Map Terms and Definitions

Application - a computer program used for a specific task or purpose, like GIS to solve problems, automate tasks, or generate information within a specific filed of interest.
Area- a closed, two-dimensional shape defined by its boundary or by a contiguous set of raster cells. A calculation of the size of a two-dimensional feature, measured in square units.
Attribute data- tabular or textual data describing the geographic characteristics of features.
Attribute query- a request for records of features in a table based on their attribute values.
Availability- the degree of ease with which a dataset or other object may be found or obtained.
Base layer- a data layer in a GIS to which all other layers are geometrically referenced.
Basemap- a map depicting background reference information such as landforms, roads, landmarks, and political boundaries, onto which other thematic information is placed. A basemap is used for locational reference and often includes a geodetic control network (the skeleton on which continuous and consistent mapping, GIS and surveys are based) as part of its structure. To understand the function, the map or a plane survey is a flat representation of the curved world.
Bearing- the horizontal direction of a point in relation to another point, expressed as an angle from a known direction, usually north, and usually measured from 0 degrees at the reference direction clockwise through 360 degrees. Bearings are often referred to as true bearings, magnetic bearings, or assumed bearings, depending on whether the meridian is true, magnetic, or assumed.
Bookmark- a shortcut that saves the current map view, including extents, active layers, and styles for future use.
Boundary- a line separating adjacent political entities, such as countries or districts; adjacent tracts of privately-owned land, such as parcels; or adjacent geographic zones, such as ecosystems. A boundary is a line that may or may not follow physical features, such as rivers, mountains, or walls.
Boundary Line- a division between adjacent political entities, tracts of private land, or geographic zones. Boundary lines may be imaginary lines, physical features that follow those lines, or the graphical representation of those lines on a map. Boundary lines between privately owned land parcels are usually called property lines.
Boundary Survey- the survey taken to gather data for a map that shows property lines and corner monuments of a parcel of land.
Cartographer- One who practices the art and science of expressing graphically, usually through maps, the natural and social features of the earth.
Centerline- A line digitized along the center of a linear geographic feature, such as a street or a river, that at a large enough scale would be represented by a polygon (example, the centerline of the road).
Color Map- A set of values that are associated with specific colors. Color maps are most commonly used to display a raster dataset consistently on many different platforms
Confidence level- In a statistical test, the risk, expressed as a percentage, that the null hypothesis will be incorrectly rejected because of sampling error when the null hypothesis is true. For example, a confidence level of 95 percent means that if the same test were performed 100 times on 100 different samples, the null hypothesis would be incorrectly rejected five times.
Coordinates- A set of values represented by the letters *x*, *y*, and optionally *z* or *m* (measure), that define a position within a spatial reference. Coordinates are used to represent locations in space relative to other locations.
Coordinate System- A reference framework consisting of a set of points, lines, and/or surfaces, and a set of rules, used to define the positions of points in space in either two or three dimensions. The Cartesian coordinate system and the geographic coordinate system used on the earth's surface are common examples of coordinate systems.
County- The primary legal subdivision of all U.S. states except Alaska and Louisiana. The U.S. Census Bureau uses counties or equivalent entities (boroughs in Alaska, parishes in Louisiana, the District of Columbia in its entirety, and municipios in Puerto Rico) as statistical subdivisions.
County Subdivision- A statistical division of a county recognized by the U.S. Census Bureau for data presentation. County subdivisions can include census county divisions, census subareas, minor civil divisions, and unorganized territories.
Data- Any collection of related facts arranged in a particular format; often, the basic elements of information that are produced, stored, or processed by a computer.

