XX PUBLISHING

2015 Content-intensive Catalog



Fonetically Phamous Feenixx Phrog



NEW See page 17







A235 Fresh Water Game Fish

A236 Salt Water Game Fish

A233 Sharks and Kin

A310 Feathered Dinosaurs 2



See page 48 P103 Pledge of Allegiance

See page 16

P114 State Flags

A311 Mammal Evolution













B614 American Autos of 1940-1949

B616 American Autos of 1960-1969

B441 America's Cup Winners

B492 Nautical Navigation







E116 Clouds

B491 Sea Fever

B410 Ocean Liners





B309 B-2 Spirit





B303 B-47 Stratojet **B305 B-52 Stratofortress**

B310 SR-71 Blackbird

CONTENT-INTENSIVE INFO POSTERS For those curious about the world in which we live

2800 Crusader Circle, Warehouse 10 | Virginia Beach, VA 23453 | www.Feenixx.com Toll Free Voice (855) 333-6499 | Toll Free FAX (888) 243-9440 | Orders@Feenixx.com

B251 Warbirds of World War I

CONTENT-INTENSIVE INFO POSTERS

For those curious about the world in which we live

Feenixx Publishing has created an entirely new type of poster. We call it a "Content-intensive Info Poster." Each provides a comprehensive overview of the subject presented through an abundance of extraordinary images accompanied by interesting, fact-filled text.

Our posters are designed to appeal to those "who are curious about the world in which we live." These are the many, many millions of people who watch educational TV shows and read books and magazines dealing with science, nature, and technology.

The scope of human knowledge is rapidly increasing, yet the demands of modern-day life leave little time for keeping up with so much new information. Curious people want this new knowledge, and they want it quickly. Feenixx content-intensive posters have been compared to condensed books. They permit the reader to quickly and easily gain a basic understanding of the subject. Many have great educational value and are cherished by teachers, students, and professionals. Everyone loves them for their outstanding beauty and decorative value.



Fonetically Phamous Feenixx Phrog

Red-eyed Tree Frog Agalychnis callidryas

The world's most informative posters

Subject Selection

Feenixx posters explore popular, interesting, and cutting-edge subjects. They are specifically designed for the U.S. market.

Comprehensive Coverage

Each title provides a comprehensive overview of the subject and includes all of its most important components.

Accuracy

Great Horned Owl

Bubo virginianus

All titles are extensively researched. Leading experts often act as consultants to help define content. They are the final authority on the accuracy of both information and images.

Outstanding Illustrations

Our artists are carefully selected on the basis of their illustration skills and their knowledge of the subject. Many have both art and science degrees. This ensures that even the smallest details are correctly rendered.

Informative Captions

The succinct captions focus on the big picture and minimize technical details. They use an easily understood vocabulary and avoid specialized scientific terms that can confuse the novice.

Up-to-Date

Our knowledge is rapidly expanding, so each and every poster is carefully reviewed well in advance of reprinting to make sure that everything is up-to-date. Revisions are made as necessary.

Great Decorative Value

Our posters are filled with interesting information presented through outstanding illustrations, photographs, and graphic design, making them works of art in their own right.

Quality Printing

All posters are printed on very heavy, high-quality paper that is also very hard in order to preserve tiny details. All posters are then specially coated to provide a satin finish that reduces glare and enhances the presentation. These are the same high standards used to produce expensive art prints.

Standard Size

All posters are the standard 24 x 36 inch size. They fit easily into stock merchandisers and inexpensive, off-the-shelf frames. This is very important to the consumer, as odd-size posters require expensive custom-made frames.

Low Prices - High Profits

Feenixx sells direct to retailers, thus avoiding middleman markups. We pass the savings on to our customers with low wholesale prices. This permits low retail prices. Great posters at great prices result in high turnover. Exceptionally high markups yield outstanding profits.

We Listen to Our Customers

Have an idea for a poster? Share it with us. Several of our titles were developed as a result of customer requests.

Mimic Butterfly Hypolimnas misippus

www.Feenixx.com

Our main website provides information on all of our titles. The Work in Progress section shows what is now in development. The Image Gallery contains large, high-quality poster pictures for use in catalogs and on websites.*



www.Dinosaur-World.com

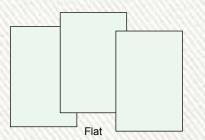
This site provides extensive information on the creatures shown on our prehistoric life posters. Large images of individual species may be used by our customers on their websites.*



Pinto (Color Breed)

www.Feenixx-Gallery.com

This site contains images from our other posters that our customers may use on their own websites. We can also provide high-resolution images of individual subjects for your catalog.*



Packaging





Deluxe Laminated

Flat Posters (non-laminated, unpackaged)

These are ideal for mail-order companies, as most customers order several titles at a time. Flat posters can be rolled together for shipping, resulting in a smaller box and lower shipping cost. They are also popular with frame shops.

Standard Posters (non-laminated, packaged)

Posters are tightly rolled and packaged in a 1" diameter x 24" long poly tube designed to fit flip-panel merchandiser cabinets. The UPC bar code label shows a color picture of the poster to assure consumers that they have the right poster.

Laminated Posters (unpackaged)

The heavily laminated poster is totally encapsulated in heavy 3 mil plastic, which provides protection and permanence, precluding the need for a frame. They are a must for the education market. Best merchandised in the sleeve and rack system.

UPC Numbers / Bar Codes

Standard, Laminated, and Deluxe posters each have unique UPC numbers and come with bar code labels. A spreadsheet listing all SKUs and UPCs may be downloaded from our website. It may be easily imported into most order processing software programs.

Deluxe Laminated Posters (packaged)

Our heavily laminated posters are rolled and inserted into a 1.5" diameter x 24" long clear soft plastic tube. They have a very large display label that shows a big picture of the poster, accompanied by a description of what the poster shows and explains. The clear tube lets the customer see the quality of the art.

This new style fits into our flip-panel merchandiser cabinets and our point of purchase displays, but the great self-contained sales presentation also permits our Deluxe Posters to be displayed independently of merchandisers. They can be offered in virtually any bin.

Best of all, Deluxe Posters come with easily attached self-adhesive hang tabs that allow them to be hung from slat wall and pegboard hooks. This permits them to be displayed along with subject-related merchandise such as books, magazines, and nature specimens.

SKU / Stock Numbers

All posters carry a basic four-character stock number. When ordering posters, add the letter code that indicates the packaging style that you want. For example, the basic number for Mammals is A151.

A151F add "F" for Flat A151S add "S" for Standard

A151L add "L" for Laminated A151D add "D" for Deluxe

Merchandisers





Flip-panel Merchandiser





Free-standing Display

Sleeve and Sleeve Rack

Point-of-Purchase (POP) DisplayThis clean and attractive corrugated display has a small 14" x 14" footprint, so it takes up little space. The header card can be customized to show up to any 12 titles that you want to carry. Holds 100 Standard or 64 Deluxe posters.

Slim Jim Poster Bin

Slim Jim Poster Bin

POP Display

The small 6" x 24" footprint permits this bin to be placed almost anywhere. The header card can be customized to show only the titles that you want. The front of the bin provides a large display area that may be used to attach a poster or your own sign. Holds 36 Deluxe posters.

Flip-panel Merchandisers with Cabinet

Each panel displays two posters back to back. The numbered panels flip, just like the pages in a book, permitting many posters to be shown within a small space. The large storage cabinet has storage slots identified by page numbers. They will accommodate Standard and Deluxe posters. Comes in 10, 24, and 30 panel sizes. Available in black and in white. See our Price List / Order Form for stock numbers, dimensions, and storage capacities.

Free-standing Flip-panel Displays

These space-saving flip-panel displays are just like the ones on the Flip-panel Merchandisers but are on a stand rather than with a cabinet. Comes in 10-, 20- and 30- panel units. Available in black and in white.

Flip-panel Wall Units

These units are the same as above but do not have a stand. The units mount directly on the wall. Comes in 10-, 20-, and 30-panel sizes. Available in black and in white.

Sleeve and Rack System

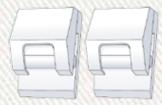
The sleeve and rack system is a great way to display posters and provides a convenient way to inventory them.

The sleeves are made of heavy clear vinyl, double stitched for long life. They contain a white corrugated stiffener to keep them upright. Each sleeve can display two different titles, one on each side of the stiffener. The sleeves are open at the top and are a little larger than the posters, making it easy to insert and remove them. This encourages impulse sales.

Our heavy-duty sleeve rack is constructed of square steel beams, making it an extremely strong unit designed for long life. Wide "lizard legs" provide exceptional stability. The sleeve rack is mounted on large wheels that permit it to be easily rolled wherever you want. It has a small 24" x 37" footprint with sleeves. The unit is available in white, gray, granite, and black.

The sleeve and rack system may be used for both laminated and non-content of the state of the

laminated posters. Most stores carry laminated ones, as they sell better and are more profitable. The rack provides space for up to 36 sleeves. Each sleeve can hold up to 30 laminated or 70 non-laminated posters.

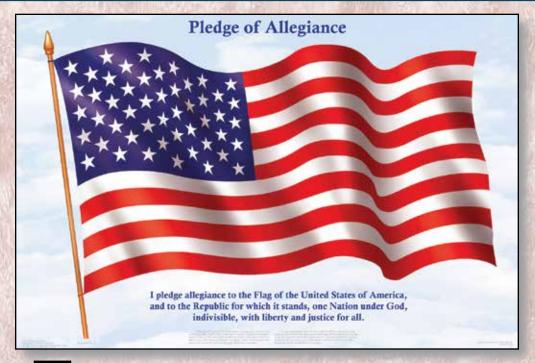


Poster Hangers

Our gravity-operated poster hangers are a great way to display laminated posters. Simply peel the protective paper off the adhesive pad, and then stick the hangers to any smooth surface, even glass.

Push in the poster and the rollers lock it in place. Push up the rollers and the poster slips out, undamaged. Use these great hangers for displaying posters in windows and on side walls above shelves.

AMERICANA



P103 Pledge of Allegiance

The Pledge of Allegiance of the United States is an expression of fealty to the flag of the United States and the republic of the United States of America. It was composed by Francis Bellamy in 1892 and formally adopted by Congress as our national pledge in 1942. The official name of The Pledge of Allegiance was adopted three years later. On Flag Day 1954, the words "under God" were added.

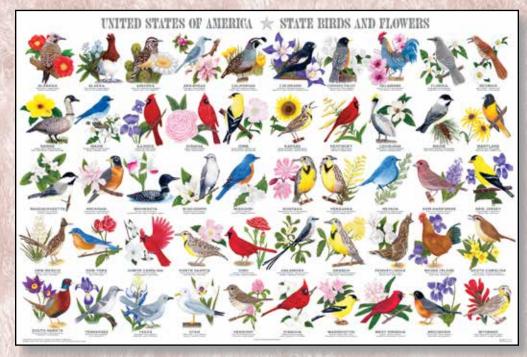
On that day, President Eisenhower proclaimed, "From this day forward, the millions of our school children will daily proclaim in every city and town, every village and rural school house, the dedication of our nation and our people to the Almighty.... In this way we are reaffirming the transcendence of religious faith in America's heritage and future; in this way we shall constantly strengthen those spiritual weapons which forever will be our country's most powerful resource, in peace or in war." It has since been used to open many a school day. It is also

used to open many federal, state, and local government meetings.

An extensive search went into finding a great photograph of our flag, one that would show it unfurled, revealing all the stars (each represents a state), and waving proudly in a stiff breeze.

We couldn't find one, so we commissioned an original illustration, which shows our flag in all its clear. The world to the pladage approach but it. its glory. The words to the pledge appear below it.

This is a must poster for every American classroom and government office.





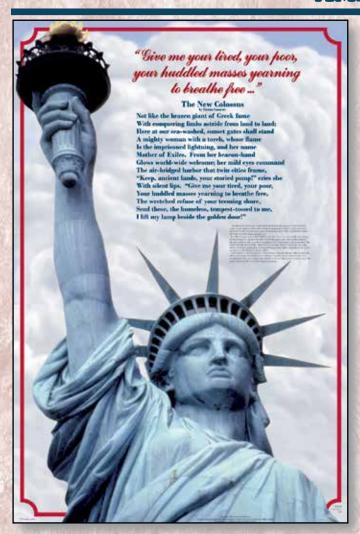
ALABAMA Yellowhammer / Colaptes auratus Camellia / Camellia japonica

P102 State Birds and Flowers

This beautiful poster was inspired by the postage stamps issued by the United States Postal Service, which quickly became the best-selling series in its

You would expect the state bird of Maryland to be the Baltimore Oriole, and you can understand New Mexico being represented by the Roadrunner, but why did dry, land-locked Utah choose the California Gull? It was because in 1848, migrating gulls saved the early settlers from starvation by eating up the Rocky Mountain locusts that were destroying their crops. The 50 states are listed alphabetically. Each bird and flower is identified by both its common and its scientific names.

AMERICANA



P101 Lady Liberty

This poster shows America's most famous lady accompanied by the full text of the poem *The New Colossus*, by Emma Lazarus (1849-1887). She wrote it in 1883 to help raise money for the Statue of Liberty pedestal. It is now inscribed on a plaque hanging inside that pedestal. Below her sonnet, a small caption presents the story behind it.

Many years ago author John T. Cunningham wrote, "The Statue of Liberty was not conceived and sculpted as a symbol of immigration, but it quickly became so as immigrant ships passed under the statue." However, it was Lazarus's poem that permanently stamped on Miss Liberty the role of unofficial greeter of incoming immigrants. She has since become a symbol for liberty throughout the world.

The New Colossus

Not like the brazen giant of Greek fame
With conquering limbs astride from land to land;
Here at our sea-washed, sunset gates shall stand
A mighty woman with a torch, whose flame
Is the imprisoned lightning, and her name
Mother of Exiles. From her beacon-hand
Glows world-wide welcome; her mild eyes command
The air-bridged harbor that twin cities frame,
"Keep, ancient lands, your storied pomp!" cries she
With silent lips. "Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore,
Send these, the homeless, tempest-tossed to me,
I lift my lamp beside the golden door!"



P114 U.S. State Flags

Each of the 50 states in the United States has its own flag. They exhibit a wide variety of regional influences and local histories, as well as widely different styles and designs. Modern state flags date from the 1890s when states wanted to have distinctive symbols at the 1893 World's Columbian Exposition in Chicago. Most state flags were designed and adopted between 1893 and World War I. Several have since been changed.

This poster shows the flags of all 50 states, the District of Columbia, and the American territories.

COLLECTIBLES

P212 U.S. State Quarters
The 50 State Quarters Program was started to support a new generation of coin collectors. President George Washington is shown on the face of each quarter, but the reverse commencates one of the 50 states with a design representing its unique history, traditions, or symbols. The quarters were released by the United States Mint every ten weeks, or five each year, beginning in 1999. They were released in the same order that the states ratified the Constitution. In 2009, the U.S. Mint began issuing quarters commemorating the District of Columbia and the U.S. Territories. Although authorized by a different legislative act, these quarters are often seen as an extension of the 50 State Quarters Program. The poster shows both sets.

The U.S. State Quarters became the most successful numismatic program in history. The U.S. Mint states that roughly half of the U.S. population collects the coins either casually or seriously. The U.S. federal government has realized profits of over \$3 billion from collectors taking the coins out of circulation.



Face - President Washington





Typical reverse - California



1971-1972 Cinnamon Teal

1995-1996 Mallards



P223 Duck Stamps

These stamps are commonly referred to as "duck stamps," but their correct name is "U.S. Migratory Bird Hunting and Conservation Stamps," as shown on the poster. The migratory birds include not only ducks, but also swans, geese, and other waterfowl. The stamps represent an extremely successful United States Government program.

