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**My First Britannica** is designed to be entertaining and informative. Presenting a broad spectrum of life on Earth and of the universe beyond, the set provides children with basic information about subjects they are interested in. The subjects have been specially chosen to convey a cross-cultural, international perspective. In addition, **My First Britannica** gives parents, teachers, and mentors an up-to-date reference with answers to the questions children are likely to ask.

**My First Britannica** consists of 12 main volumes, each organized around a broad subject area that in turn has connections to the subjects of other volumes:

**Science and Technology**
- The Earth and Earth Sciences, Volume 1
- Physical Sciences and Technology, Volume 2

**People and Culture**
- The Arts, Volume 3
- People in History, Volume 4
- Folklore and Religions, Volume 5

**Places**
- Europe, Volume 6
- Asia, Australia, and New Zealand, Volume 7
- Africa, Volume 8
- The Americas, Volume 9

**Nature**
- Plants, Volume 10
- Birds, Insects, Reptiles, and Aquatic Life, Volume 11
- Mammals, Volume 12

At a glance...
MY FIRST BRITANNICA is designed to hold children’s attention with a highly visual presentation while building their study skills. The volumes may be read from cover to cover or used to find a specific fact. The Table of Contents at the beginning of each volume shows how the subject matter is organized and helps children browse through the volume or find information quickly.

Each volume of MY FIRST BRITANNICA is divided into two-page articles, or single spreads. The text of each article is written in an age-appropriate, engaging style that will capture the child’s imagination while presenting him or her with just the right amount of information.

Included in each spread is a single vivid image or multiple images illustrating the subject and drawing the child in. These images consist of brilliant photographs, original illustrations, informative maps, and portraits of famous people.

Learn More! references at the end of each article point to related information in the same or other volumes. These references help children navigate through the set and understand the connections between subjects. For example, Australia is covered in Volume 7, and topics related to Australia can be found in that volume as well as other volumes:

- Coral, Volume 11
- Great Barrier Reef, Volume 7
- Cathy Freeman, Volume 4
- Koalas, Volume 12

Still others can be located by using the index to the set:

- An Australian Tale: How Kangaroo Got His Tail, Volume 5
- Cathy Freeman, Volume 4
- Koalas, Volume 12

Exploring interrelated topics from volume to volume will help children build their critical reasoning, comprehension, and vocabulary skills.

In this volume, the Reference Guide and Index, you will find a variety of useful reference tools, including a richly illustrated mini-atlas, a comprehensive glossary, and a cumulative index to the entire set. There is a helpful guide to using the index on pages 40–41, which shows children how the index is organized and how to find a specific subject. The index should be used along with the Table of Contents in each volume to locate a subject that is covered in more than one volume.

Although MY FIRST BRITANNICA covers a broad range of topics, it is not meant to be comprehensive. It is a fascinating resource, however, that children will want to read in its entirety and not just reach for when they want to look up a specific topic. As such, MY FIRST BRITANNICA will provide hours of pleasurable browsing for children and prepare them for more serious research in the future.
Africa

<table>
<thead>
<tr>
<th>AREA</th>
<th>11,717,000 sq mi (30,347,000 sq km)</th>
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<tbody>
<tr>
<td>Percentage of Earth's land area: 20%</td>
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<table>
<thead>
<tr>
<th>POPULATION</th>
<th>896,402,700 (2006 est.)</th>
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<table>
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<tr>
<th>LARGEST COUNTRY BY AREA</th>
<th>Sudan 966,800 sq mi (2,504,000 sq km)</th>
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<tr>
<th>LARGEST COUNTRY BY POPULATION</th>
<th>Nigeria 134,375,000 (2006 est.)</th>
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<thead>
<tr>
<th>▲ HIGHEST POINT</th>
<th>Kilimanjaro, Tanzania 19,340 ft (5,895 m)</th>
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</table>

<table>
<thead>
<tr>
<th>▼ LOWEST POINT</th>
<th>Lake Assal, Djibouti –515 ft (~157 m)</th>
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</table>

<table>
<thead>
<tr>
<th>LONGEST RIVER</th>
<th>Nile River 4,132 mi (6,650 km)</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>LARGEST LAKE</th>
<th>Lake Victoria 26,828 sq mi (69,485 sq km)</th>
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</table>

<table>
<thead>
<tr>
<th>X COLDEST RECORDED TEMPERATURE</th>
<th>February 11, 1935, Ifrane, Morocco –11° F (~–24°C)</th>
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<table>
<thead>
<tr>
<th>X HOTTEST RECORDED TEMPERATURE</th>
<th>September 13, 1922, Al-Aziziyah, Libya 136° F (58°C)</th>
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</table>

Lake Assal, Djibouti. © AFP/Corbis

The Cape of Good Hope is at the southern tip of Africa. © Nik Wheeler/Corbis

The Nile River at the Aswan High Dam, Egypt. © Lloyd Cliff/Corbis

Kilimanjaro, Tanzania. © Yann Arthus-Bertrand/Corbis
North America

<table>
<thead>
<tr>
<th>NORTH AMERICA</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>AREA</td>
<td>9,362,000 sq mi (24,247,039 sq km)</td>
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<tr>
<td>Percentage of Earth’s land area:</td>
<td>16%</td>
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<tr>
<td>POPULATION</td>
<td>515,945,700 (2006 est.)</td>
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<tr>
<td>LARGEST COUNTRY BY AREA</td>
<td>Canada 3,855,100 sq mi (9,984,700 sq km)</td>
</tr>
<tr>
<td>LARGEST COUNTRY BY POPULATION</td>
<td>United States 299,330,000 (2006 est.)</td>
</tr>
<tr>
<td>▲ HIGHEST POINT</td>
<td>Mount McKinley, Alaska, U.S. 20,320 ft (6,194 m)</td>
</tr>
<tr>
<td>▼ LOWEST POINT</td>
<td>Death Valley, California, U.S. –282 ft (–86 m)</td>
</tr>
<tr>
<td>LONGEST RIVER</td>
<td>Mississippi-Missouri River, U.S. 3,710 mi (5,971 km)</td>
</tr>
<tr>
<td>LARGEST LAKE</td>
<td>Lake Superior, U.S./Canada 31,700 sq mi (82,100 sq km)</td>
</tr>
<tr>
<td>X COLDEST RECORDED TEMPERATURE</td>
<td>February 3, 1947, Snag, Yukon Terr., Canada –81° F (–63°C)</td>
</tr>
<tr>
<td>X HOTTEST RECORDED TEMPERATURE</td>
<td>July 10, 1933, Death Valley, California, U.S. 134° F (57°C)</td>
</tr>
</tbody>
</table>
## South America