Data Integrity- The degree to which the data in a database is accurate and consistent according to data model and data type.
Data Source- Any data. Data sources may include coverages, shapefiles, rasters, or feature classes.
Database- One or more structured sets of persistent data, managed and stored as a unit and generally associated with software to update and query the data. A simple database might be a single file with many records, each of which references the same set of fields. A GIS database includes data about the spatial locations and shapes of geographic features recorded as points, lines, areas, pixels, grid cells, or TINs, as well as their attributes.
Decimal Degrees- Values of latitude and longitude expressed in decimal format rather than in degrees, minutes, and seconds.
Degree- A unit of angular measure represented by the symbol °. The earth is divided into 360 degrees of longitude and 180 degrees of latitude.
Degrees/minutes/seconds- The unit of measure for describing latitude and longitude. A degree is 1/360th of a circle. A degree is further divided into 60 minutes, and a minute is divided into 60 seconds.
Definition Query- a request that examines feature or tabular attributes based on user-selected criteria and displays only those features or records that satisfy the criteria
Distance- The measure of separation between two entities or locations that may or may not be connected, such as two points. Distance is differentiated from length, which implies a physical connection between entities or locations.
Elevation- The vertical distance of a point or object above or below a reference surface or datum (generally mean sea level). Elevation generally refers to the vertical height of land.
Export- To move data from one computer system to another, and often, in the process, from one file format to another.
Feature Class- a collection of geographic features with the same geometry type (such as point, line, or polygon), the same attributes, and the same spatial reference. Feature classes can be stored in geodatabases, shapefiles, coverages, or other data formats. Feature classes allow homogeneous features to be grouped into a single unit for data storage purposes. For example, highways, primary roads, and secondary roads can be grouped into a line feature class named "roads." In a geodatabase, feature classes can also store annotation and dimensions.
File- A collection of uniquely named information stored on a drive, disk, or tape. A file generally resides within a directory.
Geographic Coordinate System- A reference system that uses latitude and longitude to define the locations of points on the surface of a sphere or spheroid. A geographic coordinate system definition includes a datum, prime meridian, and angular unit.
GIS- Acronym for *geographic information system*. An integrated collection of computer software and data used to view and manage information about geographic places, analyze spatial relationships, and model spatial processes. A GIS provides a framework for gathering and organizing spatial data and related information so that it can be displayed and analyzed.
GPS- Acronym for *Global Positioning System*. A system of radio-emitting and -receiving satellites used for determining positions on the earth. The orbiting satellites transmit signals that allow a GPS receiver anywhere on earth to calculate its own location through trilateration. Developed and operated by the U.S. Department of Defense, the system is used in navigation, mapping, surveying, and other applications in which precise positioning is necessary.
Image Scale- The ratio between a distance in an image and the actual distance on the ground, calculated as focal length divided by the flying height above mean ground elevation. Image scale can vary in a single image from point to point due to surface relief and the tilt of the camera lens.
Index Map- A schematic map used as a reference for a collection of map sheets, outlining the total area covered along with the coverage extent of, and usually a name or reference for, each map sheet.
Longitude - the angular distance of a place east or west of the meridian at Greenwich, England, or west of the standard meridian of a celestial object, usually expressed in degrees and minutes.
Latitude - the angular distance of a place north or south of the earth's equator, or of a celestial object north or south of the celestial equator, usually expressed in degrees and minutes.
Label- text placed on or near a map feature that describes or identifies it.

Legend- The description of the types of features included in a map, usually displayed in the map layout. Legends often use graphics, symbols or examples of features from the map with a written description of what each symbol or graphic represents.
Layer- The visual representation of a geographic dataset in any digital map environment. Conceptually, a layer is a slice or stratum of the geographic reality in a particular area, and is more or less equivalent to a legend item on a paper map. On a road map, for example, roads, national parks, political boundaries, and rivers might be considered different layers
Map- a graphic representation of the geographic or spatial relationships of entities within an area.
Map Extent- The limit of the geographic area shown on a map, usually defined by a rectangle. In a dynamic map display, the map extent can be changed by zooming and panning.
Measurement- An observed numerical value that is an appraisal of size, extent, or amount according to a set criteria.
Nonspatial Data- Data without inherently spatial qualities, such as attributes.
Object ID- in ArcGIS, a system-managed value that uniquely identifies a record or feature.
Orientation- An object's position or relationship in direction with reference to points of the compass.
Output Data- Data that is the result of a computer, device, program, or process.
Overlay- A spatial operation in which two or more maps or layers registered to a common coordinate system are superimposed, either digitally or on a transparent material, for the purpose of showing the relationships between features that occupy the same geographic space.
Pan- To shift a map image relative to the display window without changing the viewing scale.
Parameter- One of the variables that define a specific instance of a map projection or a coordinate system. Parameters differ for each projection and can include central meridian, standard parallel, scale factor, or latitude of origin.
Parcel- A piece or unit of land, defined by a series of measured straight or curved lines that connect to form a polygon.
Place- any incorporated or unincorporated city, town, or community.
Plat- A survey diagram, drawn to scale, of the legal boundaries and divisions of a tract of land.
Polygon- On a map, a closed shape defined by a connected sequence of x,y coordinate pairs, where the first and last coordinate pair are the same and all other pairs are unique.
Precision- The closeness of a repeated set of observations of the same quantity to one another. Precision is a measure of the control over random error. For example, assessment of the quality of a surveyor's work is based in part on the precision of their measured values.
Projection- A method by which the curved surface of the earth is portrayed on a flat surface. This generally requires a systematic mathematical transformation of the earth's graticule of lines of longitude and latitude onto a plane. Some projections can be visualized as a transparent globe with a light bulb at its center (though not all projections emanate from the globe's center) casting lines of latitude and longitude onto a sheet of paper. Generally, the paper is either flat or placed tangent to the globe (a planar or azimuthal projection) or formed into a cone or cylinder and placed over the globe (cylindrical and conical projections). Every map projection distorts distance, area, shape, direction, or some combination thereof.
Query- A request to select features or records from a database. A query is often written as a statement or logical expression.
Query Expression- A type of expression that evaluates to a Boolean (true or false) value, which is typically used to select those rows in a table in which the expression evaluates to true. Query expressions are generally part of a SQL statement.
Reference Data- In geocoding, material containing the location and address information of specific features. Reference data consists of the spatial representation of the data and the related attribute table.
Relief- Elevations and depressions of the earth's surface, including those of the ocean floor. Relief can be represented on maps by contours, shading, hypsometric tints, digital terrain modeling, or spot elevations.
Scale bar- A map element used to graphically represent the scale of a map. A scale bar is typically a line marked like a ruler in units proportional to the map's scale
Search Radius- The maximum distance in coverage units a feature can be from the current point for consideration as the closest feature. The default is the width or height of the near coverage BND (boundary) divided by 100, whichever is larger.

