

# AP Psychology: Cognition Notes

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## AP Psychology Cognition: Key Takeaways

Review some key cognition concepts you should know for the AP Psychology exam.

- Once we perceive things in the world, we can think about them. Trying to describe thought is problematic. Descriptions are thoughts, so we are attempting to describe thought using thought itself. Forming a global, all-inclusive definition of thought is difficult, but psychologists try to define types or categories of thoughts.
- Another type of thought, images, are the mental pictures we create in our minds of the
  outside world. Images can be visual, such as imagining what your cat looks like.
  However, images can also be auditory, tactile, or olfactory or can be an image of a taste,
  such as thinking about what hot chocolate tastes like on a very cold day.
- 3. Several different models, or explanations, of how memory works have emerged from memory research. Two of the most important models are the three-box/information-processing model and the levels of processing model. Neither model is perfect. They describe how memory works in different ways, and each can describe some memory experiences better than others.

## AP Psychology Cognition: Key Terms

Review the following key terms related to cognition for the AP exam.

## Thinking and Creativity Terms

- **Algorithm:** One way to solve a problem is to try every possible solution. An algorithm is a rule that guarantees the right solution by using a formula or other foolproof method.
- **Heuristic:** A heuristic is a rule of thumb—a strategy we can use to make a quick but not necessarily accurate judgment in a situation.



- **Framing:** Even the way a problem is presented can get in the way of solving it. Framing refers to the idea that the same information can be presented in different ways and the method of presentation can drastically change the way we view a problem or an issue.
- **Convergent thinking:** Thinking pointed toward one solution.
- **Divergent thinking:** Thinking that searches for multiple possible answers to a question.

### **Memory Terms**

- Three-Box/Information-Processing Model: The principal model of memory is the
  three-box model, also called the information-processing model or the multi-store model.
  This model proposes the three stages that information passes through before it is stored.
  External events are first processed by our sensory memory. Then some information is
  encoded into our short-term (or working) memory. Some of that information is then
  encoded into long-term memory.
- Sensory memory: The first stop for external events is sensory memory. It is a holding tank for incoming sensory information. All the information your senses are processing right now is held in sensory memory for a very short period of time: less than a second for visual information (iconic memory) and 3 to 4 seconds for auditory information (echoic memory).
- **Short-term memory:** Most of the information in sensory memory is quickly lost. A small fraction is encoded into short-term memory. Short-term memories are temporary. If we do nothing with them, they usually fade in 10 to 30 seconds.
- Working memory: Working memory is your ability to manipulate items in your short-term memory. If you think about the numbers 22 and 9, they are in your short-term memory. However, if I ask you to multiply them, you are using your working memory.
- Long-term memory: Long-term memory is our permanent storage. As far as we know, the capacity of long-term memory is unlimited. No one reports their memory as being full and unable to encode new information. Studies show that once information reaches long-term memory, we will likely remember it for the rest of our lives.
- **Encoding:** Encoding is the process by which we put information into our memories, and it can be affected by many factors. One is the order in which the information is presented.
- Retrieval: The last step in any memory model is retrieval, or getting information out of memory so we can use it. There are two different kinds of retrieval: recognition and



recall.

- **Constructed memory**: A constructed memory (or reconstructed memory) includes false details of a real event or might even be a recollection of an event that never occurred.
- Retroactive interference: Learning new information interferes with the recall of older information. If you study for your psychology class at 3:00 p.m. and for your sociology class at 6:00 p.m., you might have trouble recalling the psychology information on a test the next day.
- **Proactive interference:** Older information learned previously interferes with the recall of information learned more recently. If a researcher reads you a list of items in a certain order, then rereads them differently and asks you to list the items in the new order, the old list proactively interferes with recall of the new list.