| **AREA**  | 6,895,000 sq mi (17,858,000 sq km) |
| Percentage of Earth's land area: 12% |
| **POPULATION** | 373,993,500 (2006 est.) |
| **LARGEST COUNTRY BY AREA** | Brazil 3,287,300 sq mi (8,514,000 sq km) |
| **LARGEST COUNTRY BY POPULATION** | Brazil 186,771,000 (2006 est.) |
| ▲ **HIGHEST POINT** | Mount Aconcagua, Argentina 22,831 ft (6,959 m) |
| ▼ **LOWEST POINT** | Valdez Peninsula, Argentina −131 ft (−40 m) |
| **LONGEST RIVER** | Amazon River 4,000 mi (6,400 km) |
| **LARGEST LAKE** | Lake Maracaibo, Venezuela 5,130 sq mi (13,280 sq km) |
| X **COLDEST RECORDED TEMPERATURE** | June 1, 1907, Sarmiento, Argentina −27° F (−33°C) |
| X **HOTTEST RECORDED TEMPERATURE** | December 11, 1905, Rivadavia, Argentina 120° F (49°C) |
**Asia**

AREA  17,226,000 sq mi (44,614,000 sq km)
Percentage of Earth’s land area: 30%

POPULATION  3,930,081,000 (2005 est.)

LARGEST COUNTRY BY AREA
Russia (Siberia)  5,065,400 sq mi (13,119,600 sq km)

LARGEST COUNTRY BY POPULATION
China  1,311,381,000 (2006 est.)

▲ HIGHEST POINT
Mount Everest  29,035 ft (8,850 m)

▼ LOWEST POINT
Dead Sea  –1,312 ft (–400 m)

LONGEST RIVER
Yangtze River, China  3,900 mi (6,300 km)

LARGEST LAKE
Caspian Sea (Asia/Europe)  143,000 sq mi (371,000 sq km)

X COLDEST RECORDED TEMPERATURE
February 6, 1933, Oymyakon, Russia  –90° F (–68°C)

X HOTTEST RECORDED TEMPERATURE
June 21, 1942, Tirat Zevi, Israel  129° F (54°C)
### Europe

<table>
<thead>
<tr>
<th>AREA</th>
<th>4,000,000 sq mi (10,400,000 sq km)</th>
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<tbody>
<tr>
<td>Percentage of Earth’s land area:</td>
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<tr>
<td>POPULATION</td>
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<tr>
<td>LARGEST COUNTRY BY AREA</td>
<td>Russia (European) 1,527,400 sq mi (3,955,900 sq km)</td>
</tr>
<tr>
<td>LARGEST COUNTRY BY POPULATION</td>
<td>Russia (European) 104,808,000 (2005 est.)</td>
</tr>
<tr>
<td>HIGHEST POINT</td>
<td>Mount Elbrus, Russia 18,510 ft (5,642 m) [off map]</td>
</tr>
<tr>
<td>LOWEST POINT</td>
<td>Caspian Sea –94 ft (–28.5 m) [off map]</td>
</tr>
<tr>
<td>LONGEST RIVER</td>
<td>Volga River, Russia 2,193 mi (3,530 km)</td>
</tr>
<tr>
<td>LARGEST LAKE</td>
<td>Caspian Sea (Europe/Asia) 143,000 sq mi (371,000 sq km) [off map]</td>
</tr>
<tr>
<td>COLDEST RECORDED TEMPERATURE</td>
<td>January (exact date unknown), Ust-Shchugor, Russia –67° F (–55°C) [off map]</td>
</tr>
<tr>
<td><strong>X HOTTEST RECORDED TEMPERATURE</strong></td>
<td>August 4, 1881, Sevilla, Spain 120° F (49°C)</td>
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</tbody>
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Mont Blanc, France, Europe's second highest point. © Ludovic Maisant/Corbis
Australia
## Australia (including New Zealand)

<table>
<thead>
<tr>
<th><strong>AREA</strong></th>
<th>3,074,000 sq mi (7,962,000 sq km)</th>
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<tbody>
<tr>
<td>Percentage of Earth's land area: 5%</td>
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<table>
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<tr>
<th><strong>POPULATION</strong></th>
<th>24,821,000 (2006 est.)</th>
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<table>
<thead>
<tr>
<th><strong>LARGEST COUNTRY BY AREA</strong></th>
<th>Australia 2,970,000 sq mi (7,692,000 sq km)</th>
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</table>

<table>
<thead>
<tr>
<th><strong>LARGEST COUNTRY BY POPULATION</strong></th>
<th>Australia 20,680,000 (2006 est.)</th>
</tr>
</thead>
</table>

▲ **HIGHEST POINT**
- Australia: Mount Kosciusko, New South Wales 7,310 ft (2,228 m)
- New Zealand: Mount Cook 12,316 ft (3,754 m)

▼ **LOWEST POINT**
- Lake Eyre, South Australia –51 ft (–15 m)

**LONGEST RIVER**
- Darling River 1,702 mi (2,739 km)

**LARGEST LAKE**
- Lake Eyre, South Australia 3,700 sq mi (9,600 sq km)

X **COLDEST RECORDED TEMPERATURE**
- June 29, 1994, Charlotte Pass, New South Wales –9° F (–23°C)

X **HOTTEST RECORDED TEMPERATURE**
- January 16, 1889, Cloncurry, Queensland 128° F (53°C)
### Antarctica

**AREA** 5,500,000 sq mi (14,245,000 sq km)
Percentage of Earth’s land area: 9%

**POPULATION** No permanent population

▲ **HIGHEST POINT**
Vinson Massif  16,066 ft (4,897 m)

▼ **LOWEST POINT**
Bentley Subglacial Trench  –8,327 ft (–2,538 m)

**X** **COLDEST RECORDED TEMPERATURE**
July 21, 1983, Vostock Station  –129° F (–89°C)

**X** **HOTTEST RECORDED TEMPERATURE**
January 5, 1974, Lake Vanda  59° F (15°C)

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**Snowy peaks on the Antarctic coast.** © George D. Lepp/Corbis