Shapefile- A vector data storage format for storing the location, shape, and attributes of geographic features. A shapefile is stored in a set of related files and contains one feature class.
Spatial Adjustment- an ArcMap editing function that allows transformation, rubber sheeting, and edge matching of data, as well as attribute transfer.
Surveying- Measuring physical or geometric characteristics of the earth. Surveys are often classified by the type of data studied or by the instruments or methods used. Examples include geodetic, geologic, topographic, hydrographic, land, geophysical, soil, mine, and engineering surveys.
Symbology- The set of conventions, rules, or encoding systems that define how geographic features are represented with symbols on a map. A characteristic of a map feature may influence the size, color, and shape of the symbol used.
Table- A set of data elements arranged in rows and columns. Each row represents a single record. Each column represents a field of the record. Rows and columns intersect to form cells, which contain a specific value for one field in a record.
Terrain- An area of land having a particular characteristic, such as sandy terrain or mountainous terrain.
Text Attribute Table- A table containing text attributes, such as color, font, size, location, and placement angle, for an annotation subclass in a coverage. In addition to user-defined attributes, the text attribute table contains a sequence number and text feature identifier.
Text Label- text placed next to a feature on a map to describe or identify it.
TIGER- acronym for *Topologically Integrated Geographic Encoding and Referencing*. The nationwide digital database developed for the 1990 census, succeeding the DIME format. TIGER files contain street address ranges, census tracts, and block boundaries.
Tiling- An internal sub setting of a spatial dataset (commonly raster) into a manageable rectangular set, or rows and columns of pixels, typically used to process or analyze a large raster dataset without consuming vast quantities of computer memory.
Topographic Map- A map that represents the vertical and horizontal positions of features, showing relief in some measurable form, such as contour lines, hypsometric tints, and relief shading.
Township- In the United States, a quadrangle approximately 6 miles on a side, bounded by meridians and parallels and containing 36 sections.
Value- A measurable quantity that may be passed to a function. Values are either assigned or determined by calculation.
Vector- A coordinate-based data model that represents geographic features as points, lines, and polygons. Each point feature is represented as a single coordinate pair, while line and polygon features are represented as ordered lists of vertices. Attributes are associated with each vector feature, as opposed to a raster data model, which associates attributes with grid cells.
Vertex- One of a set of ordered x,y coordinate pairs that defines the shape of a line or polygon feature.
Visualization- The representation of data in a viewable medium or format. In GIS, visualization is used to organize spatial data and related information into layers that can be analyzed or displayed as maps, three-dimensional scenes, summary charts, tables, time-based views, and schematics.
Web Application- A Web-based program that uses a Web site as the front end of a software application. Web applications allow end users to modify and pass data between a server and a client. Web applications are typically used to provide Web site search capabilities, retrieve and display user information from a database, and provide the ability to purchase items from a Web site.
Web Browser- An application that allows users to access and view Web pages on their computer screens. Web browsers enable users to view HTML documents on the World Wide Web.
Web Map- In ArcGIS Online, a Web based, interactive map that allows you to display and query the layers on the map. A Web map contains one or more ArcGIS Server map services that are referenced to ArcGIS Online.
Widget- an interactive graphic component of a user interface (such as a button, scroll bar, or menu bar), its controlling program, or the combination of both the component and program.
Workflow- An organization's established processes for design, construction, and maintenance of programs, products, and business objectives.
X, Y, Z coordinates- In a planar coordinate system, three coordinates that locate a point by its distance from an origin (0,0,0) where three orthogonal axes cross. Usually, the x-coordinate is measured along the east–west axis, the y-coordinate is measured along the north–south axis, and the z-coordinate measures height or elevation.

XML workspace document- In ArcGIS, an export file containing one or more geodatabase feature datasets, feature classes, and tables. It can include schema and data or just the schema. Schema and data in the file are encoded in XML and can be imported into a geodatabase.
Zoning- The application of local government regulations that permit certain land uses within geographic areas under the government's jurisdiction. Zoning regulations typically set a broad category of land use permissible in an area, such as residential, commercial, agricultural, or industrial. Zoning regulations can also set constraints on building construction within areas, which may affect factors such as the maximum height of structures, minimum setbacks from property lines, the amount of parking that must be provided, or the density of housing.

For more terms, use the ESRI GIS Dictionary here:
http://support.esri.com/en/knowledgebase/GISDictionary/browse/num