Conditioned reinforcer A stimulus that becomes an effective reinforcer because of its association with a primary, or unconditioned, reinforcer.

Constraints on learning A limitation on learning resulting from the evolutionary history of the organism.

Discrete-trial method A method of instrumental conditioning in which the participant can perform the instrumental response only during specified periods, usually determined either by placement of the participant in an experimental chamber or by the presentation of a trial stimulus.

Free-operant method A method of instrumental conditioning that permits repetitions of the instrumental response at any time, in contrast to the discrete-trial method.

Instrumental behavior A behavior or combination of responses that is effective in producing a particular consequence or reinforcer.

Instrumental conditioning Conditioning that results from the relation between behavior and its consequences.

Law of Effect A mechanism for instrumental behavior, proposed by Thorndike, according to which reinforcement of an instrumental response strengthens the association between the response and the stimulus in the presence of which the response occurred.

Marking stimulus A brief visual or auditory cue presented after an instrumental response that makes the instrumental response more memorable and helps overcome the disruptive effect of delayed reinforcement.

Operant behavior Behavior that is defined by the effect it produces in the environment. Examples include pressing a lever and opening a door. Any sequence of movements that depresses the lever or opens the door constitutes an instance of that particular operant behavior.

Operant conditioning A form of instrumental conditioning in which the response required for reinforcement is an operant response, identified by its effect in manipulating the environment in some way.

Puzzle box A type of experimental chamber used by Thorndike to study instrumental conditioning. The participant was put in the chamber and had to perform a specified behavior in order to be released and obtain the reinforcer.

R-O association An association between the instrumental response (R) and the reinforce or response outcome (O).

Rate of responding A measure of how often a response is repeated in a unit of time; for example, the number of responses that occur per hour.

Reinforcer A stimulus whose delivery shortly following a response increases the future probability of that response; also called *Outcome.*

S-O association An association between a stimulus (S) in the presence of which an instrumental response is reinforced and the reinforcer or response outcome (O).

S-R association An association between a stimulus and a response, so that presentation of the stimulus elicits the response.

S(R-O) association A higher-order relation in instrumental conditioning situations, according to which a discriminative or contextual stimulus (S) activates an association between the instrumental response and the reinforcer (R-O).

Secondary reinforcer Same as *Conditioned reinforce* (see above).

Shaping Reinforcement of successive approximations to a target instrumental response, typically used to condition responses that are not in the participant's existing repertoire of behavior.

Straight-alley runway A straight alley with a start box at one end and a goal box at the other.

Animals are placed in the start box at the beginning of a trial and allowed to run to the goal box.

T-maze A maze with a start box that opens to a straight alley, at the end of which the participant can turn either right or left to reach the goal box.