**Water-filled crater in Antarctica.** © Peter Johnson/Corbis

**Biologist walks through mountains of Cape Crozier, Antarctica.** © Galen Rowell/Corbis

**Crater of Mount Erebus, Ross Island, Antarctica.** © Galen Rowell/Corbis
abandon  to leave without planning to return

abbey  place where a community of monks or nuns live and work; also, the church serving that community

abdomen  in insects, the end portion of the body that is behind the head and thorax (middle section)

abominable  horrible or disgusting

Aboriginal  having to do with the original people to live in an area; especially, the original peoples of Australia

absorb  soak up

abstract (adjective)  in the arts, creatively communicating feelings or ideas about a subject rather than creating a realistic image

abundance  great quantity; plenty

abyssal  having to do with an area of the ocean that is thousands of feet below the surface of the water

acid  a chemical substance, often producing a burning effect when it interacts with another material

acrobat  performer who does tricks and physical programs that require strength, balance, and body control, often above the ground

acrylic  type of paint

adaptation  in biology, a change in an organism or its parts that allows the organism to survive better in its environment

administrative  having to do with managing or supervising the functions of a business, organization, or government

aerialist  performer who does tricks and feats above the ground or in the air

affordable  reasonable in price

agent  something that produces an effect

aggressive  openly hostile or tending to approach with great force or energy

agriculture  farming

alas  unfortunately or sadly

algae (singular: alga)  group of organisms that are similar to plants and live mostly in the water

alpine  mountainous

altar  raised place on which sacrifices are offered or religious ceremonies are performed

altimeter  the distance of an object above a specific level (such as sea level) on a planet or other heavenly body

ambassador  person who officially represents his or her own government in a foreign country

amphitheater  building with seats rising in curved rows around an open space where games and plays take place

ancestry  all the family members who lived before a particular individual

antenna (plural: antennas)  1) in biology, a slender organ on the head of some insects and crustaceans (such as shrimps and lobsters) that allows them to sense their environment; 2) in technology, a dish, rod, or wire for sending or receiving radio waves or other energy

antics  playful or funny actions

Arab  member of a people originating in the Arabian Peninsula and now inhabiting much of the Middle East and North Africa

arc  a curved line

archaeology (adjective: archaeological)  the science that deals with past human life as shown by fossils, tools, and other material left by ancient peoples
archbishop  high-ranking
curchman in some Christian
churches who supervises
church government in a very
large area

architecture  the art of
designing and building
structures, especially buildings
that can be lived and worked in

archives  place where public
records or historical
documents are kept

arena  enclosed area used for
public entertainment

aristocratic  having to do with
the upper social classes

artificial  made by human
beings rather than occurring in
nature

aspect  part, feature, or quality
of something

asteroid  small, often rocklike
heavenly body orbiting the
Sun

astronomy  (adjective:
astrological)  the science of
the heavenly bodies and of
their sizes, motions, and
composition

atmosphere  the envelope of
gases that surrounds a planet

autobiography  life story
written by the person it is
about

autonomous  independent and
self-governing

axis  imaginary pole going
through the center of the Earth
or other heavenly body

bacterium (plural: bacteria)
tiny one-celled organism too
small to see with the unaided
eye

baleen  a hardened substance
from 2 to 12 feet long found in
two rows along the upper jaws
of certain whales

banish  to force or drive away

barrier  object or structure
that blocks the ability to reach
another object or place

basilica  Roman Catholic
church that has special
ceremonial privileges

basin  in geography, the area
of land drained by a river and
its branches

bask  to lie or relax in a warm
place

bay  part of a coastline that
curves in toward land

bazaar  marketplace where
many kinds of goods are sold;
especially, such a marketplace
in Asia or Africa

Berber  member or
descendant of a people who
originally inhabited North
Africa, before the Arab
conquest in the 7th century AD

betray  to lie to or go back on
one’s word

biologist  person who studies
living organisms and life
processes

blockbuster  huge, successful
event

bog  wet spongy ground

bond  connection or friendship

botanical  (noun: botany)
having to do with plant life

boulevard  wide avenue often
having grass strips with trees
along its center or sides

bovine  animal group that
includes cattle, oxen, bison,
and buffalo

boycott  the refusal to deal
with a person, group, or
country, usually in order to
show disapproval or to force a
change in behavior

Braille  a system of writing
for the blind in which letters
are represented by raised dots

bray  to make a sound like the
loud harsh call of a donkey

breadth  width

brew  to prepare by steeping
(soaking) or boiling in hot
water

broadcast  to send out a
program or message to a
public group, usually by radio,
television, or the Internet

buff  an off-white color
burden  weight or load to carry

burrow  deep hole or tunnel made in the ground by an animal for shelter

bushman  in Australia, a person who lives in the bush (wilderness)

cactus (plural: cacti)  flowering plant of dry regions that has water-storing fleshy stems and, usually, sharp spines

calorie  unit that measures the amount of heat energy that food provides to the body

camouflage  colors and patterns that allow a person, animal, or thing to blend in with its surroundings

campaign  planned activities designed to lead to a particular result

canal  artificial waterway for boats or for draining or supplying water to land

canoe  a small, light, and narrow boat having sharp front and back ends and moved by paddling

canopy  overhead covering

captive (noun: captivity)  (adjective) taken and held in a cage or as a prisoner; (noun) one who has been taken or held in a cage or as a prisoner

caravan  group of pack animals or of vehicles traveling together one behind the other

carbohydrates  plentiful, energy-producing natural substances that are formed by many food plants eaten by animals

carcass  dead body or leftover parts of an animal

cargo  goods transported in a ship, airplane, or other vehicle

cartridge  sealed container

cassava  tropical plant that has a thick underground rootlike part and can be made into a number of foods

cast (verb)  to form a shape by pouring a liquid into a mold and letting it harden

cathedral  large Christian church where a bishop is in charge

ceramic  objects made out of clay baked at high temperatures

cereal  starchy seeds of certain grass plants grown for food

citadel  castle or fortress that protects a city

citrus  kind of tree or shrub grown in warm regions and having thick rind (skin) and fleshy fruits, including oranges, grapefruits, and lemons

civil rights  the social and personal rights of a citizen

civil war  war between opposing groups of citizens of the same country

civilization  the way of life of a people at a particular time or place; also, a fairly advanced culture and technology
classical  traditional in style
climate  average weather in a particular area
clockwise  in the direction that a clock’s hands move, as viewed from the front
cloudburst  sudden heavy rainfall
cobbled  made of rounded stones larger than a pebble and smaller than a boulder
colony  (adjective: colonial; verb: colonize)  1) in general, a settlement established in a distant territory and controlled by a more powerful and expanding nation; 2) in biology, a group of similar organisms that live together in a particular place
comet  chunk of frozen space debris that has a shiny tail and orbits the Sun
commanding  grand and powerful
commandment  law or rule for living
commerce  (adjective: commercial)  the buying and selling of goods, especially on a large scale and between different places
commission  (verb) to order to be made; (noun) an order granting the power to perform various acts or duties
commoner  person who is not of the noble or upper classes
communism  (adjective: communist)  system of government in which all property is owned by the state or community and all citizens are supposed to have a share in the total wealth
composer  person who writes music
composition  literary, musical, or other artistic work
concentrated  condensed, or made thicker, by removing water
conductor  the leader of an orchestra
conflict  disagreement, struggle, or fighting
congress  the main lawmaking group of some nations
conquistador  (plural: conquistadores)  a Spanish conqueror of Latin America
conservation  the care and protection of something fragile, unique, and valuable, such as rare wildlife or ancient structures
conservative  tending to safeguard existing views, conditions, or traditions
constitution  document containing the basic beliefs and laws of a nation, state, or social group
continent  one of the largest of Earth’s landmasses
contour  the outline of a figure, body, or surface
contract  (verb) to make smaller by tightening or squeezing together
controversial  causing division or disagreement
convert  to change; to win over to a new or different belief
conveyor belt  a loop of material that can move objects from one worker or workstation to the next for the steps needed to make a product
convict  (noun) person serving a prison sentence
core  central part
corkscrew  device with a handle and a spiral-twist metal piece, used for removing certain bottle stoppers
corridor  passageway into which compartments or rooms open
counterclockwise  in the direction opposite to the way a clock’s hands move, as viewed from the front
countless  too many to count
craft  (noun) a skill or trade; (verb) to make skillfully, usually by hand
crater  bowl-shaped dent in a surface

