cognition	the way in which information is processed and manipulated in remembering, thinking, and knowing
artificial intelligence (AI)	a scientific field that focuses on creating machines capable of performing activities that require intelligence when they are done by people
thinking	a mental process of manipulating information mentally by forming concepts, solving problems, making decisions, and reflecting critically or creatively
cognitive psychology	- approaches that sought to explain observational behavior by investigating mental processes and structures that we cannot directly observe - radical departure from behaviorism
concept	- a mental category that is used to group objects, events, and characteristics; allows us to generalize and associate; aids memorization - a form of cognitive efficiency and economy
prototype model	a model emphasizing that when people evaluate whether a given item reflects a certain concept, they compare the item with the most typical item in that category and look for a family resemblance with that items properties
problem solving	- the mental process of finding an appropriate way to attain a goal when the goal is not readily available - Step 1: find and frame the problem - Step 2: develop good problem solving strategies - Step 3: evaluate solution-- what is the criteria for success? - Step 4: rethink and redefine problems and solutions over time
subgoals	- intermediate goals or intermediate problems that put us in a better position for reaching the final goal or solution - example: breaking down studying into sections/topics/etc., and working on them in an organized sequence
algorithms	- strategies-including formulas, instructions, and the testing of all possible solutions-that guarantee a solution to a problem - examples: math formulas, recipes, driving directions, running/checking every possible solution (this one can be time-consuming) - guarantees success/solution
heuristics	- shortcut strategies or guidelines that suggest a solution to a problem but do not guarantee an answer - does NOT guarantee success/solution - convenient (quick) - allows for automatic reactions
steps in problem solving	-find and frame a problem -develop good problem-solving strategies (subgoals, algorithms, heuristics) -evaluate solutions - rethink and redefine problems and solutions over time
Maier String Problem	using a wrench or tool to make a string into a pendulum, so that you can reach both strings to tie together
fixation	using a prior strategy and failing to look at a problem from a fresh new perspective
functional fixedness	- failing to solve a problem as a result of fixation on a thing's usual functions - worse (stronger) in adulthood - failing to see that items can be used for wide variety of things
reasoning	the mental activity of transforming information to reach conclusions
inductive reasoning	- similar to bottom-up processing; reasoning from specific observations to make generalizations - specific >> general - application: forming general rules and concepts based on specific experiences and examples
deductive reasoning	similar to top-down processing; reasoning from a general case that is known to be true to a specific instance
decision making	the mental activity of evaluating alternatives and choosing among them; used to maximize outcome
two systems of reasoning and decision making	automatic and controlled reasoning
system 1	- automatic reasoning; rapid, heuristic, intuitive - frequently more accurate - research: people who make complex decisions after being distracted are more likely to make better decisions
system 2	- controlled reasoning; slower, effortful, analytical
confirmation bias	- the tendency to search for and use information that supports our ideas rather than refutes them - involves ignoring/failing to acknowledge other evidence
hindsight bias	the tendency to report falsely, after the fact, that we accurately predicted an outcome

24. **availability heuristic**	a prediction about the probability of an event based on the ease of recalling or imagining similar events
25. **base rate fallacy**	the tendency to ignore information about general principles in favor of very specific but vivid information
26. **representativeness heuristic**	- the tendency to make judgements about group membership based on physical appearances or the match between a person and one's stereotype of a group rather than on available base rate information - application: judging someone/something based on appearance
27. **critical thinking**	thinking reflectively and productively and evaluating the evidence
28. **mindfulness**	the state of being receptive to other ways of looking at things
29. **open-mindedness**	- the state of being receptive to other ways of looking at things
30. **mindless behaviors**	behaviors that do not require thought or reflection
31. **creative thinking**	the ability to think about something in novel and unusual ways and to devise unconventional solutions to problems
32. **creativity**	the ability to think about something in novel and unusual ways and to devise unconventional solutions to problems
33. **divergent thinking**	thinking that produces many solutions to the same problem
34. **convergent thinking**	thinking that produces the single best solution to a problem
35. **flexiblity and playful thinking**	reason for creative thinking: thinking outside of the box, relaxed and enjoyable thinking attitudes
36. **inner motivation**	reason for creative thinking: wanting to come up with solutions for yourself, not for others or outside benefits
37. **willingness to face risk**	reason for creative thinking: criticized a lot and ability to cope with that, because more ideas and attempts will mean more failures (but also more successes!)