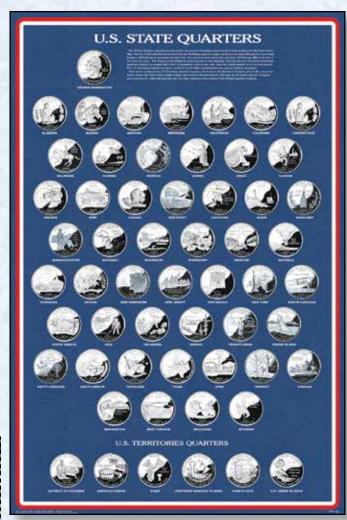
President Herbert Hoover signed the Migratory Bird Conservation Act in 1929 to authorize the acquisition and preservation of wetlands as waterfowl habitat. The law failed to provide funding, so five years later Congress passed the Migratory Bird Hunting Stamp Act to fill this need. The stamp is required to hunt water-fowl in the fall and winter. The stamps are valid from July 1st of one year until June 30th of the next, thus the two-year date.

Over 98% of the income from the stamps is actually used for wetland acquisition and preservation. The fees have paid for 580 national wildlife refuges containing more than 150 million acres. The program proved so successful that all fifty states now issue their own stamps. Similar programs have been adopted by other countries, including Canada, Australia, Mexico, Russia, and the United Kingdom.

This subject has very broad appeal. The stamps are surphased not only by bustors but by

purchased not only by hunters, but by stamp collectors those who support conservation efforts, and people who really enjoy the magnificent engravings. Each stamp is a work of art in its own right.





COLLECTIBLES



P221 Classic U.S. Postage Stamps

The United States issued its first postage stamps in 1847. Many more followed. This poster shows all of the major regular-issue stamp designs through the issue of 1902-1903. Collectors recognize many minor variations for one design as being separate issues. For example, the designs shown on rows 5 to 7 were printed by three different private companies. Each is regarded as a different issue and are assigned different catalog numbers.



1847 - First United States postage stamps



1869 - Pictorial Series

These were the first U.S. stamps to show subjects other than portraits of presidents and other famous Americans. They were also the first U.S. stamps to utilize two-color printing. There are ten stamps in the set.



P211 U.S. Currency
This poster summarizes the history of American paper money. The top row begins by showing a banknote issued by one of the colonies. It is followed by an example of Continental Congress currency used to finance the Revolutionary War. The United States Government did not begin to print currency until 1862. During the interim, private banknotes were issued by states, cities, individual banks, and even private companies. Eight of these appear in the top row. The rest of the poster is devoted to official United States Government currency. Many great designs were used before the introduction and adoption of the modern-day greenback design.



1896 \$2 Silver Certificate



1934 \$10,000 Federal Reserve Note

ANIMAL DEVELOPMENT

The Life Science Revolution

In 1735, Carolus Linnaeus published the first edition of his Systema Naturae, which set forth his system for classifying all living things. It has been in use ever since. Scientists now estimate that living animals account for less than one-tenth of one percent of all animals that have ever lived. They maintain that the Linnaeus system is the "tail wagging the dog," as it does not adequately provide for the far more abundant extinct prehistoric species. They have replaced it with the new cladistics classification system that uses phylogenetic systematics to classify animals by physical changes in an evolution-tree organization. Traditional phyla, orders, and families have been replaced by clades.

This revolutionary new way of looking at animal life is presented in a series of three extraordinary, cutting-edge posters. *Animal Development* and *Milestones of Vertebrate Evolution* explore and explain the underlying system. The all-new *Animal*

Kingdom 2 shows the results.

Each of these three titles is self-contained and may be used independently of the others, but they also complement one another and are most effective when used together. They provide an invaluable, quickly accessible reference for educators, students, professionals, and others who are curious about the world in which we live.

A104 Animal Development

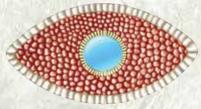
This innovative poster represents the first time the animal kingdom has ever been shown through the development of the animals' physical characteristics. It graphically explains how the main branches of the new cladistic classification system were established.

A clade is a group of organisms that share a common physical characteristic. Animals differ from other life forms in that they have at least two cell layers. This characteristic defines the Metazoa (animal kingdom) clade. Primitive sponges and jellyfish were the first animals. Then came the addition of a third cell layer, resulting in a third clade.

The poster begins with the simplest animals, then progresses to the most complex, showing all of the important changes. A branching system design presents the nine primary clades, which are then divided to the next level. Detailed illustrations show many representative species. All are identified by captions.

This poster is largely devoted to the invertebrates. The presentation shows how the various groups are related to one another, making it easy to understand their similarities and their differences. The vertebrates are summarized in the lower right corner. The complexity of the subject resulted in them being treated separately in *Milestones* of Vertebrate Evolution, shown below.

The third (triploblasic) cell layer permitted the development of a more complex body. This clade is unique in that the animals share a second common characteristic. They are also bilateral; each half is the mirror image of the other. Authorities disagree as to which of the two characteristics should be the defining one. This has resulted in the clade being referred to by two different names, Triploblastic and Bilateral. The poster cites both





History of Cladistics

Charles Darwin published his famous Origin of Species in 1859. It set forth the principles of evolution. Seven years later, German biologist Ernst Haeckel published the first known evolution tree. He proposed a new classification system based on hereditary relationships, but so little was known about extinct species that the scientific community was not ready to accept his system.

Haeckel's 1866 Evolution Tree

Another German biologist, Emil Hans Willi Hennig, resurrected the idea and published his Basic Outline of a Theory of Phylogenetic Systematics in 1950. The explosion in our knowledge of prehistoric life that followed resulted in the new system being accepted by most paleontologists by the mid-1980s. It now provides the framework for the study of all animal life.

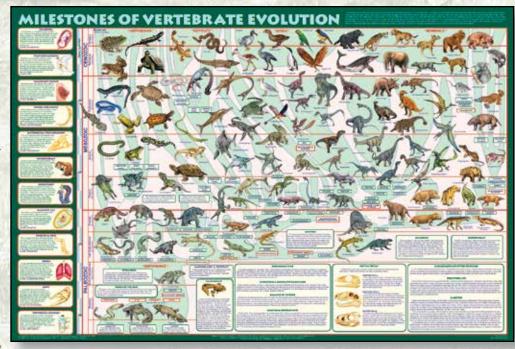


Ichthyostega An early tetrapod

Around 360 million years ago, some fish began changing: gills became lungs and fins turned into legs. These amphibian-type animals left the sea and began to live in tidal pools and along seashores. They were the first tetrapods. All terrestrial vertebrates descended from them and are members of the huge tetrapod clade.

A Milestone Poster

Milestones of Vertebrate Evolution is a major achievement. No other poster has ever explored such an enormous subject in such minute detail. It was in development for four years and required hundreds of hours of research. Cladistic pioneer Dr. Robert Reisz, vertebrate paleontologist at the University of Toronto, was the technical consultant



A105 Milestones of Vertebrate Evolution

This incredible poster presents a tremendous amount of information in an easily understandable way. Along the left edge, the major milestones (physical developments) of vertebrate evolution are shown and described. The main design is an "Evolution Tree" superimposed over the geological time scale. (See Eras of Life on page 7.) The milestones are marked on it to show the resulting animal clades. The beginning and end of each branch shows when they lived; the thickness of the branch indicates their relative abundance or scarcity during each geological period. 119 species are shown, all in the proper geological period. This makes it easy to see which animals lived at the same time. Interesting insets explain everything. everything



A111 Animal Kingdom 2

The traditional Linnaeus phyla-order-family animal classification system was the basis for our earlier *Animal Kingdom* poster, which showed only the living species. This system is now being replaced by the new cladistics classification system. This new way of looking at animal life has had an enormous impact on the study of animal development and prehistoric life. It is taught in all the

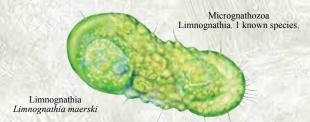
major universities and is now making its way into K-12 schools.

Animal Kingdom 2 presents the new cladistics classification system. Six newly established phyla / clades have been added as well as eleven contain-

newly established phyla / clades have been added as well as eleven containing only extinct species. This increased the number of phyla / clades from 27 to 44. They are grouped into the nine primary clades shown and explained in Animal Development; thus the two posters complement each other. Linnaeus did not know about prehistoric life, and his classification system grouped together similar living species. It has been the basis for animal science for over 270 years. Many modern-day animals have not yet been classified under the cladistics system due to disagreements among the experts. Many biology textbooks have not yet been updated to reflect this revolutionary new way of looking at animal life. These factors have resulted in the use of both systems during this transitional period.

Because of this, both Animal Kingdom 2 and Animal Development cite traditional phyla names rather than the clade names, which are almost identical. This all-new edition shows almost twice as many species as the earlier one. It is an essential reference chart for teachers, students, and professionals deal-

is an essential reference chart for teachers, students, and professionals dealing with both living and prehistoric species.



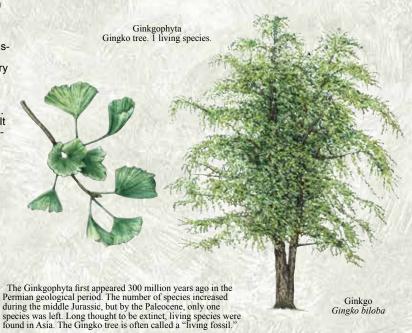
This microscopic freshwater animal was recently discovered living in the frigid springs of West Greenland. Its jaw has 32 moving parts, which is amazing considering its average length is one-tenth of a millimeter, making it one of the smallest animals on Earth. That and other unique body characteristics resulted in it being given its own clade, one of the six new ones recently established.



A112 Plant Kingdom 2

The revolutionary changes in the way we look at animal life have had little impact on the plant kingdom. Classification has been comparatively stable. Linnaeus is still king. The original purpose of this new edition of our popular Plant Kingdom poster was to match the graphic design of Animal Kingdom 2, once again making them a matched set. We took advantage of this opportunity to add the four divisions of extinct plants, resulting in a new poster.

Both posters are great for life science classes, but the non-technical presentation makes them popular with both animal and plant lovers alike.



E116 Clouds

NEW

This poster shows the different types of clouds. Many only form at certain altitudes, so this poster presents them as high-level, mid-level, and low-level. The bottom row is devoted to clouds that may be on multiple levels.

Cloud identification is one way in which weather can be predicted. To ensure absolute accuracy, all of the images are original illustrations based on widely published data.



Cumulonimbus incus (Cb inc) Clouds with a characteristic flat, anvil-like upper section.





This poster was produced with the assistance of the U.S. National Weather Service and the U.S. Coast Guard Department of Boating Safety. The Annapolis Sailing School contributed information on sail settings and boat handling.

E111 Beaufort Wind Force Scale

Accurately determine wind speed based only on your own observations. This poster shows you how.

Admiral Sir Francis Beaufort was a hydrographer and top administrator in the British Navy. Sea captains used different terms to describe wind conditions, so in 1805, Beaufort established a standard scale. It has continually evolved.

This poster cites the official description of each wind force, but it goes beyond that to show how wind impacts both land and sea. The dramatic illustrations show increasingly powerful winds and waves destroying a summer beach cottage and tearing off large sections of the cliff, severely eroding the shoreline. The terrifying sea conditions really put the little sloop in harm's way.

eroding the shoreline. The terrifying sea conditions really put the little sloop in harm's way.

Knowledge of these visual standards makes it possible for anyone to determine wind speed based solely on observation, just like the master mariners of yesteryear. This is the first time that this important information has ever been presented in such detail in any medium. It is an essential reference chart for meteorologists, seamen, or anyone else who wants or needs to know how to identify weather conditions.

Admiral Beaufort's original scale included sail setting guidelines for British ships, so we followed his example using a 40-foot sloop, typical of one used by modern day recreational sailors. Insets suggest sail settings, boat handling recommendations, and safety precautions for each wind force. As the wind force increases, the boat is really battered. In fact, it is actually rolled over. If properly ballasted and watertight, it will right itself. Of course, the crew is badly shaken.











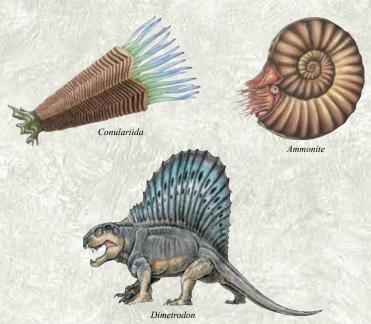
E102 Eras of Life / Geological Time Scale

The geological time scale divides the history of the Earth into units of time based on layers of rock (strata). Paleontologists use this scale to establish dates when various species lived. This chart is essential to the study of both

At the top, an introduction explains the geological time scale, its significance, how it was created, and index fossils. The main design consists of strips of illustrations, each presenting a period of geological time. The emphasis is on the last 360 million years when advanced life inhabited the earth.

Each geological period is introduced by informative text explaining the origin of its name and its significance. It is followed by magnificent illustrations showing life on land and in the seas, index fossils, and a globe showing the position

The most important groups of animals and plants are introduced in the margins through images and captions. They complement the period illustrations that show how the species within the groups changed over millions of years.





History of the Earth

E110 History of the EarthOur *Eras of Life* geological time scale poster is one of our most popular titles. It focuses on the last 360 million years, the period in which complex life has lived on Earth. History of the Earth is another geological time scale, but it greatly expands the scope of the subject to present a comprehensive overview of the entire 4.6 billion years of Earth's existence.

Geologists divide the history of the earth into four eons. Each is represented by a strip of illustrations

and captions prefaced by an introduction.

Our planet began as a sphere of molten metal.

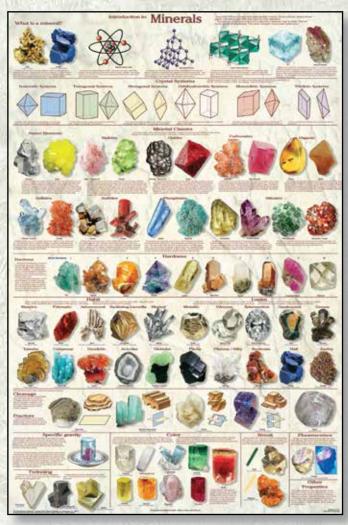
Heavier ores sunk to the center, resulting in gravity.

As Earth cooled, its crust was formed. Other topics include the creation of the moon, the appearance of various atmospheres, the formation of continents, continental drift, snowball Earth, and the development of life. The third through fifth pictures on the bottom row reflect the period covered by *Eras of Life*. The last picture shows the near future - the results of humans destroying the environment.



The introduction explains crystal structure and other important characteristics.

Specific gravity is one of the many properties explained in detail.



E105 Introduction to Minerals

This poster begins by defining a mineral. It then expands on that by exploring atoms, molecules, and crystal structure. The various crystal structures are shown. This is followed by an excellent summary of the mineral classes.

Mineral collectors and students want to identify their specimens. However, specimens of the same mineral can vary greatly in appearance, which can make that a daunting task. Identification is based on a number of properties. This poster provides an outstanding introduction to those properties: hardness, habit, luster, cleavage, specific gravity, color, streak, and fluorescence. Illustrations are used to explain principles. Photographs of truly outstanding specimens are used as examples.

Color

Some minerals consistently come in one color, but others vary greatly in color, making this property an unreliable way to identify specimens. This is illustrated by beryl. The poster shows eight color variations. Four of them are shown below.



Emerald









ROCKS

E104 Introduction to Rocks

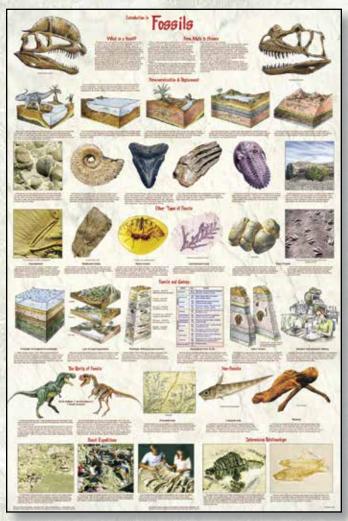
This is an outstanding rock identification chart! The introduction explains that each type of rock is the result of a specific mixture of minerals subjected to a clearly defined geological process. It shows and describes the most common rock-forming minerals and variations that occur within rock types.