crest (adjective: crested) 1) in biology, a standing clump of fur or feathers, usually on an animal’s head; 2) in geography, the upper edge or limit of something, such as the top of a mountain

critic  person who studies and comments on the quality of performances or works of art

crossbreed  to produce offspring from parents of two varieties or species

crossroads  place where roads cross; also, a central meeting place or a decision-making point

crown prince (feminine: crown princess)  the prince next in line for a crown or throne

crude oil  oil taken from the ground and not yet cleaned or separated into different products; also called petroleum

cruise  a pleasure trip on a large boat or ship

crusade  campaign or cause taken up with passion and belief

crystal  clear colorless glass of very good quality

cuisine  style of cooking; also, foods made in that style

cultivate  in gardening and farming, to plant crops and to care for them as they grow

culture  the ways of life, traditions, and behaviors of a specific group of people

customhouse  place where duties or taxes are paid on goods coming into or leaving a country

cutting  in gardening and farming, a section of an adult plant capable of developing into a new individual

Cyrillic  having to do with the alphabet for writing in Russian and other Eastern European languages

data  factual information or details

dean  in education, the head of a division of a school or university

debris  trash or fragments

debut  first formal public appearance

decade  ten-year period

delta  large triangular area made of material deposited at the mouth of a river, where it empties into the sea

democracy (adjective: democratic)  government in which the highest power is held by the citizens; they either use their power directly (usually by voting) or choose others to act for them

depict  to represent by a picture

deposit  substance laid down by a natural process

deputy  member of a lawmaking group in some nations

descendant  member of a recent age group of a family or similar division that began years earlier

descended (adjective)  related through a long line of ancestors

descent  ancestry, heritage, or origin

devastate  to wreck or destroy

device  tool or piece of equipment

devise  to figure out, invent, or plan

dialect  one of several varieties of a language used by the members of a particular group or class of people

dialogue  conversation in a play, film, or written work
**diameter** the length of a straight line through the center of an object

**dictate** to speak for another person to write down or for a machine to record

**dictator** person who rules with total power, often in a cruel or brutal way

**diesel** type of fuel-fed engine

**digestive system** parts of the body that work together to break down food into simpler forms that can be used by the body

**dike** mound of earth built to control water

**diplomat** person who works to keep up friendly relations between the governments of different countries

**discrimination** the treatment of some individuals or groups differently from others without any fair or proper reason

**disk** in plants, the central part of certain flower heads, as in daisies and sunflowers; the disks, in turn, are surrounded by ray flowers

**dismay** sadness or disappointment

**dispute** (verb) to argue with

**diverse** varied; different

**divine** holy, godlike, or concerning God

**dome** large rounded structure shaped like half of a ball

**domestic** (verb: *domesticate*) tame

**dominant** having influence or control over another person, place, or thing

**drastic** huge, extreme, or dramatic

**drawback** problem or bad side

**drought** long period of dry weather

**dual** two

**duct** pipe, tube, or channel through which liquid or gases flow

**dung** animal waste

**dwindle** to become smaller or less

**dynasty** series of rulers of the same family

**economy** the system in a country or group by which goods are made, services are offered, and both are sold and used

**ecosystem** community of all the living things in a region, their physical environment, and all their interrelationships

**edict** law or order given by a ruler or leader

**edit** to cut down to a different or shorter version

**effortless** easy and natural

**element** in science, one of the basic unique substances that make up all matter

**elevation** the height of an object above sea level (that is, the surface of the ocean)

**embassy** the living quarters or office of an ambassador (a person who officially represents his or her own government in a foreign country)

**embroidery** needlework done to decorate cloth

**emperor** (feminine: *empress*) the ruler of an empire

**empire** a major widespread area under a single government, or a number of territories or peoples under one supreme ruler

**endangered species** a group of plants or animals whose entire survival is threatened

**energetic** lively or active
engineer  person who is trained to design and produce complex structures such as roads, bridges, and dams

enlightenment  remarkably clear state of awareness, understanding, and inner peace

equator  imaginary circle running east-to-west around the Earth that lies halfway between the North Pole and the South Pole

erosion (verb: erode)  the process of wearing down; especially, the wearing away of soil or rock by wind, water, or ice

ethnic  having to do with a large group of people who share a racial, national, tribal, religious, language, or cultural background

ethnography (adjective: ethnographic)  the study of human cultures

evaporate  change into a vapor or gaseous form, usually by means of heating

evergreen (adjective)  having leaves that remain green and working through winter and more than one growing season

evolution (verb: evolve)  the process of changing, especially over time

exile (noun)  banishment or official separation

exotic  unusual and unfamiliar

expansive  large area

expedition  a planned journey or trip made for a specific purpose

export  to carry or send abroad, especially for sale in another country

expression  communication, usually of emotions or ideas

extend  to stretch out or reach across a distance, space, or time

extinct  no longer existing

extremist  person who holds unusually strong opinions or beliefs

famine  drastic food shortage, often ending in starvation for many

fantastical  highly imaginative and unrealistic

fast (noun)  period of time when a person gives up or limits eating, often for religious reasons

ferocious  fierce and wild

fertile  rich and productive; able to yield quality crops in large quantities

fertilizer  natural or artificial substance used to make soil better for growing crops

fiber  strand or threadlike structure

flare (verb)  to fan out or expand

flask  container for liquid

flax  the fiber from which linen cloth is made

fleece  wool of an animal such as a sheep or a goat

flourish  to grow successfully; to do well

fodder  coarse food for farm animals

foliage  the leaves of a plant

forefoot  one of the front feet of an animal with four or more feet

forestry  the science and work of caring for forests

formal  following a specific order or pattern

fortify  to strengthen with weapons and by military defenses

fortress  well-defended place

fossil  an imprint or other trace in rock of an animal, plant, or other living thing
foundation the support on which something rests; also, the base from which an idea or creation grows

