

## Unit 1 Key Terms

Key Term	Definition
<b>Assess</b>	To thoroughly and methodically analyze accomplishment against specific goals and criteria.
<b>Assessment</b>	An evaluation technique for technology that requires analyzing benefits and risks, understanding the trade-offs, and then determining the best action to take in order to ensure that the desired positive outcomes outweigh the negative consequences. Techniques used to analyze accomplishments against specific goals and criteria. Examples of assessments include tests, surveys, observations, and self-assessment.
<b>Brainstorm</b>	A group technique for solving problems, generating ideas, stimulating creative thinking, etc. by unrestrained spontaneous participation in discussion.
<b>Client</b>	A person using the services of a professional person or organization.
<b>Creativity</b>	The ability to make or bring a new concept or idea into existence; marked by the ability or power to create.
<b>Criteria</b>	A means of judging. A standard, rule, or test by which something can be judged.
<b>Constraint</b>	1. A limit to a design process. Constraints may be such things as appearance, funding, space, materials, and human capabilities. 2. A limitation or restriction.
<b>Design</b>	1. An iterative decision-making process that produces plans by which resources are converted into products or systems that meet human needs and wants or solve problems. 2. A plan or drawing produced to show the look and function or workings of something before it is built or made. 3. A decorative pattern.
<b>Design Brief</b>	A written plan that identifies a problem to be solved, its criteria, and its constraints. The design brief is used to encourage thinking of all aspects of a problem before attempting a solution.
<b>Design Process</b>	A systematic problem-solving strategy, with criteria and constraints, used to develop many possible solutions to solve a problem or satisfy human needs and wants and to winnow (narrow) down the possible solutions to one final choice.
<b>Design Statement</b>	A part of a design brief that challenges the designer, describes what a design solution should do without describing how to solve the problem, and identifies the degree to which the solution must be executed.
<b>Designer</b>	A person who designs any of a variety of things. This usually implies the task of creating drawings or in some ways uses visual cues to organize his or her work.

<b>Engineer</b>	A person who is trained in and uses technological and scientific knowledge to solve practical problems.
<b>Engineering Notebook</b>	A book in which an engineer will formally document, in chronological order, all of his/her work that is associated with a specific design project.
<b>Innovation</b>	An improvement of an existing technological product, system, or method of doing something.
<b>Invention</b>	A new product, system, or process that has never existed before, created by study and experimentation.
<b>Iterative</b>	A process that repeats a series of steps over and over until the desired outcome is obtained.
<b>Justifiable</b>	Capable of being shown as reasonable or merited according to accepted standards.
<b>Piling-on</b>	An idea that produces a similar idea or an enhanced idea.
<b>Problem Identification</b>	The recognition of an unwelcome or harmful matter needing to be dealt with.
<b>Product</b>	A tangible artifact produced by means of either human or mechanical work, or by biological or chemical process.
<b>Prototype</b>	A full-scale working model used to test a design concept by making actual observations and necessary adjustments.
<b>Research</b>	The systematic study of materials and sources in order to establish facts and reach new conclusions.
<b>Valid</b>	Well-founded on evidence and corresponds accurately to the real world.