The bulk of the poster is divided into three sections, one for each rock type: igneous, sedimentary, and metamorphic. An illustration shows how they are made, and a photograph shows a natural formation. A dozen other photographs show representative specimens. Each is accompanied by an informagraphs show representative specimens. Each is accompanied by an informative caption citing identifying characteristics and common variations.

A bonus section shows and explains some of the more specialized and popular rock forms, such as geodes, concretions, agates, and meteorites This is a great poster for earth science classes. Rock collectors find it invaluable for quick reference.

A few of the rock-forming minerals





E103 Introduction to Fossils

Fossils were a mystery for thousands of years; then a few pioneering scientists realized that they were the remains or traces of once-living organisms. Well-known bone-type fossils are actually rocks, the result of a process called mineralization in which minerals replace decaying tissue. This process is shown and explained. All of the other fossil types are also explored. The rarity of fossils is dramatically presented, and strange things sometimes mistaken for fossils are identified. There's an introduction to fossil expeditions and a summary of how fossils contribute to our understanding of the earth and and a summary of how fossils contribute to our understanding of the earth and

There is an especially helpful section on the relationships between fossils and geology. It covers the principle of original horizontality, the law of superimposition, the principle of faunal succession, the geological time scale, index

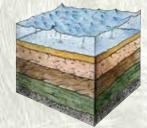
fossils, relative dating, and absolute dating.

All of this is conveyed through detailed illustrations showing the processes, excellent photographs of representative specimens, and interesting and informative captions. This poster is a great aid to museum interpretive programs and is extremely beneficial in the study of both life and earth sciences.

Principle of Original Horizontality

In 1669, Nicolaus Steno (1638-1686) reasoned that rock strata were formed when particles suspended in a fluid, such as water, fell to the bottom, leaving horizontal layers. This principle maintains that rock layers form in the horizontal position, and any deviations from this horizontal position result from the rocks being later disturbed by geological forces.





Law of Superimposition

Steno also maintained that layers of rock are arranged in a time sequence, with the oldest on the bottom and the youngest on the top. To envision this, think of the layers of paint on a wall. The oldest layer was put on first so it is at the

bottom, while the newest layer is at the top.
The layers contain fossils. Some are found in only certain layers and can be used to date the layer. Dated layers can be used to determine the age of the fossil.



Hard gemstones lend themselves to faceting in many shapes. The pear, or tear-drop, is one of the most popular cuts.



Softer gemstone material is better suited for cutting and polishing into carbochons, such as the crazy lace agate heart.



E107 Introduction to Gemstones

This poster begins by showing the most popular gemstones, grouped together by class. It explains the important "Four C's" of gemstones - cut, clarity, color, and caret, followed by an introduction to other important qualities such as asterism, opalescence, hardness, and pattern. The next row provides wonderful illustrations of the important gemstone cuts, accompanied by an explanation. This is followed by an introduction to cabochons.

It then presents an assortment of jewelry. The focus is on affordable items, including some that enthusiasts can make themselves. Next comes non-jewelry use of gemstones - collectible eggs, carvings, decorative slabs, and royal crowns. Of course, we had to include a famous Faberge egg. The bottom row presents all the birthstones, in accordance with modern-day standards.



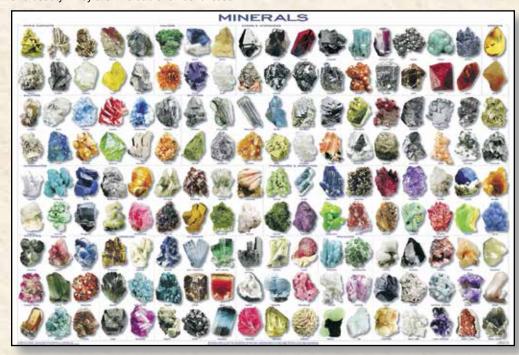
Logan Sapphire Brooch



Amber Bracelet

NATURE COLLECTIONS

Humans have been collecting nature specimens for tens of thousands of years. They have been used for personal ornamentation, given spiritual significance, and even used for money. These posters show comprehensive collections that reveal them in all their diversity and beauty. They are invaluable for identification.







E106 Minerals

E106 Minerals

This poster shows a whopping 162 specimens, carefully selected to include those most likely to be encountered by the student and collector. Over 20,000 photographs were reviewed to select specimens that would best show a diversity of color, habit, luster, and crystals. These magnificent minerals are presented by class: native elements, carbonates, sulfates, suflides, halides, oxides, phosphates, organics, and silicates. The silicates are such a large group that the bottom three rows are devoted large group that the bottom three rows are devoted to them. They are grouped by subclass, such as nesosilicates, sorosilicates, and cyclosilicates. All of the popular gemstones are shown.

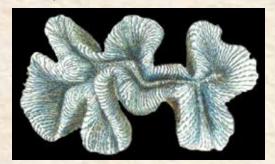


A901 Curiosity Cabinet

Cabinets of natural curiosities were the precursors of today's natural history museums. They first appeared around 1500 in the courts of Italian princes. By the beginning of the next century, they were quite popular and were found throughout

Albertus Seba (1665-1736), a Dutch apothecary, had one of the most extensive collections of natural curiosities in the world. He commissioned artists to draw all his specimens and then had them engraved and published as a set of folios. This poster was created from those folios. All of this and more is presented in an informative inset at the bottom of the poster.

Great care went into selecting a diverse range of subjects. They include shells, coral, insects, reptiles, fish, crustaceans, and many other natural curiosities. They are presented within a simulated "cabinet" border, permitting everyone to have their very own curiosity cabinet.



NATURE COLLECTIONS

North American Seashells

A238 North American Seashells

This is by far the most comprehensive poster about seashells ever published. Magnificent illustrations accurately portray 140 specimens, all accompanied by captions citing common name, biological name, where they are found, and size. Representatives from all major biological groups are included. Special care was taken to show the seashells most often found on North American beaches and those widely wailable in convenir shore and actual care. available in souvenir shops and nature stores.

Often the only difference between species is the color and design pattern. Thus this poster is also very helpful in identifying the type of shell - such as a pectin, cone, or whelk - even if it is found in other parts of the world. This is a truly beautiful poster that makes a handsome addition to any decor. It also provides an easy way for the novice collector to quickly identify the results of beachcombing



Ammonite bergstrand split and polished

E108 Collectible Fossils

E108 Collectible Fossils

Fossil collecting is not limited to museums. It is an extremely popular hobby. Fossils are artifacts of living creatures and plants. They are visually fascinating and many are absolutely beautiful. Educators find them extremely helpful, as they permit students to actually see the remains of a long-extinct species. When a student gets to actually hold an eight-inch tooth from a huge Megalodon shark, he or she will tooth from a huge Megalodon shark, he or she will never forget the experience. The same holds true with many other fossils.

This poster shows and explains the fossils that are most widely available to private collectors. These include the well-known fish from Wyoming's Green River Formation, the famous ferns from St. Clair, Pennsylvania, the Chesapecten so abundant around the Chesapeake Bay, and the petrified wood of the American Southwest. It includes such favorites as trilobites and coprolite. The latter is petrified dinosaur dung. Kids love "dinosaur poo poo.

This poster presents photographs of outstanding specimens. All are accompanied by an illustration of the prehistoric species, except where appearance is unknown due to soft parts not fossilizing. In such cases, an illustration of a closely related modern species is presented. Interesting captions provide information and cite the geological period in which the species lived. A geological time chart puts everything in perspective.

Color and Pattern Variations

Some seashells vary widely in color and pattern, as demonstrated by the common dove shell. This can make identification difficult. This poster shows the most common colors and patterns.



Common Dove Shell color and pattern variations Columbella mercatoria SE Florida to West Indies; 0.3"

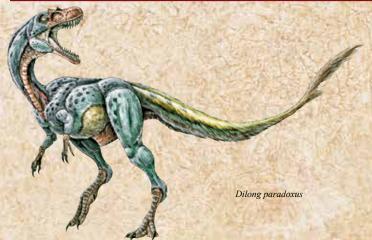


Giant Atlantic Murex Murex fulvescens NC to Florida, Texas; 5"

Florida Horse Conch Pleuroploca gigantea NC to Mexico; 18"



Feathered Dinosaurs



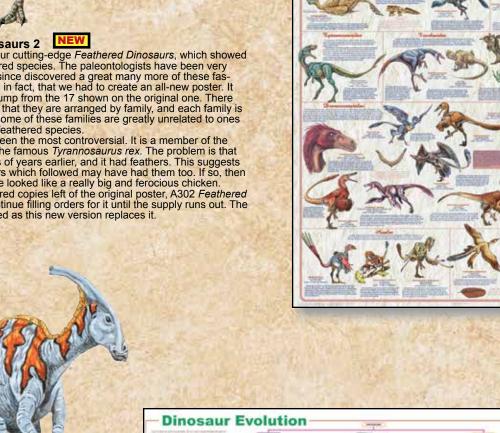
A310 Feathered Dinosaurs 2

In 2004, we published our cutting-edge Feathered Dinosaurs, which showed all of the recently discovered species. The paleontologists have been very busy because they have since discovered a great many more of these fascinating critters. So many, in fact, that we had to create an all-new poster. It shows 37 species, a big jump from the 17 shown on the original one. There are now so many species that they are arranged by family, and each family is introduced. Surprisingly, some of these families are greatly unrelated to ones that were known to have feathered species.

Dilang paradoxus has been the most controversial. It is a member of the

Dilong paradoxus has been the most controversial. It is a member of the tyrannosaur family, as is the famous Tyrannosaurus rex. The problem is that Dilong lived many millions of years earlier, and it had feathers. This suggests that the other tyrannosaurs which followed may have had them too. If so, then good ole *T. rex* might have looked like a really big and ferocious chicken.

We do have a few hundred copies left of the original poster, A302 Feathered Dinosaurs, so we can continue filling orders for it until the supply runs out. The original will not be reprinted as this new version replaces it.



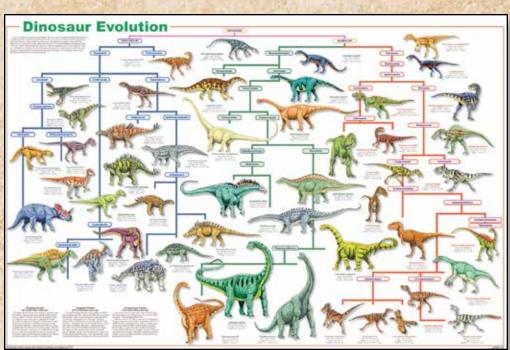


Parasaurolophus walkeri Age: Late Cretaceous Length: 30 ft. (9 m) Weight: 3 tons (3 t)

A301 Dinosaur Evolution

Paleontologists have long been aware of the hereditary relationships between species and realized that categorizing them into neat little compartments was inadequate for their purposes. They discarded the Linnaean system and replaced it with phylogenetic systematics, also known as cladistics. This new system organizes species and groups in relationship to one another, based on the development of physical characteristics. This poster represents the first time that this new system was ever used to create a pictorial cladogram showing how dinosaurs evolved over millions of years.

This second edition features a more streamlined cladogram, making it easier to use.





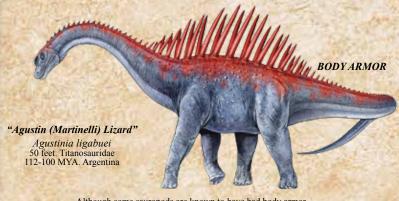
A305 T. rex Window

What could be worse than a *Tyrannosaurus rex* peering in your window? The answer: one that has crashed through your window and is inside your house. This poster was inspired by the terrifying scene in the movie *Jurassic Park* in which the world's favorite dinosaur peered into the tour vehicles just prior to its attack. This poster captures that "calm before the storm."

Trompe l'oeil is a highly realistic style of painting developed by French artists to create cabinets, windows, mantels, and other architectural elements on bare walls to simulate the effect of the items actually being there. This technique was used to create T. rex Window. The painted frame simulates a window, and

Mr. Rex is quietly peering in, apparently looking for his next meal. A tiny, fragile kitten sleeps on the sill, oblivious to the threat.

For maximum effect, simply "wallpaper" this poster wherever you want. From a dozen feet away, it looks like the real thing. It's great for kids' rooms, but it is also an interesting conversation piece for the office. Just write, "The boss is watching" on it in high hold letters watching" on it in big, bold letters.

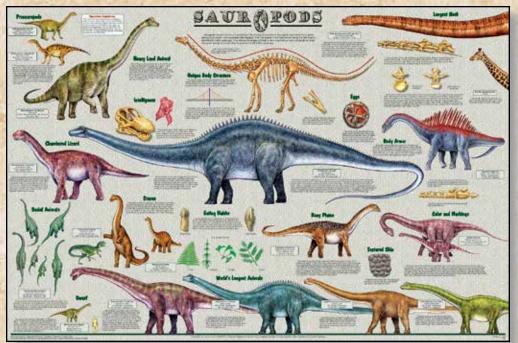


Although some sauropods are known to have had body armor, Agustinia armor was unique. It had a series of wide, vertical spikes and plates down the center of its back, somewhat like the unrelated Stegosaurus. It is possible that they were used for show or mating display. If so, they may have been quite colorful.



DWARF

Europasaurus was the "Pee Wee" of the sauropods. It lived on a small island in what is now Germany. Lineages of large animals commonly evolve into smaller ones when they are isolated on islands, and this is called "island dwarfism Island dwarfs are thought to evolve because islands have limited food and smaller animals need less of it.



A312 Sauropods

Sauropoda are a clade of saurischian ("lizard-hipped") dinosaurs. Sauropods were herbivorous (plant-eating), long-necked, and quadruped (four-

(plant-eating), long-necked, and quadruped (four-legged). They first appear in the fossil record during the late Triassic, around 230 million years ago. They include the largest animals to have ever lived on land. Along with all other dinosaurs (except for birds), they became extinct 65 million years ago.

This poster shows all the largest species. Some were close to 200 feet long - the length of four school buses. Also shown are some of the more unique species. Camarasaurus vertebrae were hollowed out or riddled with passages and cavities, which inspired its name, "Chambered Lizard." Mamenchisaurus had a 31-foot-long neck that comprised half of the body length of the animal. For size comparison, the neck length of the animal. For size comparison, the neck of a giraffe is shown next to it in the same scale.

The unique body structure of these fascinating animals is explored. Could they rear upright like a horse? Other interesting topics are intelligence, teeth and diet, eggs, skin texture, and social behavior.

Created with the help and cooperation of the American Museum of Natural History.



Cryolophosaurus ellioti 190 MYA; Antarctica

Cryolophosaurus is the first meat-eating dinosaur to be discovered on the frozen continent of Antarctica. It had a bizarre fan-shaped crest running across its head, perpendicular to the skull. It looked like a Spanish comb, used by women in their hair. The crest was actually an extension of the skull. While other theropods had crests, they usually ran along the skull instead of across it. Due to its resemblance to Elvis Presley's pompadour haircut in the 1950s, this dinosaur was quickly nicknamed the "Elvisaurus." The crest was too fragile to be used in combat, so it was probably used in mating displays.

A304 Weird Dinosaurs

A304 Weird Dinosaurs

These are some really strange critters. Although well documented, most are rarely mentioned in popular literature. Cryolophosaurus ellioti is a good example (see above). The paleontologist who described the ugly Majungatholus atopus said, "It's the kind of face that only a mother could love." The weird Masiakasaurus knopfleri had forward-facing teeth jutting out from its lower jaw; it really needed a good orthodontist. Stygimoloch spinifer sported bony spikes on its head. Tsintaosaurus spinorhinus had a horn protruding from its forehead, resulting in it being called "the unicorn dinosaur." The poster shows nine more really bizarre creatures.

Weird Dinosaurs has been magnificently illustrated by a leading paleontological artist to ensure anatomical accuracy. Fact-filled captions provide essential data and a description of the unique distinguishing characteristics. This poster includes fascinating newly discovered species, ones largely

This poster includes fascinating newly discovered species, ones largely unknown to the public.