fragrance (adjective: fragrant) sweet, pleasant, and often flowery or fruity smell

frankincense a sweet-smelling substance from an African or Arabian tree

fresco painting done on freshly spread moist plaster

frigid frozen or extremely cold

fungus (plural: fungi) organism (such as a mushroom or mold) similar to a plant but lacking a stem, roots, leaves, and the substance called “chlorophyll”

generate to create or be the cause of

geography the natural physical features of an area; also, the study of the countries of the world and of the Earth’s surface features

geometric based on straight lines, curves, and simple shapes such as circles and squares

gesture movement of the body, arms, hands, or legs to express feelings or thoughts

gills pair of breathing organs found in fish and some other water-dwelling animals

geography one of the first four New Testament books of the Bible, telling of the life, death, and resurrection (raising from the dead) of Jesus Christ

government, or gospel music black American music that grew mostly from Christian church services, blues, and traditional spirituals

governess woman who teaches and trains a child in a private home

gravity force that attracts objects to each other, keeps people and objects anchored to the ground, and keeps planets circling the Sun

guerrilla person who is part of an independent fighting force that makes surprise raids behind enemy lines

gymnastics difficult physical exercises, often performed as a sport in competitions

habitat the physical environment in which a living thing dwells

hail small balls or lumps of ice that fall from the sky, as rain does

handicrafts articles, such as pottery, made by hand by an individual person

handiwork creative product

hare rabbitlike animal
**harness** (verb) to control, much as an animal may be hitched up and controlled by its harness

**harvest** the gathering of a crop

**hatch** to come forth from an egg or other protective covering during development

**headquarters** the governing and directing center of an organization

**heath** low evergreen shrub with needlelike leaves and clusters of small flowers

**hemisphere** half of the planet Earth or any other globe-shaped object

**herb** pleasant-smelling plant (such as mint, oregano, basil, and coriander) often used in cooking, either in part or as a whole

**heritage** background or descent

**hermit** person who has withdrawn from society to live alone

**hibernate** to pass the winter in a sleeping or resting state

**highland** high or mountainous land

**horizon** distant point where the land and the sky appear to meet

**hot spring** a source of hot water coming from underground

**hull** hard outer shell of a seed; also, the outer layer of a boat or ship

**humanitarian** devoted to the happiness and welfare of other people

**humidity** (adjective: humid) moisture or dampness; especially, the amount of moisture in the air

**hurricane** major tropical storm that occurs in the Atlantic Ocean and features high winds moving in circular patterns; in the Pacific Ocean such storms are called “typhoons”

**husk** usually thin, dry outer covering of a fruit or seed

**hymn** song of joy or praise, often to a god

**immigrant** person who goes to a country to live there

**immigration** the process of moving to a new country

**immortal** living or lasting forever

**impaired** damaged or limited

**imperial** having to do with an emperor or empire

**implant** (noun) object inserted within living tissue; (verb) to insert securely or deeply

**import** to bring from a foreign place

**impression** mark or figure made by pressing one object onto the surface of another; also, the effect or feeling an object or person creates

**inanimate** not living

**incense** substance that produces a sweet smell when burned

**indivisible** unable to be divided

**industrial** having to do with businesses that construct or produce something

**Industrial Revolution** 18th-century era that began when power-driven machinery became common

**industrialized** built up and modernized through business and manufacturing

**industry** business and manufacturing

**inhabited** (adjective) occupied; having residents

**inhaler** device through which medicine is drawn in through the nose or mouth
inlaid  decorated with materials set into the surface

inland  part of a country away from the coast

inspiration  something that causes a particular thought, feeling, or idea

instinct  natural tendency of a living thing to respond in a particular way to a situation

integrate (adjective: integrated) to combine two or more parts in order to create a more-balanced whole; especially, to remove barriers that isolate one group of people from another

international  having to do with two or more countries

intricate  complicated or detailed

investigate  to look into or study

islet  small island

isolate  to keep separate or alone

isthmus  narrow strip of land connecting two larger land areas

ivory  material that makes up elephant and walrus tusks

judo  sport, developed from the Japanese fighting art of jujitsu, in which opponents use quick movements and careful positioning to try to throw each other to the ground

kernel  whole grain or seed of a cereal plant

kerosene  fuel for lanterns

laboratory  place where science tests and experiments are done

landmass  large area of land

landscape  picture showing views of nature and the countryside

larva (plural: larvae) wingless, often wormlike stage of many insects

lash  to tie or attach

layperson (adjective: lay) person who belongs to a religious group but is not part of its official clergy (as a priest or minister is)

legacy  something handed down from an earlier time or person

magnify  to make something appear larger

majestic  grand or splendid

majority  most; usually, more than half of a group of individual people or things
**majority rule** system in which the majority (that is, a number over half) of a group is given the power to make decisions that the entire group must accept.

**mammal** class of warm-blooded animals that feed their young with milk from special mammary glands, have an internal backbone, and are more or less covered with hair.

**mangrove** tropical tree or shrub that has partly exposed roots and grows thickly in areas of salty water.

**manufacture** to make from raw materials, by hand or by machine.

**manuscript** handwritten or typewritten document.

**marginal** lying at or near the outer edge (margin) of some larger place, object, or group.

**marine** having to do with the ocean.

**marmalade** clear, usually sugary jelly containing pieces of fruit and fruit rind.

**marsh** area of soft wet land usually overgrown by grasses and sedges.

**massive** heavy or large.

**matter** physical substance or material from which something is made.

**mausoleum** large or fancy tomb.

**meal** coarsely ground substance.

**medicinal** used as a medicine.

**medieval** period in European history from the 5th to about the 14th century AD.

**meditation** (verb: meditate) quiet, focused concentration, meant to calm and clear the mind; sometimes used to reach a spiritual awareness.

**memorial** something that keeps alive the memory of a person or event.

**mesa** flat-topped hill or small upland with steep sides.

**meteorite** mass of material from space that reaches the Earth’s surface.

**method** way or system.

**metropolitan** having to do with a city and its heavily populated surrounding areas.

**molecules** the smallest possible pieces of a particular substance.

**mollusk** any member of a group of animals that have no backbone and are usually enclosed in a shell (for example, snails, clams, or squids).

**molten** melted.

**monarchy** form of government in which the ruler inherits the position and rules for life; monarchs include kings, queens, emperors, and tsars.

