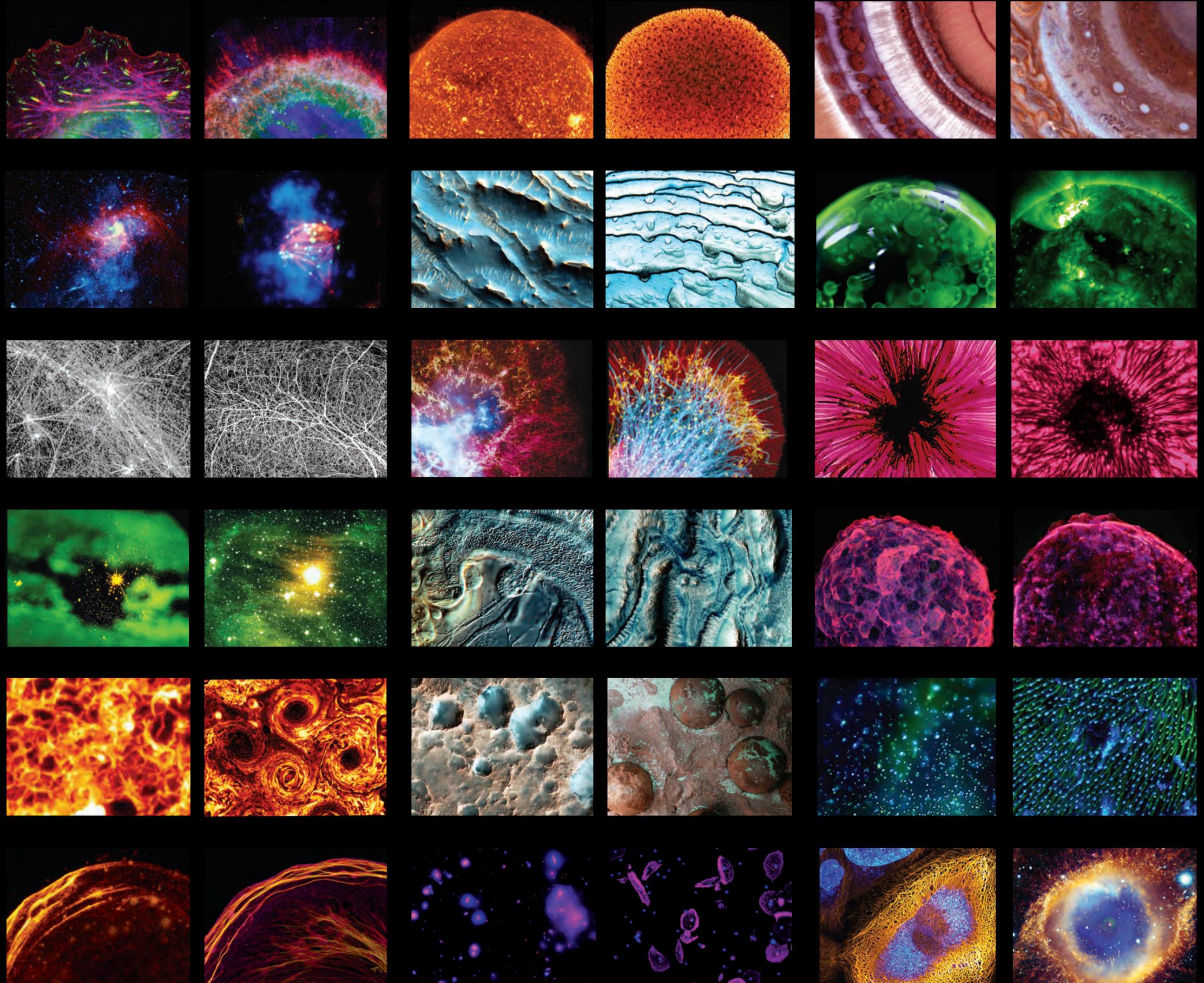
National Aeronautics and Space Administration

MICRO TO MACRO

It's not always about what you see, but how you see it. Discovery requires keeping an open mind – no matter what you are looking at. This project seeks to spark a sense of exploration by challenging viewers to think a little differently about how they experience images from science.