Furcula

This bone is found on only one living species: the birds. It is used to anchor the strong wing muscles to the chest. It is commonly called the "wishbone. The tyranosaurs also had this unique bone. Authorities maintain that it is strong evidence of the relationship of dinosaurs to modern day birds



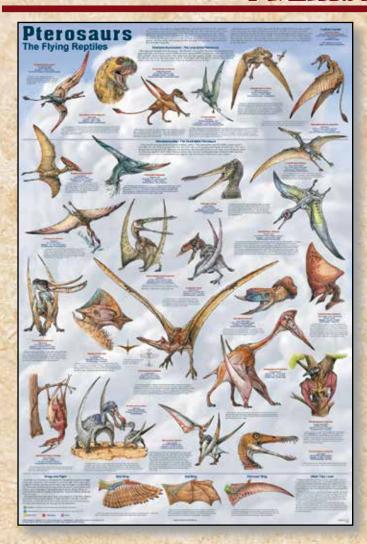
A303 Tyrannosaurs

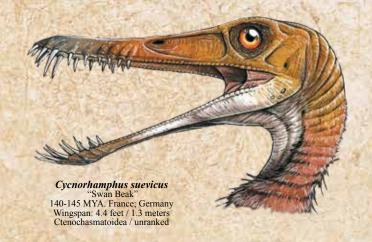
This is an exciting presentation of an extremely popular subject. The central design consists of magnificently detailed illustrations of all nine members of the tyrannosaur family, all in scale to one another. Of course *T. rex* takes center stage, but note the size of some of the others. Above them, insets explore anatomy and ancestors. The latest discoveries are also shown; the newly found feathered tyrannosaur. also shown: the newly found feathered tyrannosaur, and the remarkable growth rate recently proven by researchers. Other insets explore social habits and provide a list of all North American museums where tyrannosaur fossil skeletons are on display.



Feathered Tyrannosaur

The recent discovery of this small tyrannosaurid dinosaur caused quite a stir. It had feathers! *Dilong* lived 130 million years ago, which was 65 million years before *T. rex.* If its ancestor had feathers, then the world's most famous dinosaur may have had them too. Maybe Mr. Rex was just a really big chicken.





A306 Pterosaurs

Pterosaurs
Pterosaurs
Pterosaurs were the first vertebrates known to have been able to fly. They suddenly appear in the fossil record during the late Jurassic period, around 220 million years ago. These first species were fully developed and have baffled paleontologists as there are no fossils to provide even a hint as to their origin or how they evolved. They are often referred to as pterodactyls, but that name refers to members of the *Pterodactylus* genus. There are many others.
Pterosaurs became extinct at the end of the Cretaceous period, 65 million years ago. They were an incredibly successful group of animals. During the

years ago. They were an incredibly successful group of animals. During the 155 million years that they dominated the skies above the earth, they constantly evolved into new forms. This is the first poster to explore their incredible diversity. The picture captions cite biological and common names, where the fossils were found, when the animals lived, and their wingspan. Each is also accompanied by succinct text explaining its uniqueness and importance. At the bottom of the poster, anatomical illustrations and text are used to explain the differences between the wings of birds, bats, and pterosaurs.

This is a truly beautiful poster. The species were illustrated by a paleontologist and are shown against a dramatic sky background.

A307 Prehistoric Sea Monsters

A307 Prehistoric Sea Monsters

The earth's oceans were once the hunting ground of real sea monsters that could have frightened even the most fearsome Hollywood creations. This fascinating new poster provides 22 striking and scientifically accurate illustrations of the most well known. These aquatic monsters include the terrifying Dunkleosteus, a giant fanged fish more than 33 feet long with laws like a primitive slicing machine for long, with jaws like a primitive slicing machine for devouring armored prey; the 66-foot-long *Plesio*saurus, a ferocious long-necked aquatic reptile that was the apex predator of the Jurassic oceans; and the massive Megalodon, the largest-known shark, at least three times longer and larger than today's great

Surprisingly, fossils for many of these aquatic species have been found in central and western North America. That's because 148 million years ago, this area was covered with a vast inland sea. It dried up about 70 million years ago, leaving behind many spectacular fossils. This poster contains a map of this sea and the above explanation.



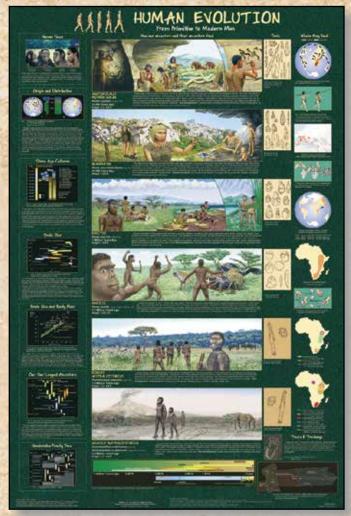


Consultant: Mike Everhart Visit his website: www.oceansofkansas.com

HANNAL EVOLUTION ***PROPRIES AND THE PROPRIES AND THE PR

Mammary Gland (human breast)

The synapsid clade includes the primitive early species and modern day mammals. Mammals were named for their mammary glands, which produce milk to feed the young. This soft tissue does not fossilize. To differentiate modern mammals from their more primitive ancestors, paleontologists use a distinguishing feature shared by all living mammals: the three middle ear bones used for hearing. These bones are now the defining characteristic of modern mammals. They are not found in the more primitive species.



A311 Mammal Evolution



Mammals are an outstanding example of adaptive radiation, the process by which organisms evolve into a multitude of new forms. This poster explores that subject, and it shows the results. It begins with the first tetrapods (terrestrial vertebrate), then it shows and explains how they evolved into three basic groups based on skull characteristics.

groups based on skull characteristics.

The synapsids were the last group to evolve, and they were the most advanced. They evolved around 324 million years ago. They are often referred to as the "stem-mammals" or "proto-mammals." They were the dominant and largest terrestrial vertebrates during the Permian, 299 to 251 million years ago. Changes in the planet resulted in their mass extinction. The reptiles adapted to fill the ecological niches they left behind. The result was a world dominated by dinosaurs. The earth changed again around 65 million years ago, and the dinosaurs became extinct. The few surviving synapsids adapted into modern mammals, which are also classified as synapsids.

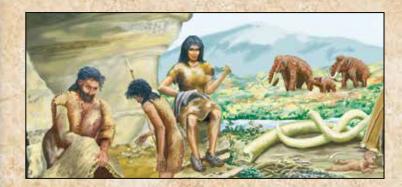


Dinodontosaurus turpior

A103 Human Evolution

Finally, this fascinating subject is explored in detail. This colorful poster shows six steps in human evolution. It begins with *Australopithecus africanus* of 3.68 million years ago, then progresses through *Paranthropus robustus*, *Homo habilis*, *H. erectus*, *H. neanderthalensis*, and, finally, to anatomically modern man, *Homo sapiens* of 30,000 years ago.

Each of the main sections explores a single species. A highly detailed illustration provides insights into anatomical features, lifestyles, and culture. Each is accompanied by a caption summarizing our knowledge, followed by line drawings of the tools produced by each culture and a globe or map showing where they lived. An abundance of additional information is presented through insets that cover a broad range of topics, such as tool-making techniques, relationship of brain size to body mass, time charts, migration patterns, relationship to other species, and much, much more. Recently updated to reflect new discoveries.



ANIMALS / Sea Life



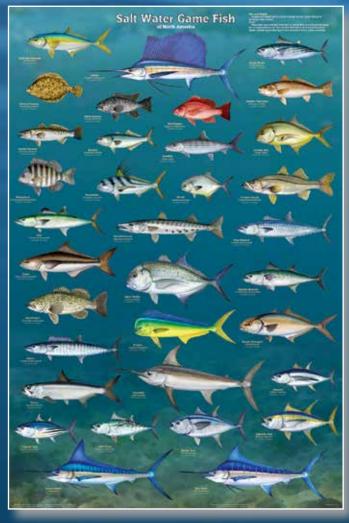
A235 Fresh Water Game Fish of North America

These are the fish that the fishermen seek. The poster presents outstanding original illustrations of bass, perch, trout, and all the other popular species. Species are listed by both common name and biological name, accompanied by average length and weight. Both of our game fish posters show only species found in North American waters.



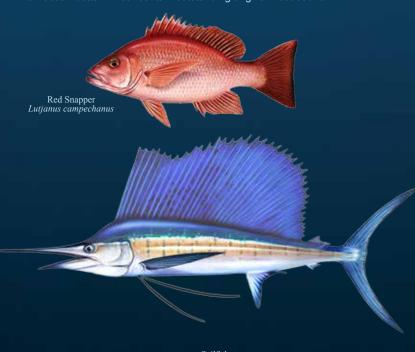
Striped Bass Morone saxatilis





A236 Salt Water Game Fish of North America

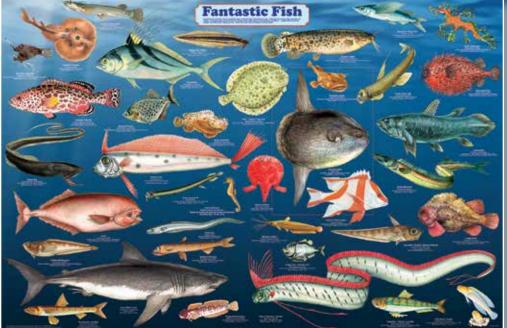
This poster has the same basic design as the one on the fresh water fish, and contains corresponding information. The big differences are in the species of fish that are shown and the background: Fresh Water Game Fish features an illustration of a river bottom, and Salt Water Game Fish shows an ocean bottom. Both contain outstanding original illustrations.



Sailfish Istiophorus platypterus

ANIMALS / Sea Life







Leafy Sea Dragon

Phycodurus eques

Leaf-like appendages permit it to hide in seaweed.

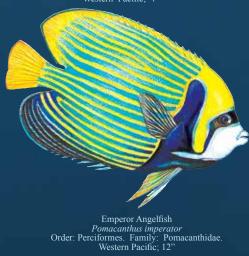
East Indian Ocean; 13.8 in. / 35 cm

A231 Fantastic Fish

This poster presents some of the world's most fantastic fish. Extensive research went into finding those with the most remarkable physical forms and most unusual behaviors. Each is accompanied by a caption that cites common name, scientific name, size, locations where found, and perhaps most importantly, what makes them so unique and fantastic.



Western Clown Fish
Amphiprion ocellaris
Order: Perciformes. Family: Pomacentridae.
Western Pacific; 4"





A232 Tropical Fish

Tropical fish are among the most beautiful animals on Earth. This poster shows many of the most interesting and colorful species. Special care was taken to show those most often found in home aquariums. All are identified by common and scientific names. The captions also cite order, family, size, and where they live. This poster uses the same great graphic design as *Fantastic Fish*, making the two posters a perfectly matched set, ideal for decorative use.

ANIMALS / Sea Life





A234 Whales

A234 Whales
The Cetacea order includes whales, porpoises, and dolphins. It includes 90 species, some known only by a single specimen. The whales are the most popular, so this title focuses on them. By not including the porpoises and most of the dolphins, this poster is able to present larger images and informative facts about all whale species, such as the estimated world population. The "false whales," such as the Killer Whale, are also included, even though they are biologically classified as dolphins.

Although whales are mammals, this poster does not show all of the Cetacean orders; thus it is not

not show all of the Cetacean orders; thus it is not considered part of the Mammal series. Rather, it is

part of our Sea Life series.



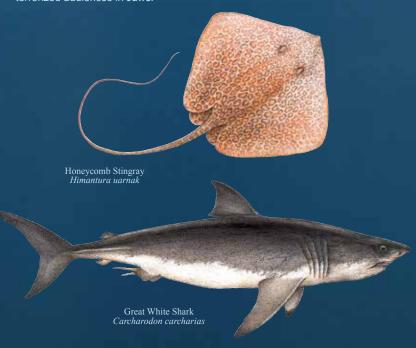
Two scuba divers are shown in the same scale as the whales to emphasize their great size. Can you find the other one? Hint: It's a girl in a red bathing suit.

A233 Sharks and Kin NEW

There are over 470 species of sharks, and a great many of them are very similar to one another, so the subject was expanded to provide a comprehensive overview of all the cartilaginous fish. These animals are unique in that their skeletons are made of cartilage rather than bone. This subject expansion makes the poster more useful and provides far greater visual interest.

All of these fish are members of the Chondrichthyes class, which includes the sharks, rays, skates, and chimaeras, sometimes called ghost sharks. They

are presented within their various biological groups. Of course, the great white, hammerhead, whale shark, and other famous sharks are shown. This poster also includes a section on the Megalodon. This long-extinct shark was one of the largest and most powerful predators in vertebrate history. It was almost three times the length, and four times weight, of the Great White Shark, which terrorized audiences in *Jaws*.





ANIMALS / Vertebrate Orders

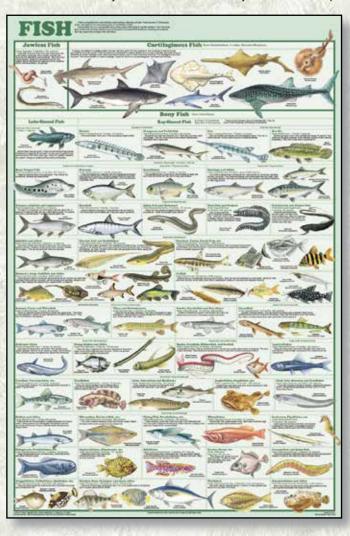
The Vertebrate Orders

This four-poster set provides a comprehensive overview of the living vertebrates. Animal life is now undergoing the transition from the Linnaeus classification system to the new cladistic classification system. Birds have been reclassified under the new system. There have been many systems proposed for the other animals, but none has been widely accepted. This required that the posters present the animals in the context of their existing Linnaeus orders. Each of these posters presents all of the orders within the group. There are so many marsupials and cartilaginous fish orders that they are presented as super orders.

Each order is introduced by the common name or names (such as whales, dolphins, and porpoises), followed by the biological name (i.e., Cetacea), the number of species, and a brief description. A great many representational animals are beautifully shown, all identified by both common and biological names.

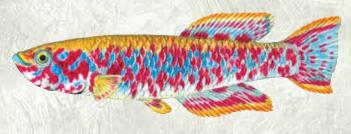
This is the first time that a comprehensive overview of this enormous and

This is the first time that a comprehensive overview of this enormous and complex subject has ever been presented on posters. This set is invaluable for life science classes and anywhere else where the study of animals takes place.

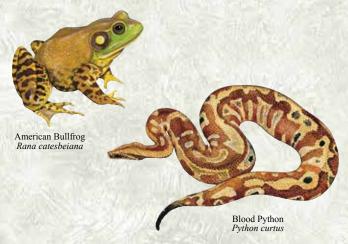


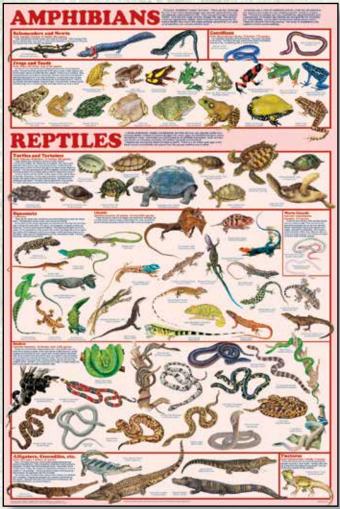
A154 Fish

Fish are cold-blooded animals that live in water. They have a streamlined body design and are covered with scales that reduce friction. Most are excellent swimmers. There are over 27,000 species, making them the most diverse vertebrates on earth. This poster shows the three major clades: the jawless fish, the cartilaginous fish, and the bony fish. The latter dominates the poster, as all the orders are explored.