**monastery** housing for people who have taken religious vows, especially for monks.

**monk** man who lives separately from society, either alone or in a community of men, so that he can devote all his time to religious life.
monsoon  regular period of heavy rainfall and wind, especially in southern Asia

monument  stone or building set up in memory of a person or event

mosque  Muslim place of worship

mountaineer  mountain climber

mourn  to feel great sorrow, usually because of a death or other loss

mural  a painting on a wall

mussel  kind of mollusk (shellfish)

muzzle  animal’s snout (jaw and nose)

mystical  having to do with a person’s direct spiritual connection with a god or other supernatural power

myth  story that unfolds part of the worldview of a people or is used to explain a belief or natural event

mythology  the stories dealing with the gods and heroes of a particular people or culture

native (adjective) living or growing naturally in a particular region

natural resources  the materials or qualities supplied by nature (such as minerals or water power) that make a place valuable to people, usually for industrial and manufacturing purposes

nature  inborn or instinctive way of behaving or thinking

nectar  sweet liquid produced by plants and used by bees in making honey

negotiate  to discuss and bargain with another in order to reach an agreement

Negro spiritual  religious folk song developed among blacks in the southern United States

network  complex system

nobility  a nation’s upper-class social group

noble  of upper-class birth or rank

nocturnal  active at night

nomad  member of a people who have no permanent home but instead move from place to place, usually with the seasons and within a specific area

nonfiction  literature that is based on fact rather than imagination

nostril  one of the outer openings of the nose

nuclear weapon  explosive device that produces enormous power by splitting apart the centers of the tiny particles called “atoms”

nuisance  annoying or troublesome person, thing, or event

nursery  place where plants are grown for farming, for scientific experiments, or for sale to the public

nutrient  substance that a living thing needs in order to stay healthy and grow

ocelot  medium-sized wildcat of the Americas

oddity  unusual thing or quality

oil (or crude oil)  liquid taken from the ground and not yet cleaned or separated into such products as gasoline and kerosene; also called petroleum

oral  having to do with the mouth

orbit  (verb) to travel around an object; (noun) an object’s path around another object

orchestra  group of musicians playing together, usually with a leader called a “conductor”

order  religious community, usually requiring that its members take solemn vows promising duty and faithfulness
organism  living thing
organization  group of people working together for some purpose
orthodox  strictly obeying traditional rules, customs, or beliefs
 overseer  person in charge of others who are carrying out a task
 overwhelm  to defeat, beat down, or swallow up
 oxygen  very common gas that is one of the basic elements necessary for human and animal life
 pagan (adjective)  non-religious; especially, used disapprovingly to describe a form of worship very different from a familiar and socially acceptable religion
 pagoda  towerlike Asian temple or memorial building several stories tall, with the edges of the roof at each level curving upward
 papyrus  tall reed plant that grows in the Nile valley and that the ancient Egyptians used to make an early kind of paper
 paralyze  to make someone or something unable to move
 parasite  creature that lives on another, which it usually injures
 parka  hooded heavy jacket for very cold weather
 parliament  the lawmaking body of some governments
 particle  tiny bit or piece
 pastel  type of drawing crayon
 patent (verb)  to legally protect the rights to make, use, or sell an invention; (noun) document that legally protects the ownership and use of an invention
 patron saint  holy person who is chosen to specially protect a group or place
 peccary  American animal related to the pig
 peninsula  a finger of land with water on three sides
 perfection  state of being without flaw or error
 permanent  unchanging, long-lasting, or meant to last forever
 persecute  (noun: persecution) to treat cruelly or harmfully for an extended period of time; especially, to make a person or group suffer because of their beliefs
 pesticide  poison that kills insects dangerous to growing plants
 petroleum  liquid taken from the ground and not yet cleaned or separated into such products as gasoline and kerosene; also called “crude oil”
 philharmonic  large orchestra that plays classical music
 philosopher  thinker or seeker after truth and understanding of basic concepts
 photoelectric effect  electrical effect produced when light strikes a metal surface
 physics  the science that deals with matter and energy and the way they interact
 piazza  open place or area formed at the meeting of two or more streets, especially in an Italian town
 pied (adjective)  having blotches of two or more colors
 pilgrim  person who travels to a shrine or holy place to worship
 pilgrimage  journey made to a holy place to worship there
 plantation  large farming property, usually worked by resident laborers
 plate  in the Earth sciences, a large segment of the Earth’s crust (outer layer) that is constantly in motion
plateau  wide land area with a fairly level surface raised sharply above the land on at least one side
plaza  open place or area formed at the meeting of two or more streets
pleated  folded and laid over another part of some material, especially a piece of cloth
plot  the main story of a work of literature
poet laureate  poet honored by a country or other region as its most outstanding poet
polar region  area at or near the North Pole or South Pole
polio  serious disease that may kill or permanently weaken or paralyze its victims
political  having to do with creating and controlling a government
pollen (verb: pollinate)  very fine dusty substance that comes from flowers; it is important in the reproduction of plants
pollute (noun: pollution)  to poison or make dirty, often with man-made waste
polo  team sport played by hitting a wooden ball with mallets through goalposts while on horseback
pope  the leader of the Roman Catholic church
population  all the people living in a country or other specific area
populous  having a large population
porcelain  hard white ceramic ware (earthenware) used especially for making dishes
porridge  soft food made by boiling grain meal or a vegetable in milk or water until it thickens
port  protected harbor where ships dock to load or unload goods
porter  person who carries baggage
portrait  to show by making a picture or by imitating; also, to act the part of a character in a play
potential  possible
poultry  birds raised for their eggs or meat
poverty  the condition of being poor
preach  to deliver a sermon; to urge to accept an idea or course of action
precious  of great value or high price
predator  (adjective: predatory)  animal that lives by eating other animals
predict  to foretell an event on the basis of study, experience, or reasoning
prehistoric  having to do with times before written history
presence  the strong and self-confident quality a person has that makes others focus on him or her
prey  an animal eaten by another animal
prime minister  the chief officer of the government in some countries
primitive  ancient, or belonging to a very early stage of development
print (noun)  work of art made by a process that allows more than one copy of an image to be made
prism  piece of many-sided clear crystal
procession  group of people moving along in an orderly, often ceremonial way
Promised Land  in Judaism, the land of Canaan, which God promised to Abraham and Moses if the Hebrew people promised to worship only him
propeller  a device that uses blades that fan outward from a central hub to propel (move) a vehicle, such as a boat or an airplane
prophet a holy person who acts as a messenger between God and people; also, a gifted person with the ability to accurately predict future events

prosperous wealthy

prowl to creep about in a sneaky way, often while hunting

psalm a sacred song or poem used in worship; especially, one of the biblical poems collected in the Book of Psalms

pulp 1) in plants, the juicy fleshy part of a soft fruit; 2) in industry, a mashed-up pasty glop such as the plant material used in making paper

pygmy something very small for its kind

pyramid structure with a square base and four sloping triangle sides that meet in a point at the top

quay structure built along the bank of a waterway for use as a landing place

rabies serious disease of animals that is usually passed on through the bite of a sick (rabid) animal; its effects include extreme salivation, strange behavior, and usually death