These images are samples of very big objects seen through telescopes as well as tiny phenomena only visible under microscopes. Can you tell which is which?

Through a collaboration between NASA's Chandra X-ray Observatory and the Nikon Small World competition, we invite you to explore these spectacular images – and take a moment to look at science with a fresh perspective.



Top left to Right

Cell Death vs Star Death

Left: Human cancer cells viewed with fluorescent light.

Right: The remains of a dying star.

Our Sun vs Carbon Nanotubes

Left: Over two days, the Sun erupted with giant loops of plasma.

Right: Carbon nanotubes, tiny cylinders made of carbon atoms, appear under the microscope.

Agate vs Turbulence on Jupiter

Left: A polished slice of agate, a type of quartz found in South Dakota.

Right: The swirling atmosphere of Jupiter, captured by NASA's Cassini spacecraft.

Exploded Star vs Divided Cells

Left: The remains of a supernova near the Milky Way's center glow in X-rays and radio waves.

Right: Mammalian cells caught in abnormal division.

Martian Crater vs Blue Pigment

Left: A textured section of Mars' Gale Crater.

Right: A blue pigment called toluidine used in dyes and research.

Algae in Reflected Light vs Our Star in UV light

Left: Volvox is a type of green algae.

Right: This image of our Sun was taken with the Extreme Ultraviolet Imager.

Night Sky Moves in X-rays vs Capillary Network of the Brain

Left: A map of the night sky made from nearly two years of X-ray observations.

Right: A 3D view of tiny blood vessels in a section of the mammalian brain.

Dead Star vs Sea Slug Nerve Cell

Left: The Crab Nebula glows in X-rays and visible light.

Right: A nerve cell from a sea slug.

Shrubby Plant Hair vs Sunspot

Left: Star-shaped plant hairs cover the leaves of the silverberry plant.

Right: A close-up view of a sunspot on the surface of the Sun.

Heart Tissue vs Heart of a Stellar Nursery

Left: A section of heart tissue exposed to radiation.

Right: A bright young star wrapped in gas and dust inside a stellar nursery.

Tiny Wheel Animal vs Flowing Deposits on Mars

Left: Rotifers, some of the smallest animals on Earth, are shown in extreme close-up.

Right: A Martian landscape shaped by ice & dust flows.

Cardiac Organoid vs Supernova 1006

Left: A cardiac organoid, a three-dimensional cellular model system grown from stem cells.

Right: A supernova remnant was seen here in a long observation from NASA's Chandra X-ray Observatory.

Membranes vs Cyclones on Jupiter

Left: The endoplasmic reticulum, a network inside animal cells.

Right: At Jupiter's south pole, five giant cyclones circle a central storm.

Martian Valley vs Microcapsules

Left: A section of Mars shows different types of clay that could only have formed with water.

Right: Tiny capsules under a microscope show cracks and self-healing properties.

Star Cluster vs Ladybug Leg

Left: A cluster of stars near the Milky Way's center shines in X-rays.

Right: A close-up of a ladybug's leg

Supernova 0509 vs Rat Liver

Left: SNR 0509-67.5 is a supernova remnant located in the Large Magellanic Cloud.

Right: Isolated cell from the liver of a Sprague-Dawley rat.

Galaxy Cluster vs Fruit Fly Cells

Left: A massive galaxy cluster glows in X-rays, infrared, and visible light.

Right: Immune cells from a fruit fly are highlighted with fluorescent colors

Lab Skin Cells vs Planetary Nebula

Left: Human skin cells glow with added color that highlights their structure.

Right: A planetary nebula, the phase of a star like our Sun experiences after it runs out of fuel.

All image credits can be found at our website.