Blue Lyretail





A153 Amphibians & Reptiles

These animals are often confused by people, so they are treated together. These animals are often confused by people, so they are treated together. "Amphibian" comes from the Greek *amphi*, meaning "both," and *bios*, meaning "life." It has two meanings. First, the animals physically change. Reproduction is accomplished through external fertilization. The female spawns her eggs in water where they are fertilized by the male. After hatching, most amphibians undergo a dramatic change known as metamorphosis. They slowly change from fishlike, water-dwelling animals to ones better suited for life on land. Fins and gills become legs and lungs. The most well-known example is the change from tadpole to frog. Second, the term also refers to the fact that these animals live first in water and later on land.

Reptiles reproduce by sexual intercourse and internal fertilization just like

Reptiles reproduce by sexual intercourse and internal fertilization, just like mammals. Amniotic eggs develop within the mother's abdomen. Once they are sufficiently developed, the mother lays them and they hatch. However, some reptiles give birth to live young.

ANIMALS / Vertebrate Orders





A151 Mammals

This is a beautiful poster that is cherished by animal lovers, but it's also an extremely useful educational tool, as it provides a comprehensive overview of the subject. It is divided into three sections, one for each type of mammal: the egg-laying monotremes, the pouched marsupials, and the familiar placental mammals. The latter is divided into 19 subsections, one for each of the orders. Superb, highly detailed illustrations show 98 representative species, including everything from the aardvark to the zebra.

This poster is an excellent way to introduce young children to a great many animals. However, its outstanding organization and presentation make it an invaluable reference chart for teachers, students, and professionals involved or interested in zoology, comparative anatomy, and taxonomy, the naming and classification of life forms.



A152 Birds

This is an especially important poster because it presents the new Sibley-Ahlquist bird classification system. Based on recent DNA studies, this system uses cladistics to reconstruct the evolutionary family tree. Who would have thought that birds as diverse as flamingos, eagles, and penguins would end up in the same clade? However, this revolutionary new system has been widely accepted by North American ornithologists and has made the previous bird classification system obsolete. Although this poster shows true clades, the scientific community continues to use the order names, which are cited. This is a truly beautiful poster, one greatly appreciated by bird lovers. It certainly enhances the decor of their home or office, yet it presents information that has even greater value. All the bird clades are explored, and all of the

This is a truly beautiful poster, one greatly appreciated by bird lovers. It certainly enhances the decor of their home or office, yet it presents information that has even greater value. All the bird clades are explored, and all of the many classification changes resulting from the transition from orders to clades are explained. This information has never before been published in such a concise and convenient form, making this poster an essential reference for anyone seriously interested in birds.



ANIMALS / Mammals

Mammal Series

Mammals are the most well-known animals on earth. Animals are now being reclassified in accordance with the new cladistic classification system. Yet none of the new systems proposed for mammals has been widely accepted, so the Linnaeus classification system is still used. Under it there are 29 orders, 153 families, and about 1,200 genera. There are approximately 5,400 species, ranging in size from the 1.2-inch Bumblebee Bat to the 110-foot Blue Whale.

These posters explore the largest and most popular orders. They identify and present every family in the order. Each is briefly introduced, and the number of known species is cited. A great many beautiful, highly detailed, and anatomically accurate illustrations show an excellent selection of representational mammals. North American species are shown whenever possible. All of the titles in this series have the same graphic design, making them a matched set. The warm colors go well with almost all decors.



Ursus arctos middendorffi





A252 Carnivora

Carnivore means meat-eater, and all of the animals in the order do just that. The sole exception is the herbaceous panda, which, because of its physical features, is classified as a bear. The animals in this order vary in size from the tiny Least Weasel (*Mustela nivalis*), at 0.88 ounces and 4.3 inches, to the huge Southern Elephant Seal (*Mirounga leonina*) at 11,000 pounds and 23 feet. There are 13 families containing 260 species.



A251 Primates

This order includes the lemurs, tarsiers, monkeys, and apes. Most live in tropical or subtropical regions of the Americas, Africa, and Asia. Fossil evidence indicates that *Plesiadapis* may have been their ancient

Fossil evidence indicates that *Plesiadapis* may have been their ancient ancestor. It looked somewhat like a squirrel, and it lived in North America and Europe around 55 million years ago. Scientists have long recognized that the animals in this group are still evolving. This is reflected in the classification system that divides the order / clade into two groups: (1) the primitive Prosimians, which have physical characteristics found in the earliest known species, including the lemurs, lorisiforms, aye-aye, and tarsiers; and (2) the more advanced simians, which include the monkeys and apes.

ANIMALS / Mammals





A254 Marsupials

Marsupials are a clade of mammals characterized by a distinctive pouch (called the marsupium) in which females carry their young through early infancy. Females have two vaginas, which lead to separate uteruses, but both open externally through the same orifice. A third canal, the median vagina, is used for birth. Marsupials do not have a placenta, so babbes not much larger

than an embryo crawl from their mother's median vagina to her pouch where they feed from her nipples.

There are 334 species. Around 200 are native to Australia and neighboring northern islands. They include the most well known, such as the kangaroos and the koala. The 100 or so New World species are generally small animals. There is only one marsupial native to North America, the Virginia Opossum. No one knows how it got here.



A253 Ungulates

Ungulates are hoofed animals. Most use the tips of their toes to sustain their entire body weight while moving. Under the Linnaeus classification system, all were originally classified into one order, Ungulata. It was later split into two orders: (1) the Perissodactyla, or odd-toed ungulates, which includes horses, tapirs, and rhinoceri totaling 15 living species; and (2) the Artiodactyla, or eventoed ungulates. It contains about 220 species that includes pigs, camels, hip-procedurations of the property of the proceduration of t popotamuses, chevrotains, deer, giraffes, sheep, goats, cattle, and America's

unique pronghorn antelope, the sole species in its family.

There is controversy regarding classification. Some scientists maintain that ungulates are a cladistic (evolution-based) group. Others argue that they are a phenetic group or folk taxon (similar, but not necessarily related) because not all ungulates appear as closely related as once believed. Whatever the outcome of this dispute, it is fairly certain that regardless of whatever classification system eventually prevails, it will almost surely contain the same species

This poster is divided into two sections, one for each of the two orders. Within them, all of the families are explored.



ANIMALS / Domestic



The American Shorthair is the most popular cat in the United States Its fur comes in many colors and patterns.

A262 Cats of the World

The domestic house cat, Felis silvestris catus, descends from a group of desert wildcats that lived in the Near East, but most people do not think of the house cat in a biological context, but rather as a favorite pet.

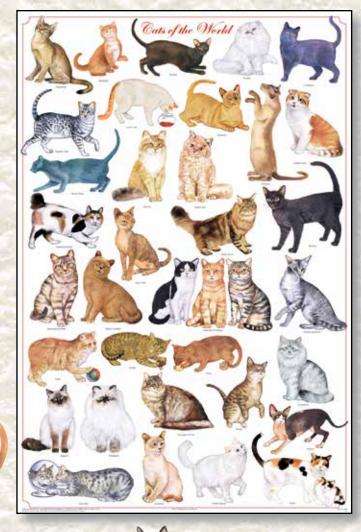
The relationship between the domestic house cat and humans dates back over 9,500 years. It is sometimes considered to be symbiotic. The human over 9,500 years. It is sometimes considered to be symbiotic. The human provides food, a safe place to live, and generally a great deal of attention. In return, the cat honors the human with its presence. Cats are very independent, and the terms "owner" and "master" are just not applicable as they are to dogs. It has been said that humans exist to serve their cats.

Cats are great companions. Many will entertain their human with funny antics and joyful playfulness. They will crawl up into their human's lap and purr. They may even provide an occasional lick to express their affection.

This poster shows 34 breeds from around the world, but a recent study showed that over 95% of all domestic house cats are not true breeds, but rather hybrids. The domestic house cat recently overtook dog breeds as the most popular pet in the United States. They are found in over 53% of all

the most popular pet in the United States. They are found in over 53% of all households









Alaskan Malamute

A261 Dogs of the World

The domestic dog was named Canis familiaris by Linnaeus in 1758. DNA evidence shows that it descended from the wolf, and it is now treated as a subspecies, Canis lupus familiaris. The line diverged from wolves about 100,000 years ago. Dogs were domesticated about 15,000 years ago.

The domestic dog has been one of the most widely kept working and companion animals in human history. In some countries, it is also an important food source.

Humans have been selectively breeding dogs for many centuries. Dogs with similar traits or characteristics are grouped together. For example, the Working Dog Group includes the Alaskan Malamute, Doberman Pinscher, Great Dane, Boxer, Newfoundland, and Saint Bernard.

This poster shows 54 of the most popular breeds, presented in the context of official American Kennel Club groups. These are the dogs most often encountered. This poster is not only a great tribute to "man's best friend," but it is also a handy identification chart.

ANIMALS / Domestic









Golden Hamster

A263 Popular Pets

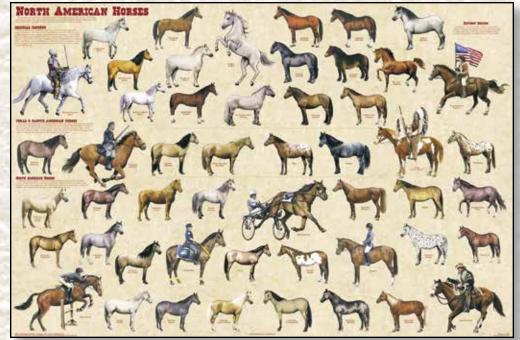
People have had pets for thousands of years. This poster presents 35 beautiful and highly accurate illustrations of popular pets, along with descriptions of their origins, behavior, and pet-care tips. It includes 18 "pocket pets," such as guinea pigs, mice, rats, gerbils, and hamsters, and even the exotic African dormouse and degu. Rabbits can be quite fancy and nine different breeds are shown. Ferrets and pot-bellied pigs are also featured. This poster also explores interesting exotic pets, such as fennec foxes, kinkajous, pygmy hedgehogs, Asian sugar gliders, and the native American flying squirrels.



The Spanish Norman was the great warhorse of the conquistadors.



The Thoroughbred was imported to Virginia from England in 1730. By the time of the American Revolution, it was both popular and widespread.



A265 North American Horses

This beautiful poster presents all of the important North American horses in historic context. The captions explain that the horse evolved in North America and in prehistoric times crossed the Bering Sea land bridge into Asia. Its descendants migrated to Europe. The horse became extinct in North America around 11,000 years ago. Horses were reintroduced to the New World by

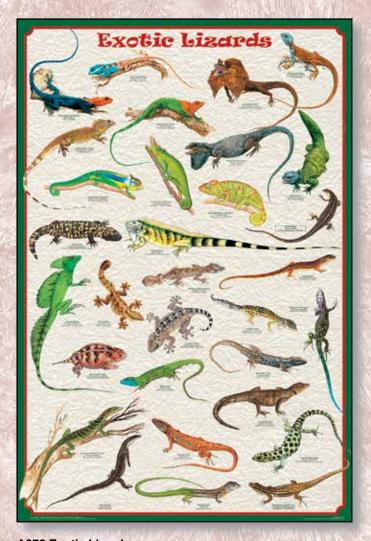
Horses were reintroduced to the New World by Columbus on his second voyage in 1493 when he brought them to Cuba. Cortez landed them on the North American continent in 1516. Later explorers and settlers brought many different breeds. These "Colonial Imports" are shown on the top three rows. They provided the bloodlines for all that followed. The next row presents the feral and Indian horses. The bottom three rows are devoted to the many other breeds that originated in North America.

This poster accurately portrays 54 breeds, making it a valuable identification chart for horse lovers. Included are four famous horses that were used so extensively for crossbreeding that the original stock was bred out of existence; they are now extinct. They are the Spanish Jennet, Galloway, Hobby, and Narragansett Pacer. They are included because of the importance of their bloodlines to modern-day breeds. (The highly popular Hobby inspired the toy horse that bears its name and was the origin of the word as it is used today, for a recreational activity.)

Most of these magnificent horses are shown in profile for easy identification, but some of the most famous breeds are shown with riders in great action poses to represent a few of the many ways the horse has contributed to America.

ANIMALS / Reptiles





North American Snakes

A271 North American Snakes

Snakes descend from lizards. Like them, they have loosely articulated skulls, and most can dislocate their lower jaw in order to swallow prey much larger than their own head. They differ from legless lizards by their lack of eyelids and external ears.

Most species are non-venomous. They are generally shy and docile and try to avoid humans. Some are even kept as pets. The venomous snakes use their natural weapon primarily to subdue and kill prey. They are not normally aggressive, but when threatened, they will protect themselves. It's best to avoid them, as some have venom powerful enough to cause painful injury or death. This causes many people to fear snakes. North Americans are justified in doing so because there are some really nasty serpents slithering around the

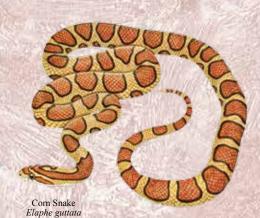
This poster presents the most widespread North American species. It makes it easy to tell if a particular snake is a threat, as the graphic design divides them into non-venomous (green background) and venomous (red background) species. It's the latter you really need to be able to identify because the others may give you a painful bite, but they won't kill you.

A272 Exotic Lizards

The first tetrapods superficially resembled lizards but were far more primitive. True, modern-day lizards first appear in the fossil record around 150 million years ago. The new clade continued to evolve, resulting in the many modern species.

This poster shows 31 of the most colorful and interesting lizards. They include not only the popular iguana, chameleon, and gecko, but also the Gila monster and monitor lizard. The focus is on the unique, exotic species, such as the bearded dragon and frill-necked lizard. Captions cite common name, scientific name, where they are found, and their family.

> Green Iguana Iguana iguana Central & South America. Iguanidae.



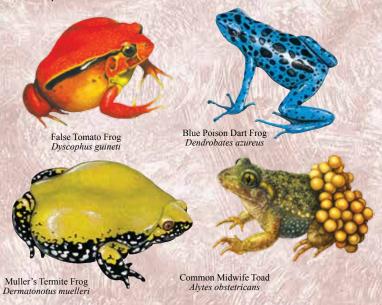
ANIMALS / Reptiles & Amphibians



A274 Frogs & Toads

The Anura (meaning "tail-less") clade contains all of the frogs and toads. There are over 4,800 recorded species, which represents 88% of all amphibian species. The distinction between frogs and toads is based on common cultural rather than specific physical differences. In common usages, the term "frog" usually refers to species that are aquatic or semi-aquatic and have smooth, moist skins, and the term "toad" generally refers to species that are terrestrial with dry, warty skins, but there are numerous exceptions to this rule.

This colorful poster is divided into three sections, one representing each of the major groups or sub-clades. Extensive research went into showing the amazing diversity of these little animals. North American species are shown whenever possible.





A275 Turtles, Tortoises, & Terrapin

These are the reptiles of the order Chelonii. All have a bony or cartilaginous shell, and many species withdraw into it for protection. Fossils have been dated to 220 million years ago, making turtles older than lizards, snakes, and crocodiles. Like other amniotes (reptiles, dinosaurs, birds, and mammals), they breathe air and do not lay eggs underwater, although many species live in or around water. The largest turtles are aquatic.

Technically, all animals in this order are turtles, and the term can refer to the entire order or to any individual species. In common usage, the term tortoise refers to those that live only on land, and a terrapin is a turtle that lives in fresh or brackish water. These are common usage terms, not biological ones. There is only one terrapin species.