radiation energy sent out in the form of rays, waves, or particles

rainforest dense tropical woodland with a high yearly rainfall and very tall trees

ray beam

rebel person who fights against an existing power or way of doing things

recitation act of speaking or reading a piece of literature aloud

reclaim to change to a wanted condition

recycle to reuse, or to pass used or scrap material through various changes in order to create new useful products from it

reef raised length of rocks, coral, or sand at or near the surface of water

refined polished, complex, and advanced

refinery factory that treats crude petroleum and separates it into different parts

region (adjective: regional) general area; also, a specific district

reign the time during which a ruler is in power

remains (noun) parts that are left after time passes or some event occurs

repel to force away or resist

reptile major animal group that includes snakes, lizards, and other animals that usually have scales or bony plates

republic form of government in which citizens who are allowed to vote elect officials and representatives responsible for governing by law

research careful search and study

reserve area of land set apart for some special purpose; also (usually plural, reserves), money or valuable items kept in hand or set apart until needed

resort (noun) fancy vacation spot

resurrection raising from the dead

revere to honor

revolt (verb) to rise up (often violently) against the power of a ruler or government

revolution (adjective: revolutionary) activity or movement designed to make changes in a situation

rhythm (adjective: rhythmic) regular pattern of sound

rind the usually hard or tough outer layer or “skin” of a fruit or vegetable

ritual formal custom or ceremony, often religious
roam  to travel or wander freely through a wide area

rodent  major animal group that includes mice, squirrels, and other small gnawing animals

rotate (noun: rotation)  to spin or turn

rubble  confused mass of rough or broken things

rudder  flat piece attached to the back of a boat or ship and used for steering

ruthless  without pity

sabotage  damage or destruction of property that interferes with an enemy’s use of it

sacred  holy

sacrifice  (noun) valuable offering made to a god; especially, a human or animal victim killed on an altar

saga  tale of historic or legendary figures and events of Norway and Iceland

salvation  rescue from the power and effects of sin

samurai  warrior class in Japan from about the 12th to the mid-19th century

sanctuary  safe place

sap  the liquid inside a plant

satellite  natural or man-made object that circles another object, usually a planet

savage  extremely violent

savanna  hot, dry grassland with scattered trees

saw-toothed  having an edge or outline like the teeth (cutting points) of a saw

scale  in biology, one of the small, stiff, flat plates that form an outer covering on the body of some animals, especially fishes and reptiles

Scandinavia  area in northern Europe that includes the countries of Denmark, Norway, and Sweden

scenic  having to do with a pleasing view or natural landscape

scholar  person who has done advanced study in a special area

scholarship  award of money to help pay for a person’s education

science fiction  stories that deal with the effects of real or imagined science on society or individuals

score  in films, the background music that goes with the pictures on the screen

scorpion  animal of the arachnid class (which includes spiders) that has a long body and a narrow sectioned tail with a poisonous stinger at the tip

scour  scrub hard

sculpture  three-dimensional artwork, usually shaped by carving, molding, or welding

sea level  the height of the surface of the sea midway between the average high and low tides

seaport  port, harbor, or town reachable by seagoing ships

seclusion  isolation or separation from others

secretariat  department that handles an international or government organization

sedge  plant group found in marshes and related to grasses and rushes

self-portrait  picture of a person, usually showing the face, that is painted or drawn by the artist himself or herself

semidesert  area that is much like a desert but has more rainfall

senate  official lawmaking group of some nations

sensitive  easily affected

sepulchre  place of burial
seraphim in Christianity, Islam, and Judaism, special angels who guard God’s throne

shears cutting device similar to scissors but usually larger

shortage situation of need, or amount that is missing or isn’t enough

shrine place where honor or worship is offered to a saint or deity

skyline outline of buildings or other large objects against the background of the sky

sleet frozen or partly frozen rain

slum crowded, dirty, run-down housing

smog dirty air, a word made by combining “smoke” and “fog” to describe how the air looks

snout long projecting nose, like that of a pig; also, the long front part of the head of some animals, such as alligators

solar having to do with the Sun

solitary alone

sonar method of locating objects (usually underwater) by sending out sound waves to be reflected back from the objects

sophisticated complicated or stylish

soprano the highest woman’s singing voice; also, a person who sings in this voice

Soviet Union country of eastern Europe and northern Asia that existed from 1922 to 1991 and consisted of Russia and 14 other republics

space shuttle rocket-launched airplane-like vehicle that transports people to and from space

species group of living things that have certain characteristics in common and share a name

sphere ball or globe

splendor something very grand or beautiful

spool reel for winding lengths of materials such as tape, thread, or wire

spout tube, pipe, or hole through which liquid flows

square open place or area formed at the meeting of two or more streets

sturdy physically strong and healthy

stylized simplified or made to suggest natural forms but not imitate them

submerge to put under water

suction holding onto something by sucking

sultan king or ruler, especially of a Muslim state

standard commonly accepted amount or number

starchy containing starch, a natural substance that is made by green plants and is part of many foods

stationary unmoving

steppe land that is dry, usually rather level, and covered with grass

Stone Age the oldest period in which human beings are known to have existed, characterized by the making of stone tools

storage space to keep or hold on to things

strait narrow channel connecting two large bodies of water

strike temporary stopping of normal activities in protest against an act or condition

sturdy physically strong and healthy

stylized simplified or made to suggest natural forms but not imitate them

submerge to put under water

suction holding onto something by sucking

sultan king or ruler, especially of a Muslim state

summit top or highest point
superior better than
superstition unproven belief usually based on a mistaken idea of how something is caused
supreme highest, best, and without limit
supreme court the highest court in a country or other specific official area
surgery a medical procedure or operation for treating a disease or condition
symbolize to stand for something else; especially, to stand for or suggest something that cannot itself be pictured or shown
synagogue Jewish house of worship
synthetic produced artificially
tableland broad flat area of high land
tallow the solid fat of cattle and sheep, used chiefly in making soap, margarine, and candles
tamarind tropical tree whose sharp-tasting fruit is used as a flavoring
tannery place where animal hides are turned into leather, especially by soaking in a tannin solution
tap (verb) to make a hole in something in order to remove the liquid inside
tapered little by little becoming smaller toward one end
tapestry heavy cloth that has designs or pictures woven into it and is often used as a wall hanging
tapir hoofed, long-snouted mammal of Malaysia and the Americas that is related to horses and rhinoceroses
technical having to do with the way a skilled individual handles the details of an art or craft
technique special way of doing something; especially, the way a skilled individual handles the details of an art or craft
technology scientific ideas and knowledge put to actual use
teleming crowded
telegraph device for sending coded messages over long distances by using electrical signals
temperament personality or usual mood
temperate having mild weather
temperate having mild weather
temple building used for worship
tentacle long armlike structure on certain animals, usually found sticking out near the head or mouth and used especially for feeling or grasping
terrace area of hillside that has been leveled off to allow farming on the land
territorial protective of a territory or home area
terrorist person who uses violence to try to reach political goals
text written work
textile cloth
texture the feel of a surface
thatch to cover the roof of a building with plant material such as straw
theme the main idea or subject of a work of art; especially, in music, the main melody that a piece of music builds on
theory in science, an idea or reasoned explanation for why things are as they are or why things happen as they do
thermal springs a source of hot water coming from underground
thorax the middle of the three main divisions of the body of an insect
three-dimensional having depth (or thickness) in addition to width and height

