In Java a class refers to a template for objects. “It specifies the names and types of variables that can exist in an object, as well as "methods"--procedures for operating on those variables.” (ncl.ucar.edu) It can be viewed in a way as a set of instructions for which objects can be created, stored and used. This is a vital component for Object Oriented Programming. Objects are considered to be a member of a class. An object will often times hold the values either that one assigns, or the default provides. Another common name for an object is an instance. These names are often times used interchangeably. One of the greatest powers of classes and objects is inheritance which refers to the ability for classes to share properties with other classes. In addition to being able to share properties through inheritance, one is able to add additional variables or methods to a new class while still having shared the properties of the “parent” class. An example of some code that shows classes and objects could be:

Java class libraries are a variety of libraries that store lots of information including functions amongst other things. These libraries can be called at runtime to allow the Java Virtual Machine to run them. They help programmers to have a set of well-defined features of functions, classes and regular expression processing. The Java Class Library is almost exclusively written in Java except for parts that need to access the hard drive or operating systems (Wikipedia). Some examples of common Java Class Libraries are:

1. java.text. which allows programmers to better handle things like text and dates
2. java.math which allows for a variety of mathematical expressions to be used
3. java.sql which allow programmers to access SQL databases