ANIMALS / Arthropods



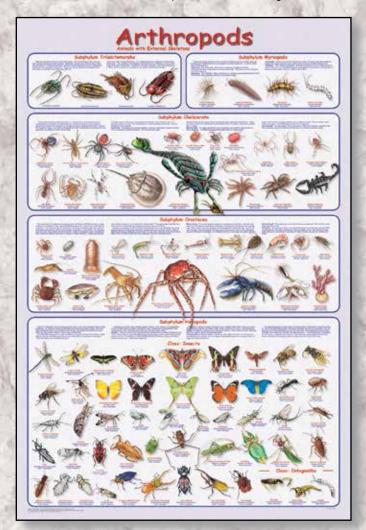
A224 Arthropods

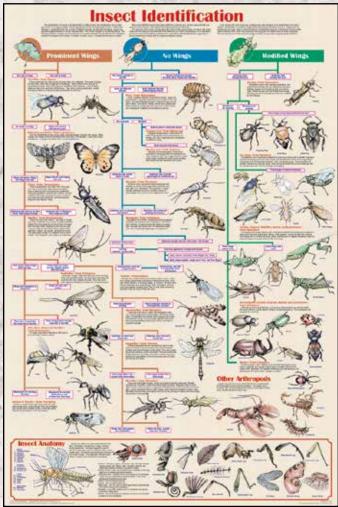
Arthropods are animals that have an external skeleton. They are the most abundant animals on Earth but are often misunderstood. Spiders, millipedes, and other arthropods are often mistakenly referred to as "insects" and "bugs." This

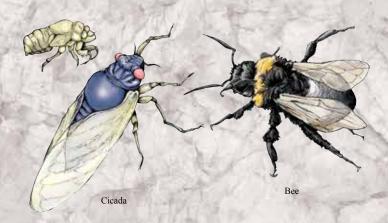
poster explains the differences.

Each of the five clades (formerly subphylum) is carefully explored. Highly detailed illustrations show an incredible 98 species, many life size. All are identified by both common and scientific names.

Insects account for the great bulk of the arthropods, and this poster includes representatives of all the major orders. The crustaceans include crabs and lobsters as well as shrimp, krill, and even barnacles. Included with them is the giant sea scorpion; this long-extinct animal is the largest arthropod that ever lived, reaching a length of six feet. This remarkable poster even includes the prehistoric trilobites. They were the dominant life form during the Permian but became extinct. Highly educational, very attractive, and decorative, this poster appeals to teachers, students, collectors, and professional entomologists







A222 Insect Identification

Insects are the most diverse group of animals on Earth. There are more than a million described species, more than all other animal groups combined. Insect collecting is a very popular hobby and is often assigned as a

bined. Insect collecting is a very popular hobby and is often assigned as a classroom project. With so many species, insect identification is difficult. This chart presents all the insect orders through a brief description accompanied by detailed pictures of one or more species. A section on anatomy identifies important physical features.

A unique branching system permits the novice to identify a specimen to the order level (beetle, bee, bug, butterfly, etc.). More detailed identification requires professional training and an extensive library.

This poster is extremely popular with collectors, students, and educators. This new edition has been graphically streamlined, making it easier to use.

ANIMALS / Arthropods

A223 Insect Metamorphosis

Insect metamorphosis is taught in every life science class. Each of these nine paintings shows the larva, pupa, and a mature specimen of a different

nine paintings snows the larva, pupa, and a mature specimen of a different insect, making this poster especially appropriate for education.

Maria Sibylla Merian (1647-1717) was the first artist to paint and show species in their native environments. In 1699, at age 52, she sailed on one of the fragile wooden ships of the day across the vast Atlantic Ocean to the wild, unexplored jungles of South America. There she was able to observe living specimens of remarkable and previously unknown insects.

Each of her magnificent paintings features an insect in all three stages of life. But she went beyond that and showed them on the plant that provides their most frequent habitat or food source. Many are exotic, and all are shown complete with foliage, flowers, and fruit. Merian set the standard for the many botanical and zoological artists who followed. Thus, this poster has great art and art history value.

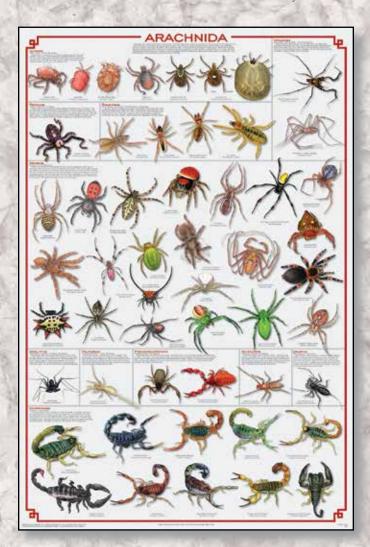
Merian created her superb paintings over 300 years ago, and they have never been surpassed in beauty or scinever peen surpassed in beauty or scientific accuracy. Her masterpieces are exhibited in museums worldwide. She is the subject of a permanent exhibit at the National Museum of Women in the Arts in Washington, DC.

An informative inset tells the fascinating story of this courageous and telepted.

ing story of this courageous and talented woman who was so many, many years ahead of her time. Her remarkable accomplishments appeal to those interested in the achievements of women.



Maria Sibylla Merian







A228 Arachnida

Many Feenixx customers have asked for a poster on spiders, but this title goes beyond that. It provides a comprehensive overview of the entire arachnid clade. In addition to spiders, the scorpions, ticks, pseudo spiders, and other groups are explored. Each is introduced by informative text and accompanied by outstanding illustrations of the species.

The arachnids have four pair of legs, which easily distinguishes them from the insects, which have only three pair. Great care was taken to show the amazing diversity of these little critters. North American species are shown whenever possible.

ANIMALS / Arthropods



Monarch Butterfly Danaus plexippus Worldwide - tropics and subtropics

A221 Butterflies of the World

The Lepidoptera order / clade contains the butterflies and moths. There are over 180,000 known species. In general, butterflies fly during the day and moths fly at night. The most obvious physical difference between them is the feelers, or antended that the files have alreaded files per true are nae. Most butterflies have slender filamentous ones that are club-shaped at the end. Moths, on the other hand, often have comb-like or feathery antennae, or ones that are filamentous and unclubbed.

This popular poster shows over 100 of the most colorful butterflies, as well as a few moths. The captions cite common name, biological name, and where they are found. These beautiful insects are grouped by continent or other geographic area. Unique globe and arrow icons identify the location.







Giant Atlas Moth Attacus atlas Saturniidae. S Asia. 10 in. / 25 cm

The Giant Atlas Moth's design replicates snake heads on its wing tips. They are used to scare away predators. These magnificent moths are raised commercially, and specimens are available to collectors.

A226 Moths of the World

Our beautiful Butterflies of the World poster has Our beautiful Butterlies of the World poster has always been an extremely popular title. Now it has a companion that uses the same graphic design, resulting in a visually striking matched set.

We often think of the moth as the little brown pest that likes to eat our clothes, but the "night butterflies" include some of the most spectacular

Lepidoptera. Some of the species are huge. The Giant Peacock Moth, Saturnia pyri, has a ten-inch wingspan.

ANIMALS / Birds





A202 Avian Raptors

AZUZ AVIan Raptors

It is well established that modern birds are the last living descendants of the dinosaurs. This poster provides a comprehensive overview of the most dinosaur-like birds, the birds of prey. Magnificent illustrations show hawks, eagles, falcons, buzzards, vultures, owls, and the single harrier species. Each group has an introductory caption that summarizes its unique characteristics. Each bird is identified by both its common and scientific names. Whenever possible, North American species are shown. Great care went into selecting the flight poses, as they reflect the hunting style of each bird.



Red-winged Blackbird Agelaius phoeniceus

A201 Backyard Birds of North America
What's that strange bird flying around your backyard? This poster will help you find out. Beautifully detailed illustrations show the most widespread backyard birds of North America. Males and females of many species have different markings and/or coloration. In such cases, both are shown.
This has long been one of our most popular posters, and it has been revised to match the graphic design of the titles in our new bird series.



Bald Eagle Haliaeetus leucocephalus

ANIMALS / Birds

Parrots The Psittaciformes



Galah Rose-breasted Cockatoo Eolophus roseicapillus

Carolina Parakeet Conuropsis carolinensis
Only parrot native to North America; became extinct in 1904

A204 Parrots - The Psittaciformes
Parrots are birds that have a strongly curved bill, an upright stance, strong legs, and clawed zygodactyl feet. The newly defined clade contains the same birds as the former Psittaciformes order. There are around 350 species. They include the true parrots, cockatoos, love-birds, and parakeets. Many of these birds are popular pets due to their sociable nature, high intelligence, bright colors, playful antics, and ability to imitate human voices. This poster shows representatives from all of the families a great many of

This poster shows representatives from all of the families, a great many of the most popular pets, and even the now-extinct Carolina Parakeet, the only parrot known to have been native to North America.

Bird Series

These are the first two titles in a multi-title set of posters that will explore many of the most popular birds. Each poster is devoted to a single biological order / clade. All utilize the same graphic design, resulting in a matched set. Together they provide a spectacular presentation of the subject. Future titles include *Waterfowl*, *Perching Birds*, and *Wading Birds*.



A206 Gamebirds & Fowl - The Galliformes

This is an order / clade of heavy-bodied, ground-feeding birds. It includes turkey, grouse, chicken, quail, ptarmigan, partridge, and pheasant. There are around 290 species. All are skilled runners that can fly only a few hundred feet when escaping danger. Because of this limitation, they do not migrate. Males often have elaborate courtship behaviors that include strutting, fluffing of tail or head feathers, and vocal sounds.

Many species are raised as gamebirds by humans for their meat and eggs. Others are the target of recreational hunting. This has led to their common names of gamefowl and gamebirds. They are also called land fowl to distinguish them from ducks, geese, and other waterfowl.

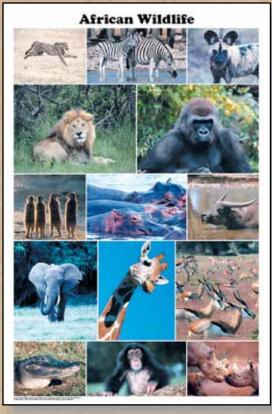


Crested Fireback Lophura ignita

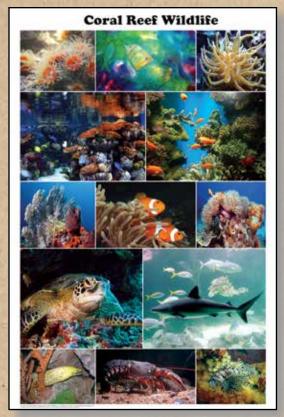
North American Wild Turkey Meleagris gallopavo

ANIMALS / Wildlife Montages

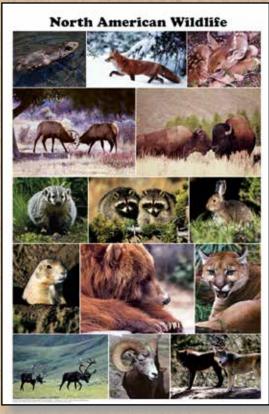
These posters are a departure from our normal "contentintensive" approach of presenting a subject through detailed illustrations accompanied by fascinating and informative text. It has been said that a picture is worth a thousand words, so we have simply presented montages of outstanding photographs of related animals. These posters are very popular with zoos, but they are also very useful in the study of biomes, the climatically and geographically defined area of ecologically similar communities of plants, animals, and soil organisms, often referred to as ecosystems.



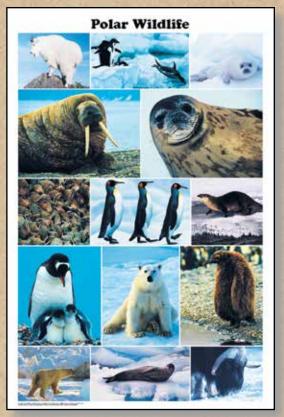
A401 African Wildlife



A404 Coral Reef Wildlife

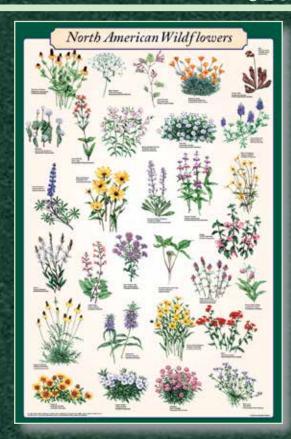


A403 North American Wildlife



A402 Polar Wildlife

FLOWERS I ECOLOGY



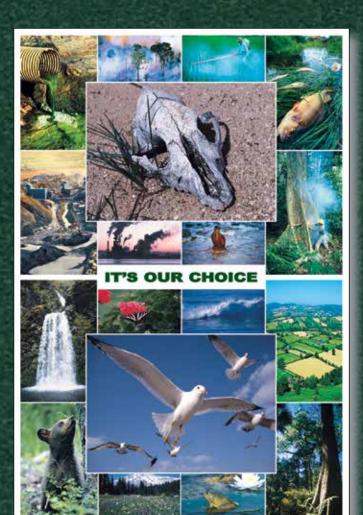


A601 North American Wildflowers

This striking poster displays the most widespread and colorful North American wildflowers. The magnificent illustrations show a lavish group of them rather than just an individual flower. Each beautiful flower is listed by its common and scientific names. All are accompanied by botanical order and family.

A602 Garden Flowers

This poster shows the most popular garden flowers. Its clean, white design somewhat follows the presentational style of our very popular *Butterflies of the World* poster. All species are grouped by their botanical order, which is clearly identified. So many of the garden flowers are hybrids that normal botanical names are just not applicable. These flowers are listed by their popular names.



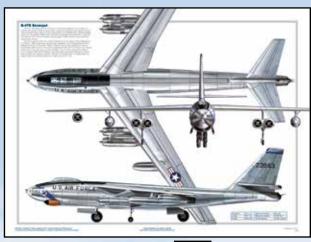
E101 It's Our Choice / Protect the Environment
This poster utilizes photography to dramatically illustrate the importance of protecting our environment. The top half shows the impact of abuse on our fragile planet: filthy water, polluted air, and dead animals. The central design is a skull, symbolizing death. The bottom half shows the results of conservation: clean water and air, magnificent landscapes, and an abundance of animals. The central image shows a bird soaring into the sky, symbolizing life. The two montages are separated by the title, "It's Our Choice."

SPECIAL DEAL

Environmental problems are getting worse, and we would like your help in promoting ecology. We believe that our popular poster "It's Our Choice" can help influence public awareness, and we would like for it to receive broader distribution. To do that, we're offering this poster at really low prices to those who distribute large quantities of them. Minimum order: 100 units. The more you buy, the lower the price. Call for details.

3- View Airplane Posters

Over the years we have received a great many compliments on our outstanding aircraft illustrations, and customers have asked us create posters on famous individual aircraft. We maintained our content-intensive standard by providing three views, a history of the airplane, and a chart citing specifications and flight characteristics.



B303 B-47 Stratpket, 3-View

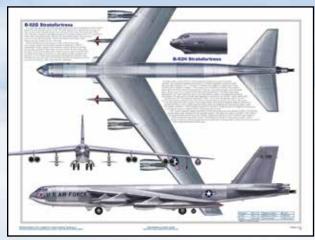


B309 B-2 Spirit (stealth bomber), 3-View

SAC Bomb Wings
These three posters honor the men who defended us during the trying days of the Cold War. Bombers were organized into wings. Each of these posters begins by introducing the aircraft. It then honors each of the wings that flew it by showing the patch that its men wore on their uniforms. (The patch changed

18" x 24" Mini-Posters

The posters on this page are half the size of all our other posters. The primary reason for this is that our standard 24" x 36" poster is just too big for the subject. The smaller size is more appropriate. The big benefit is that several posters can be hung together as a set.



B305 B-52 Stratofortress, 3-View



B310 SR-71 Blackbird, 3-View

over the years.) The patch caption names the unit, its primary base, the years it was active, and its operational (flying) squadrons. The 18" x 24" poster size results in the patches being shown actual size.



B371 B-29 & B-50 Superfortress Wings



B372 B-47 Stratojet Wings



B373 B-52 Stratofortress Wings



Montgolfier Balloon On June 4, 1783, brothers Joseph and Jacques Montgolfier flew their globe-shaped balloon at Annonay, France. The flight lasted 10 minutes and covered 1.2 miles. The balloon climbed to an altitude in excess of 5,000 feet. This is widely regarded as the first

B201 Quest for Flight

human flight.

Humans have long sought to soar in the sky, just like birds. This informative and visually striking poster shows what it took to accomplish that seemingly impossible goal.

Impossible goal.