timber wood used for building or carpentry

tolerate to put up with; also, to be able to survive

tollhouse building or booth where a fee is collected for some permission (such as using a highway)

tomb special building or room in which a dead person is buried

topknot short mound of hair worn on the top of the head

tourism business of encouraging travel to a specific location and of managing services for visitors (including lodging, transport, food, and activities)

tourist person who travels for pleasure

tractor heavy vehicle used to pull farm equipment

tradition custom; habit of belief or of living

traditional usual; well known because of custom or longtime use

train (verb) in gardening and farming, to direct the growth of a plant, usually by bending, trimming, and tying off

translation version of a written work that has been changed from its original language into another

transmitter device that sends messages or code

tribute gift, performance, or action meant to show appreciation, respect, or caring for someone or something

tropical having to do with the Earth’s warmest and most humid (moist) climates

troupe company or group; especially, a working group of stage performers

truce temporary stop in fighting during a war or other violent conflict

tsar one of the emperors of Russia until 1917

tsunami huge ocean wave produced by an undersea earthquake or volcanic eruption

tuft 1) in plants, a small cluster of flexible leaves or fibers that are attached or close together at the base and free at the opposite end; 2) in animals, a short mound of fur

tundra treeless plain with spotty grasses mostly in extremely cold regions

turban head covering made of a long cloth wrapped around the head or around a close-fitting cap

turpentine oil used to dissolve or thin out paint and other substances

tusk long tooth that overhangs when the mouth is closed and serves for digging food or as a weapon

tutor private teacher

twilight the light between the end of day and the beginning of night; also, the name for that time of day

typhoon major tropical storm that occurs in the Pacific Ocean and features high winds moving in circular patterns; in the Atlantic Ocean such storms are called “hurricanes”

tyrant powerful and cruel ruler; also, someone who acts like a tyrant

unique very unusual or one-of-a-kind

unity oneness or harmony

universal present or occurring everywhere

values morals or ideals

vapor substance in the state of a gas (rather than a solid or liquid)

vast huge or spacious

vaudeville popular American form of entertainment from the 1890s to the 1930s, involving musical, dancing, comedy, magic, and other variety acts
vegetarian  person or animal that does not eat meat

vehicle  device or machine used to carry something

venom  poison that comes from animals

veterinarian  doctor who takes care of animals

vibrate  to move rapidly back and forth or from side to side

vivid  bright or dramatic

vow  solemn promise or statement

vulnerable  exposed or in danger

wages  payment for work or services

warm-blooded  having a body temperature that stays mostly unchanged and is not affected by the surrounding environment

waste  materials that are unused or left over after some work or action is finished

water power  energy produced by moving water that can be used to do physical work; it may come directly from water's own force or from machines run by water that in turn produce even greater power (such as electricity)

wean  capable of and used to eating food rather than nursing

weld  to join metal parts together with heat

wildlife manager  scientist who watches over the conditions, habitats, and populations of wild animals and plants

wildlife sanctuary  place of protection for animals and plants

worship  (verb) to honor and show surrender and obedience to a god or supernatural power

yacht  small ship or large boat used for pleasure cruising or racing
What is an index?
An index is a guide to the many subjects in a book or a set of books. It tells you where to find each discussion of every subject.

Why do we use an index?
There is usually a table of contents at the beginning of a book. It tells you the major parts of the book, in order, and the page numbers where each section starts. But it doesn’t tell you all the subjects that the book discusses or where to find them. For that, you need to use the index.

How do we use an index?
An index lists all the subjects of a book from A to Z. This makes it easy for you to find what you’re looking for, as in the example below:

Ando Hiroshige
(Japanese artist)
look under
Hiroshige

ants

apes

Arafat, Yasir
(Palestinian leader)

architecture

Argentina (country)

Armstrong, Louis
(American musician)

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Notice that the subjects are in **bold-faced** type and in alphabetical order. Notice, also, several other clues that will help you use the index.

First, many subjects are followed by a word or phrase in parentheses that describes the subject.

Second, people with last names have their last names listed first. Armstrong, Louis is one example. Ashoka is an example of a person without a last name. He is therefore listed under this single name.

Third, some subjects, such as Ando Hiroshige, are known by more than one name. In such cases, the index may tell you to look under a different name. All the names of a subject are also included with the name the index tells you to look under. They follow the words **also called**. For example, you’ll find the subject **cosmonauts** in **bold-faced type** with an instruction to **look under** astronauts:

- cosmonauts (space explorers): look under astronauts

Then at astronauts you’ll find:

- astronauts, also called cosmonauts (space explorers)

Some subjects are discussed only in articles on other topics. To find them, the index tells you to **look under** related subjects. For example:

- moons (satellites of planets): look under Moon; for other moons look under the planets Jupiter; Mars; Neptune; Pluto; Saturn; Uranus

So the first things you need to do to find a subject in the index are:

1. Choose a word or phrase that best describes the subject you’re interested in. Subjects can be things such as **music** or **telescopes**, places such as **Rome** or **Tokyo**, or people such as **Judi Dench** or **Albert Einstein**. (Remember to look under the last name for most people.)

2. If you can’t find the subject you’re looking for in the alphabetical list, try to think of different words for your subject and look again. For example, you may want to know about maps. You’ll find the information under **atlas**.

3. Once you locate your subject in the index, you’ll see that the index works like a map. At each subject, you’ll find explanations of how to get to all the places that discuss or illustrate your subject.
There are important things to notice in this example. If there is an entire article written about your subject, you'll see the word ARTICLE followed by the volume and page numbers where it can be found:

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If your subject is also discussed or illustrated in articles other than the main article, or if it appears on a map in the mini-atlas in Volume 13, you'll see the word DISCUSSIONS. Below this is a word or phrase describing each of the other articles or indicating the mini-atlas, also followed by the volume and page numbers where each can be found. If there are also photographs or illustrations related to your subject, they too will be listed along with their volume and page numbers:

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Sometimes you'll see the phrase Did you know? followed by a volume and a page number. This means that you'll find information about your subject in the DID YOU KNOW? box on that page.

The index sometimes helps you learn more about your subject by giving you a list of related subjects. You'll find these after the words LEARN MORE look under

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