

# THE 13 SKILLS ADDRESSED BY CROSS-TRAINER: LOGICAL REASONING

*Lexia Cross-Trainer: Logical Reasoning* covers 13 logical reasoning skills, listed alphabetically, and defined below:

**Classification:** Organizing objects (and ideas) into categories and sub-categories according to their similarities and differences.

**Compare / Contrast:** Evaluating and determining similarities and differences, while suppressing superfluous information.

**Conjunction:** Joining concrete or abstract elements together.

**Deductive Reasoning:** Making a conclusion based upon a given a set of evidence (however incomplete the knowledge). For example, if one sees a dog at the Smith's house, one may conclude that the dog belongs to the Smiths.

**Exclusion:** Identifying items that do not belong to a group.

**Exclusive Disjunction:** Discerning which arguments are true, when two terms or ideas are presented.

**Implication:** Understanding the logic behind a statement in the form of, "if A, then B." It is the comprehension of logical necessity, in that certain conditions or statements determine certain outcomes.

**Inductive Reasoning:** Making a general conclusion based on a specific case or observation. For example, if a frisbee is thrown three times and always falls back down, based on this observation, one may generalize that it will *always* come back down.

**Inferential Reasoning:** Predicting a specific outcome based on a general principal, or making a specific inference when given a general premise. For example, if one believes in gravity, one may infer that what goes up, must always come back down.

**Negation & Double Negation:** Understanding the concept of something that is the opposite of the affirmative. Double negation is combining two negatives to create the affirmative.

**Patterning:** Recognizing recurring patterns among distractors, identifying the repeating sequence of elements, and coordinating and predicting the next object in the series.

**Reversibility:** Mentally reversing an operation and envisioning it in its original state.

**Union:** Grouping or classifying objects that are members of two or more other groups to form a union.