The bottom row shows man's earliest attempts to fly. Moving up the poster, the most important discoveries, inventions, and events are presented in chronological order. The great aviation pioneers are honored by a portrait and a brief biography. In the late 1700s, English engineer Sir George Cayley correctly identified the four forces that would affect a flying machine. A century later, Lawrence Hargrave discovered the lift provided by a cambered wing. About that time, Octave Chanute compiled and published the first organized, written collection of aviation research. He shared his knowledge with many aviation pioneers.

aviation pioneers.

Americans Orville and Wilbur Wright made the first controlled flight of a heavier-than-air machine on December 17, 1903, at Kitty Hawk, North Carolina. It flew 120 feet in 12 seconds. Their Flyer was very experimental, and it took the Wright brothers three more years to make it reasonably practical. Some of the valuable improvements made by other early aviators are incorporated in the two planes shown above the Flyer.

B202 Flying MachinesNews of the Wright Brothers *Flyer* spread rapidly, and soon many other aviation pioneers were building

and soon many other aviation pioneers were building their own flying machines.

In August 1909, twenty-two of them met at a race-track outside Reims, France, to compete in the first organized international air meet. They brought 38 aircraft, but only 23 actually flew in the meet. The pilots completed 87 flights. The Reims Air Meet proved the viability of flying. David Lloyd George, the future prime minister of Great Britain, remarked, "Flying machines are no longer toys and dreams. They are an established fact." an established fact.

The Reims Air Meet was one of the most important events in aviation history. It dramatically legitimized the importance and significance of flight. It prompted rapid innovation, civil aviation, air mail service, and motivated many nations to establish an air force. Only five years later, pilots were dogfighting in the skies over Europe during World War I.

This poster shows all of the planes that flew at the

meet. A few important contemporary flying machines did not participate. These included Edwin Roe's triplane that incorporated the first aircraft control column, and Hans Grade's monoplane, the first German aircraft. These are also shown so that the poster provides a comprehensive overview of aviation in its

infancy.



Curtiss 1909 "Golden Flyer" Set the speed record at the Reims Air Meet

American Glenn Curtiss began his career as a bicycle racer and shop owner. In 1907, he turned his attention to building airplanes. He won the speed record at Reims, completing the 10 km course in under sixteen minutes for an average speed of 46.5 mph. He won the cherished Golden Bennett cup. Curtiss was the most successful of the early American aircraft builders. He became a major supplier of military aircraft.



B251 Warbirds of World War I

Quest for Flight and Flying Machines present the history of aviation through 1910. This poster takes that history to the next step. It shows the most famous aircraft of the "war to end all wars," but does so in a unique way. When the war began, aviation was in its infancy, and constant combat experience resulted in rapid innovation and invention. It was the beginning of the aviation arms race. The pictured aircraft all played a role in this great drama, as explained in their captions. All of the widely flown aircraft are shown. In addition, there is information on technological advancements, important events, and the development of various combat missions. This poster is filled with great original illustrations and fascinating facts.



Manfred von Richthofen made this plane famous as he flew it to score 19 victories in the last year of the Great War. His title and its color resulted in his nickname, "The

Principles of Flight

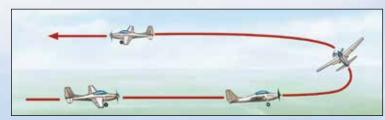
B291 Principles of Flight

This poster provides a comprehensive overview of the title subject. It begins by graphically explaining the physics of the all-important airfoil. A large picture of an airplane is used to identify all of its major parts. This is followed by the exploration of the aircraft control system: how the ailerons, rudder, and elevator are used to control climb and descent, yaw, and roll. It is accompanied by a section that discusses an airplane's center of gravity, its importance, and how to control it. All of this covers the basic principles of flight, but we don't stop there. Whereas the top half of the poster focuses on theory, the bottom half concentrates on practice.

The six traditional mechanical flight instruments are explained. The flight deck, which contains these instruments plus a great many other things, is then explored. Traditional flight instruments are now being replaced by electronic multi-function "glass panels," which are introduced.

The finale is an introduction to actual flying. It begins with a detailed description of takeoff procedure, followed by a section on how to turn, bank, climb, and descend. Of course, it ends with how to land the airplane.

Certainly a poster is no substitute for formal flight training, but Principles of Flight provides an outstanding step-by-step introduction to flying.



Climbing and descending turns are explained in detail, as are takeoff and landing procedures.

Authors: Pilots Jeremy King and Dave Montcalm
Consultants:
William Pedeaux, Senior B-52 Flight Instructor, CBD Training, Inc. Barksdale AFB, LA
Lt. Col. Jeffrey Neischel, USAF. Former B-52 pilot and squadron commander.
(The Boeing B-52 Stratofortress is the most complex aircraft ever built.)



FORMATION PRESENTATION

Aircraft are usually shown in profile. Although appropriate for many applications, such a limited view has serious shortcomings. The P-38 Lightning had twin booms, and the B-47 Stratojet (shown on next page) introduced swept-back wings and nacelle-hung engines, the design used by almost all future airliners. These important body and wing designs cannot be shown in profile views. To overcome this, Feenixx uses perspective views, and we took that one step further by introducing our unique new "Formation Presentation.'

Our military aircraft posters show all the appropriate planes flying in the same direction, in the same perspective, with the same lighting, and sized to the same scale. When superimposed over a common sky background, it creates the illusion that they are flying overhead in formation. This makes it very easy to visually compare their size and design.

These posters also contain a highly detailed chart citing the specifications and performance characteristics of each aircraft, making them easy to compare.

B253 USAAF Warbirds of WW II

This magnificent poster faithfully presents all the aircraft widely used by the U.S. Army Air Force during World War II. Each has been meticulously researched to provide the best possible representation of the airplane. They include the famous B-17 Memphis Belle, the first bomber to complete 25 missions over Germany; Lt. Colonel Jimmy Doolittle's B-25, which flew off of the aircraft carrier *Hornet* to bomb Tokyo in one of the most daring raids of the war; a P-40 of the immortal Flying Tigers; and the Enola Gay, the B-29 that dropped the first atomic

Some of the other aircraft are not as well known. The twin-engine P-38 *Pudgy* was flown by Major Thomas B. McGuire. He was the top American ace of WWII. He shot down 38 enemy aircraft in the Pacific Theater. Colonel Francis "Gabby" Gabreski

Pacific Theater. Colonel Francis "Gabby" Gabreski was the top ace in the European Theater. Flying a P-47 Thunderbolt, he was credited with 34 kills. The C-46 Commando and C-47 Skytrain were cargo planes, but they were used extensively to drop paratroopers during invasions and other offensive operations; they constantly airlifted supplies to front line fighting troops. Because of such use, many authorities consider them warbirds.



B256 U.S. Tri-Service Fighters

For many years, each of the U.S. military services had its own aircraft designation system, which could be confusing. For example, the Korean War era jet fighter built by North American was called the F-86 Sabre/Sabrejet by the Air Force and the FJ Fury by the Navy. That changed in 1963 when the United States Department of Defense introduced the Tri-Service aircraft designation system. This system has since been used by all U.S. military aircraft, with one exception (see below). The letter represents the basic aircraft type. "F" represents fighters. Other types include "B" for bombers and "C" for cargo planes.

This poster shows all the U.S. fighters that have actually flown under this system. It includes all those flown by the Air Force, Navy, and Marines since 1963. The one exception is the Lockheed F-117 *Nighthawk*, as it used the old Air Force designation system although development did not begin until 1975. It made its first flight in 1981.



F-14D Tomcat





B254 USAF Strategic Bombers

This poster shows all nine of the USAF strategic bombers. All but the B-2 were flown by the Strategic Air Command. Although the Cold War has long been over and SAC disbanded, three of these aircraft (the B-1, B-2, and B-52) are still protecting us from our enemies

SAC's mission included strategic reconnaissance, and many bombers were modified to perform it. The famous SR-71 *Blackbird* was built for that purpose and was flown by SAC, so it is included.



B-47 Stratojet

B292 High Flight (Poem)

During the dark days of the Blitz, John Gillespie Magee, Jr., was one of the many Americans who enlisted in the Royal Canadian Air Force. Within a year, many Americans who enlisted in the Royal Canadian Air Force. Within a year, he was sent to England and assigned to the No. 412 Fighter Squadron, RCAF, where he flew the Supermarine Spitfire. On September 3, 1941, he flew a high-altitude test flight in a new model of the Spitfire V. As he climbed upward through 33,000 feet, he experienced great exhilaration which inspired his immortal line, "to touch the face of God." He later expanded it into a poem. Three months later, he was killed in a midair collision. He was only 19 years old. Although young John Magee was lost, he had sent a copy of his poem to his father, who was then rector of a Washington, DC, church. His father printed it in church publications. This led to its inclusion in an exhibition of poems

it in church publications. This led to its inclusion in an exhibition of poems called *Faith and Freedom* at the Library of Congress in February 1942.

High Flight has since become the most famous aviation poem ever written. It has inspired countless aviators and astronauts. It is the subject of a special exhibit at the National Museum of the United States Air Force in Dayton, Ohio. U.S. Air Force Academy cadets are required to memorize it.

The poster magnificently depicts his Spitfire climbing toward the peak of its exciting flight and cites the full text of his ageless and classic poem. A caption, located in the lower left corner, tells the story behind it.

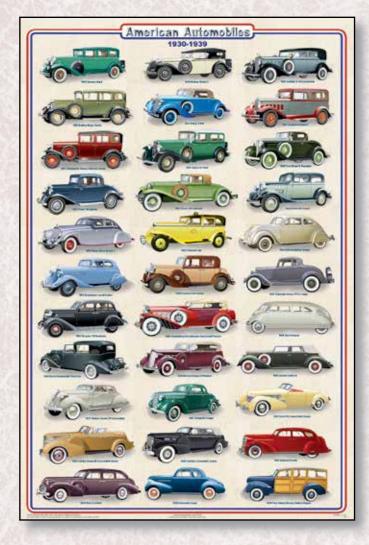
High Flight

Oh, I have slipped the surly bonds of earth And danced the skies on laughter-silvered wings; Sunward I've climbed, and joined the tumbling mirth Of sun-split clouds ... and done a hundred things You have not dreamed of ... wheeled and soared and swung High in the sunlit silence. Hov'ring there, I've chased the shouting wind along, and flung My eager craft through footless halls of air. Up, up the long, delirious, burning blue I've topped the windswept heights with easy grace Where never lark, or even eagle flew. And, while with silent, lifting mind I've trod The high untrespassed sanctity of space Put out my hand, and touched the face of God.

American Automobiles

American automobile manufacturers have produced an incredible variety of cars over the past century. This visually striking new series devotes a poster to each decade. Each poster provides a comprehensive overview of the subject, which includes representative cars made by all manufacturers, the various models produced, and, of course, the famous milestone cars.

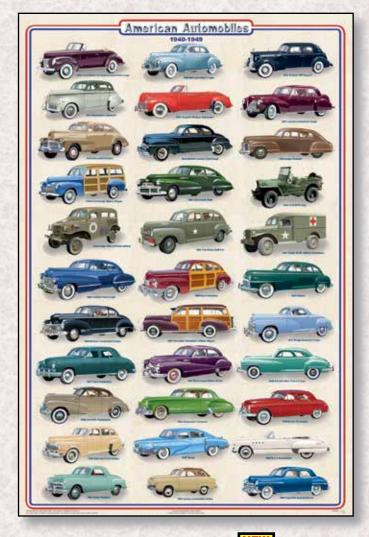
All are presented through outstanding original illustrations. All of these posters will use the same graphic design, resulting in them being a matched set. The decade-by-decade approach makes it easy to see how automobile design has evolved over the years. We hope to publish two a year. Once the first ten posters are complete, it will be time to start on the 21st century.



B613 American Automobiles 1930-1939

Many people maintain that the 1930s were the golden age of movies, railroads, and automobiles. Certainly the decade did see many innovative new car designs. They ranged from the highly functional Checker Taxicab to the flashy Duesenbergs. Note the 1935 Stout Scarab (7th row, right side). Featuring an aerodynamic design, it is regarded as the first minivan.





B614 American Automobiles 1940-1949

NEW

World War II had a drastic impact on the American automobile industry during this decade as between 1942 and 1945 automobile factories were manufacturing military vehicles, tanks, airplanes, boats, and even ships.

This poster shows four of the military vehicles. The enormous economic

This poster shows four of the military vehicles. The enormous economic boom that followed the war and the pent-up demand for cars led to an explosion of new models. All of the most popular ones are shown. Of course, the revolutionary but short-lived Tucker had to be included.



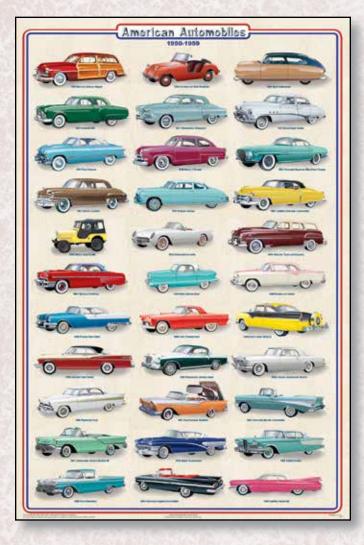


American Automobiles

Comments and Suggestions Invited

During the past 30 years, Volkswagen, Honda, Toyota, and other foreignowned automobile manufacturing companies have opened factories within the United States. Our highways are covered with the cars they have produced within our country. Should they now be considered American automobiles? This question needs to be settled as it will determine the content of our *American Automobile* posters from 1980 to date. Should we show these cars or only those made by U.S. companies? It's a big question. Your opinion is invited.

American Automobiles



B615 American Automobiles 1950-1959

Remember the Crosley, Hudson, Studebaker, Packard, Pontiac, Nash, and the original Jeep? All are now long gone. On the other hand, the 1950s saw the introduction of the Corvette, Thunderbird, Edsel, and Ford's Fairlane *Skyliner*, its remarkable, but short-lived, hardtop convertible. The second half of the 1950s was the age of the tail fins, and many great examples are shown.

B616 American Automobiles 1960-1969

This poster required many editorial decisions. This was the age of the great muscle cars, but the poster had to provide a comprehensive overview of all American cars, so we showed restraint and kept to the original objective.





1959 Cadillac DeVille Convertible The famous "Pink Cadillac"



1964 Ford Mustang



1969 Lincoln Continental Mark III

EARLY LAND TRANSPORTATION



1831 Omnibus
They were the ancestor of the modern bus and remained in service until the early 1920s.



1840 Truck
They were so popular that the name carried forward into the motor age.

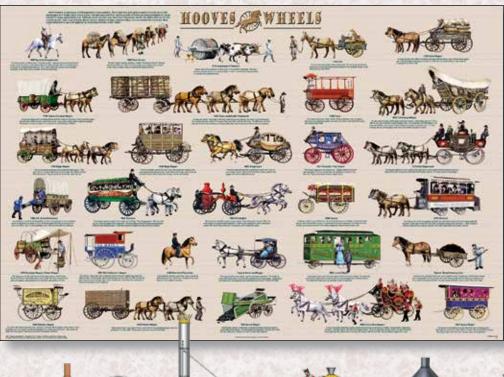


1871 Horsecar These were used as early as 1821. They were replaced by the electric streetcar.

A267 Hooves and Wheels

Prior to the internal combustion engine, horses were the primary means of moving people and goods in and around urban areas. Cities and towns were covered with them, and many horse-drawn vehicles remained in use until the 1930s.

This poster begins with the reintroduction of the horse to North America by the Spanish. It then shows a 17th-century train of pack horses. The bulk of the poster is devoted to the most popular and famous horse-drawn vehicles. They include the covered wagon, the Conestoga wagon, coaches from various periods, and many means of moving freight. Hooves and Wheels includes fascinating specialty vehicles such as a fire engine, Civil War ambulance, circus band wagon, and even a gypsy wagon. Interesting, colorful, and filled with interesting information.