38. **objective evaluation of work**	reason for creative thinking: desire to improve one's work, always criticizing one's own work
39. **intelligent**	a person who has intelligence is this
40. **intelligence**	- all-purpose ability to do well on cognitive tasks, to solve problems, and to learn from experience (U.S. definition) - definition varies between cultures
41. **validity**	the extent to which a test measures what it is intended to measure
42. **reliability**	the extent to which a test yields a consistent, reproductable measure of perfromance
43. **standardization**	the development of uniform procedures fro administering and scoring a test, and the creation of norms (performance standards) for that test
44. **intelligence quotient (IQ)**	-an individuals mental age divided by chronological age multiplied by one hundred - IQ = (MA/CA) X 100 - if mental age is older than chronological age = above average IQ - if mental age is lower than chronological age = below average IQ - IQ of 100 means mental age = chronological age
45. **criterion validity**	does the test measure what it is suppose to measure?
46. **norms**	normal distribution; the average intelligence level has increased from 100 in 1932, to 120 in 1997
47. **mental age (MA)**	an individuals's level of mental development relative to that of others
48. **normal distribution**	a symmetrical, bell shaped curve, with a majority of the scores falling in the middle of the possible range and few scores appearing toward the extremes of the range
49. **chronological age (CA)**	one's actual age
50. **cultural bias in test**	a type of bias that hinders certain groups of people and gives others an advantage
51. **culture-fair test**	- intelligence tests that are intended to be culturally unbiased; impossible to be this completely - puzzle questions (content not seen prior in any culture)
52. **heritability**	the proportion of observable differences in a group that can be explained by differences in the genes of the group's members; 75% intelligence is this, increases with age

53.	**Flynn effect**	- higher IQ scores worldwide because of higher education levels and less bias - shift to the right of the normal bell curve of IQ scores
54.	**gifted**	possessing high intelligence (an IQ of 130 or higher) and/or superior talent in a particular area
55.	**Stanford-Binet IQ**	initiated the modern field of intelligence testing and was one of the first examples of an adaptive test. IQ scale is normal distribution
56.	**intellectual disability**	a condition of limited mental ability in which an individual has a low IQ, usually below 70 on a traditional intelligence test, and has difficulty adapting to everyday life - formerly called mental retardation
57.	**organic intellectual disability**	may be caused by inherited physiology, injury, or disease affecting brain tissues, chemical or hormonal abnormalities, exposure to toxic materials, neurological impairment, or abnormal changes associated with aging.
58.	**cultural-familial intellectual disability**	a disability we cannot account for. Cannot identify any genetic condition such as brain damage, etc.