1804 Trevithick First steam locomotive







1839 "Gowan and Marks" 4-4-0 "American Design"

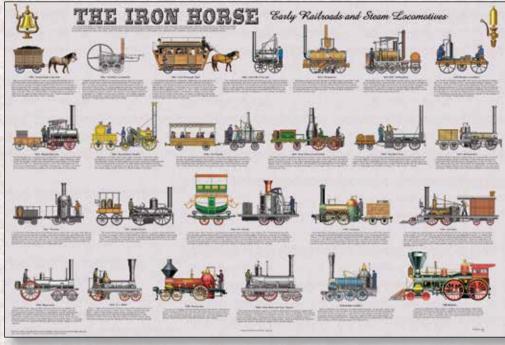
B501 The Iron Horse

Railroads changed America as they provided a fast and efficient means of transporting people and goods for long distances.

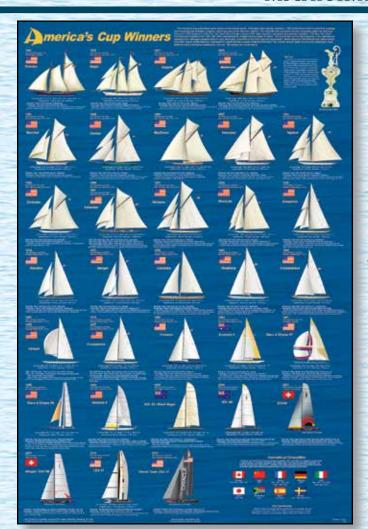
goods for long distances.

This poster presents the early history of railroads and steam locomotives. Rails reduced friction and increased efficiency and trains began as horse-drawn carts that carried coal. In 1804, Richard Tevutchick introduced the first steam locomotive. Other Englishmen vastly improved on it. Robert Stephenson introduced his famous *Rocket* in 1829. This poster shows these English locomotives and two that were imported to America. The most important was Edward Bury's *Liverpool* design. Almost 100 of them were used by American railroads.

The vast distances that needed to be covered resulted in constant innovation and new developments. The bulk of the poster is devoted to the many American designs that followed. It shows and explains all the milestone locomotives made in the U.S. prior to the Civil War. They include the 4-2-0 Jarvis design and the 4-4-0 American design. By 1850, American locomotives had cow-catchers, headlights, whistles, and bells. The basic 4-2-0 design dominated our nation's railroads for over a half-century. This early devolpement is presented through highly-detailed illustrations.



MARITIME HERITAGE



New Nautical Series

This exciting new series of content-intensive posters will explore our nautical heritage. Present plans call for at least a dozen titles. The first four are being released this year.

The America

America's Cup Trophy

B441 America's Cup Winners

In 1851, Great Britain sponsored the first really big international trade show, the giant "Great Exhibition of the Works of Industry of all Nations." It was especially famous for its enormous exhibition hall, which was the first building to have a cast iron skeleton completely covered with large panes of glass. This led to the show's popular nickname, "The Great Crystal Palace Exhibition." The supporting events included the first international sailboat race, which

the British were sure they would easily win. In one of the great sports upsets of all time, the highly coveted silver cup was won by the New York Yacht Club's schooner, America. The crew donated the trophy to the yacht club, to be held as a "challenge trophy." The America's Cup was born. The race was named after the first winning boat, not the country. It is the longest-running sports event in history.

America's Cup is the most prestigious regatta and match race in the sport of sailing. The New York Yacht Club successfully defended the trophy until 1987. The last 30 years have seen enormous international competition for the coveted cup. This poster shows all the winners. It even includes the winner of the recent 2013 race. It is the first time that all of the winners have been shown together in any media.

The international flavor of recent races is represented by including the flags of countries that had participating yacht clubs even if they did not win.





The James Monroe

An ocean liner is a ship that makes regular, scheduled crossings of an ocean carrying passengers. The very first was the James Monroe that began operating out of New York City in 1816. It was operated by the Black Ball Line, and a black ball was was painted on one of its sails

B410 Ocean Liners

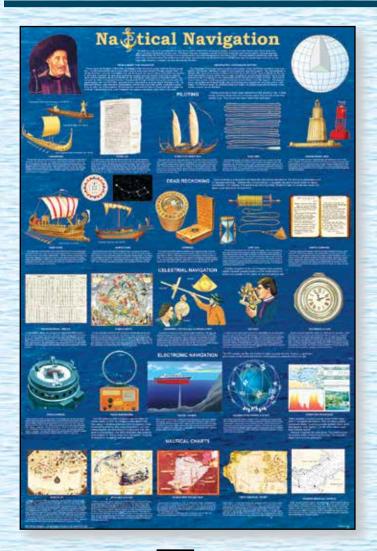
These great passenger ships carried millions of people across the oceans until they were made obsolete by jet airliners. They included such famous ships as the Great Western, Deutschland, Lusitania, Titanic, Ile de France, Queen Mary, Queen Elizabeth, Normandie, and United States.

The North Atlantic was by far the most frequently traveled route. The early 20th century saw the liners competing to provide the greatest luxuries. The fastest ship received the Blue Riband, an honorary award dating back to 1838. The SS United States made her maiden voyage on July 4, 1952, and set both the eastbound and westbound speed records. That was over a half-century

the eastbound and westbound speed records. Inat was over a nair-century ago, but her speed records have never been broken.

This poster is a history of the ocean liner from its humble beginnings through the recently produced *Queen Mary 2*. An outstanding original illustration of each of the 37 ships is accompanied by the name of owner line, the date launched, overall length, a brief history, and a flag icon representing her nation. Blue Riband winners are indicated by a blue ribbon icon. The two bottom raws chose when that ealled the Parific Ocean. tom rows shows ships that sailed the Pacific Ocean.

MARITIME HERITAGE



B492 Nautical Navigation

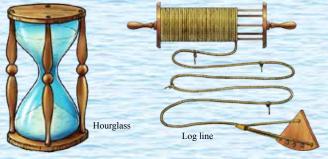
This informative poster traces the science of nautical navigation from its primitive beginning through the modern electronic age. Although theory is well covered, the emphasis is on practical application

The goal of navigation has always been to safely take a ship from one place to another. The first mariners followed the coast and relied on landmarks. The first known navigational aid was the giant lighthouse built by Alexander the

Great over 2,000 years ago. Many more would follow. By the 16th century, important channels were marked by buoys.

Early mariners relied heavily on the position of the sun and stars to determine their position and direction. They observed the wind and tides. They learned to determine their position with regard to coasts by taking soundings of the water depth. They developed the log line to determine speed.

Navigators have always needed to know position, direction, speed, water depth, and other things. Advances in knowledge and technology have simply provided better means of determining them. A modern-day navigator relies heavily on electronic instruments, but wise ones also know all of the timehonored techniques, which they can use to double check instrument accuracy or utilize if the electronics malfunction or fail.



The nautical mile was introduced as a standard unit of measurement in the 15th

century. It represented a fraction of the circumference of the earth.

The first recorded use of the log line was in 1574. It was a long rope with knots tied in it at 42-foot intervals. A log was attached to one end of the rope, as it provided resistance to the water. The log was thrown overboard and the number of knots that ran out in 30 seconds, as timed through an hourglass, resulted in the number of nautical miles per hour that the ship was traveling. The log was later replaced by a triangular chip. In 1954, the spacing of the knots was increased to 47 feet to more accurately reflect the diameter of the earth. Nautical speed is still measured in knots.

B491 Sea Fever (Poem)

"I must go down to the seas again, to the lonely sea

"I must go down to the seas again, to the lonely sea and the sky, and all I ask is a tall ship and a star to steer her by." This is the opening line of John Masefield's famous poem, Sea Fever. A "tall ship" is one characterized by high masts and great spreads of sail. Sea Fever was first published in 1902 and has since been loved by generations of sailors.

The full text of the poem is superimposed over an original oil painting of the United States Coast Guard cutter Eagle. The 295-foot barque is the only actively commissioned "tall ship" in American military service. The U.S. Coast Guard Academy uses her to train future officers during the summer months. The rest of the year, Eagle sails to many foreign ports as our nathe year, Eagle sails to many foreign ports as our nation's good will ambassador. She was the only Coast Guard ship not to have racing stripes, as the traditionalists maintained that the stripes would be inconsistent with her historic design. However, she was the host ship of Operation Sail 1976, a coming together of tall ships from all over the world in New York Harbor to ships from all over the world in New York Harbor to celebrate the American Bicentennial. Eagle finally got her distinctive racing stripes.

History of the Eagle

The WWI Armistice Treaty prohibited Germany from building warships. When Hitler came to power, he ordered four tall ships to train naval officers. The sailing ship configuration disguised that the engine room, control center, navigation station, and other that the engine room, control center, navigation station, and other things were identical to those of the submarines that Germany was then secretly building. Commissioned in 1936, the *Horst Wessel* was one of these four deceptive ships. She was used to train U-boat skippers that later sank many American ships. The United States confiscated her following the defeat of Germany in WWII. The *Horst Wessel* was renamed *Eagle* and assigned to the Coast Guard Academy. Her three sister ships are still in service. This story appears in the lower right hand corner of the poster.



SPACE EXPLORATION



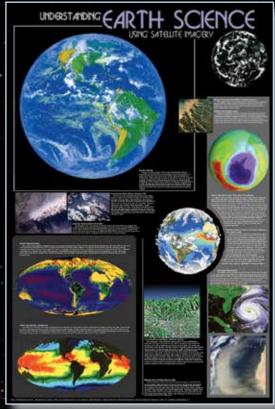
B101 Man's Greatest Adventure

This poster presents a step-by-step review of what it took to put a man on the moon. The Mercury Program launched the first Americans into space. The two-man Gemini Program proved that people could survive for long periods of time and actually leave the protected space vehicle and walk in space. The Apollo Earth Orbit Program tested the equipment, and the Apollo Saturn V Moon Program accomplished the goal, putting a man on the moon. This spectacular poster provides highly detailed illustrations of the launch vehicles, astronauts, and "spaceships." (The astronauts did not like them being called "capsules.") Informative captions explain the importance of each step. The central image is the Eagle landing on the moon's surface with the earth in the background.



B102 America's Astronauts

...or more properly, their spacesuits, as you can't see too much of the guys inside. This striking poster shows astronauts from the Mercury, Gemini, Apollo, and Space Shuttle Programs, each accompanied by a caption explaining the importance of the program. The side-by-side presentation of the astronauts makes it easy to compare how they were outfitted for their respective missions. A must for every kid who wants to explore the vastness of the universe.



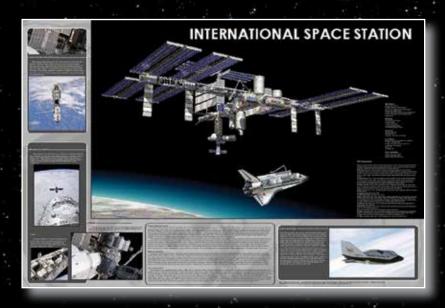
B108 Understanding Earth Science... through space imagery. This poster explores some of the many ways that our knowledge of our own planet has been expanded greatly by using satellites. Topics include making topographical maps, weather forecasting, documenting environmental trends, tracking wildfires, and more.



B107 Voyager's OdysseyLaunched in 1977, the two Voyager space probes began exploring the solar system. Now, over 35 years later, they are still going strong in deep space. This poster explains their missions and their achievements. Filled with remarkable photos taken by the probes.

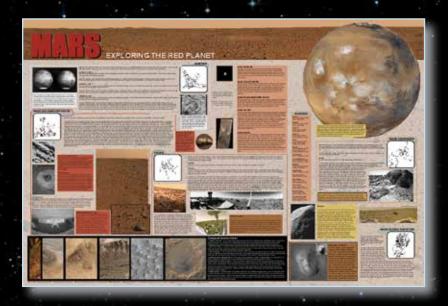
SPACE EXPLORATION





B103 International Space Station"We can follow our dreams to distant stars...," declared President Reagan when he proposed this ambitious project in his 1984 State of the Union address. This poster provides a comprehensive overview of the program goals, how it got started, its various components, and its appearance when finished. The visiting Space Shuttle provides scale.

B105 Expedition: MoonThe United States has made six trips to the moon. This poster explains what we learned. NASA photographs are paired with explanatory text and diagrams to summarize important discoveries.



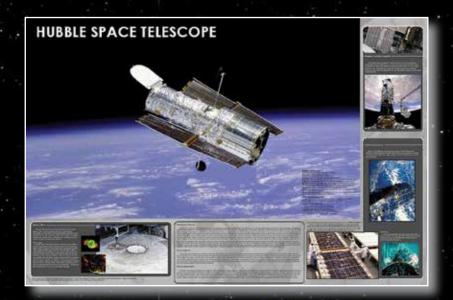
B106 Mars Exploration

Of all the planets in the solar system, Mars is most like Earth. Learning its secrets may tell us much about our own planet. NASA probes search for water, signs of life, and many other things. This poster documents their findings. Photographs reveal their discoveries, and informative text explains their significance. This poster is so up-to-date, it even includes discoveries made by the latest Rovers.

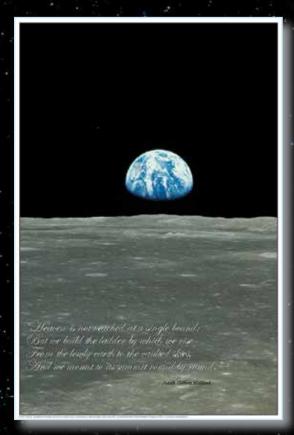


B109 Space Shuttle FleetThis poster provides a brief history of all six shuttles. A detailed diagram shows a typical mission profile. Another shows the various parts of the launch vehicle. A special inset honors the fallen astronauts.

SPACE EXPLORATION

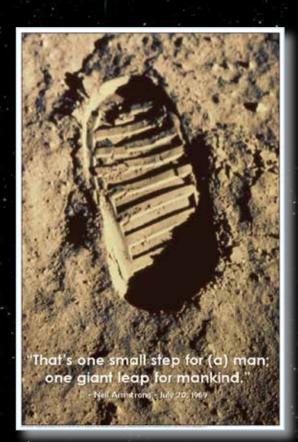


B104 Hubble Space Telescope
This amazing instrument has provided breathtaking photographs of deep space: nebulae, galaxies, stars, black holes, and much more. This poster explains the mission, the technology, and the problems. Photographs show various aspects of assembly and how the telescope was put into orbit and later repaired while still in space. This poster utilizes the same graphic design as the International Space Station, resulting in a striking matched set. Great for the space enthusiast for the space enthusiast.



B112 Earthrise

This poster features the earth as seen from the moon, one of the most spectacular photos ever taken. It is accompanied by American Josaich Hollands 1872 poem, "Heaven is not reached at a single bound. But we build the ladder by which we rise. From the lowly Earth to the vaulted skies. And we mount to its summit round by round."





B111 Shuttle BlastoffThe spectacular blastoff is complemented by a 1764 quote from Alexander Pope, "Seas roll to waft me, suns to light me rise; My footstool earth, my canopy the skies."

B110 One Small Step
Astronaut Neil Armstrong was the first human to set foot on the moon. This poster cites his famous quotation superimposed over a footprint made by fellow astronaut Buzz Aldrin, the second man on the moon. There is a controversy over its wording. Armstrong states that he said "a man," but the "a" was not heard by people on Earth. Apparently it was lost in the transmission. This poster places the "a" in parentheses.

Attention: Poster Buyer

Address Correction Requested Return Postage Guaranteed

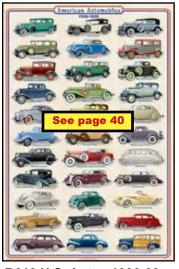
Last Year's New Posters



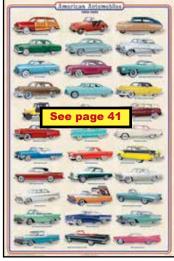
A253 Ungulates



A254 Marsupials



B613 U.S. Autos 1930-39



B615 U.S. Autos 1950-59



P211 U.S. Currency



P221 Classic Postage Stamps



P212 State Quarters



P101 Lady Liberty