59.	**conceptual skills**	one of adoptive behavior deficits; means that one can think critically and solve problems
60.	**social skills**	one of adoptive behavior deficits; means one can interact acceptably with others
61.	**practical skills**	one of adoptive behavior deficits; means that one can carry out everyday life tasts
62.	**Robert J. Sternberg**	created the triarchic theory of intelligence
63.	**triarchic theory of intelligence**	Sternberg's theory that intelligence comes in three forms - three forms: anaylitical intelligence, creative intelligence, practical intelligence
64.	**analytical intelligence**	one of Sternberg's three forms of intelligence in his theory; means one can solve problems and think critically
65.	**creative intelligence**	one of Sternberg's three forms of intelligence in his theory; means that one can think outside of the box
66.	**practical intelligence**	one of Sternberg's three forms of intelligence in his theory; means that one can complete everyday tasks
67.	**Howard Gardner**	created a theory with 9 levels of intelligence; his theory is criticized because of no testing to support it
68.	**verbal**	the ability to think in words and to use language to express and appreciate complex meanings. - word smart
69.	**mathematical**	ability to calculate, quantify, consider propositions and hypotheses, and carry out complete mathematical operations - number/reasoning smart
70.	**spatial**	the ability to think in three dimensions. -picture smart
71.	**bodily-kinesthetic**	the capacity to manipulate objects and use a variety of physical skills. - body smart
72.	**musical**	the capacity to discern pitch, rhythm, timbre, and tone - musical smart
73.	**interpersonal**	the ability to understand and interact effectively with others. - people smart
74.	**intrapersonal**	the capacity to understand oneself and one's thoughts and feelings, and to use such knowledge in planning and directing one's life. - self smart
75.	**naturalist**	Designates the human ability to discriminate among living things (plants, animals) as well as sensitivity to other features of the natural world (clouds, rock configurations) - nature smart
76.	**existentialist**	Sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here. -reflective smart
77.	**multiple intelligences approach**	thinking that intelligence can be broken up into categories; Sternberg's theory had 3, Gardner's had 9
78.	**language**	a form of communication- whether spoken, written, or signed- that is based on a system of symbols
79.	**infinite generativity**	the ability of language to produce an endless number of meaningful sentences
80.	**phonology**	a language's sound system
81.	**morphology**	a language's rules for word formation
82.	**syntax**	a language's rule for combining words to form acceptable grammar phrases and sentences
83.	**semantics**	the meaning of words and sentences in a particular language
84.	**pragmatics**	the useful character of language and the ability of language to communicate even more meaning than is said; the purposefulness of language

85.	**linguistic relativity hypothesis**	"language determines thought"
86.	**language universals**	a pattern that occurs systematically across natural languages, potentially true for all of them
87.	**language milestones**	levels of linguistic ability as a baby develops into an adult
88.	**0-6 months**	cooing discrimination of vowels babbling present by this age
89.	**6-12 months**	babbling expands to include sounds of spoken language gestures used to communicate about objects first words usually occur at this age
90.	**12-18 months**	understands 50+ words on average by this age
91.	**18-24 months**	vocabulary increases to and average of 200 words two-words combinations by this age
92.	**2 years**	vocabulary rapidly increases correct use of plurals use of past tense use of some prepositions by this age
93.	**3-4 years**	mean length of utterances increases 3-4 morphemes in a sentence use of yes and no questions, and all questions use of negatives and imperatives increased awareness of pragmatics
94.	**5-6 years**	vocabulary reaches an average of about 10,000 words coordination of simple sentences
95.	**6-8 years**	vocabulary continues to increase rapidly more skilled use of syntactical rules conversational skills improve
96.	**9-11 years**	word definitions include synonyms conversational strategies continue to improve
97.	**11-14 years**	vocabulary increases with addition of more abstract words understanding of complex grammar forms increased understanding of function a word plays in a sentence understands metaphor and satire
98.	**15-20 years**	understands adult literary works
99.	**cognitive appraisal**	individual's interpretation of events in their lives as harmful, threatening, or challenging and their determination of whether they have the resources to cope effectively with the events
100.	**coping**	managing taxing circumstances, expanding effort to solve life's problems, and seeking to master or reduce stress
101.	**cognitive reappraisal**	regulating one's feelings about an experience by reinterpreting that experience or thinking about it in a different way or form a different angle
102.	**primary appraisal**	three types of this form of appraisal: already a problem something is threatening to happen there is a challenge (best way to think)
103.	**secondary appraisal**	form of appraisal: evaluate situations how to use resources to solve problems
104.	**benefit finding**	decreases negative feelings decreases amygdala use increases prefrontal cortex use thinking positively
105.	**Noam Chomsky**	- prewired to learn language (children all over the world acquire language at the same time)