- $_1$  Myers' Psychology for AP\*
- <sup>2</sup> Unit 6: Learning

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- Operant Conditioning
- Learning by Observation
- 4 How Do We Learn?
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  - Habituation
  - <u>Associative learning</u>
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    - -Operant conditioning
    - -Observational learning



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**Extinction and Spontaneous Recovery** 

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   Spontaneous recovery

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   Generalization
   Generalization
- <sup>29</sup> Pavlov's Experiments *Discrimination* 
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  Biological Predispositions

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- Showed how to study a topic scientifically
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<ul> <li>Types of Files <ul> <li>This presentation has been saved as a "basic" Powerpoint file. While this file format placed a few limitations on the presentation, it insured the file would be compatible with the many versions of Powerpoint teachers use. To add functionality to the presentation, teachers may want to save the file for their specific version of Powerpoint.</li> <li>Animation <ul> <li>Once again, to insure compatibility with all versions of Powerpoint, none of the slides are animated. To increase student interest, it is suggested teachers animate the slides wherever possible.</li> </ul> </li> <li>Adding slides to this presentation <ul> <li>Teachers are encouraged to adapt this presentation to their persentation at the slides at the slides at the slides of the slides are animated.</li> </ul> </li> </ul></li></ul>
continuity, blank slides which can be copied and pasted to a specific location in the presentation follow this "Teacher Information" section.
111 Teacher Information
<ul> <li>Hyperlink Slides - This presentation contain two types of hyperlinks. Hyperlinks can be identified by the text being</li> </ul>

underlined and a different color (usually purple).

- -Unit subsections hyperlinks: Immediately after the unit title slide, a page (slide #3) can be found listing all of the unit's subsections. While in slide show mode, clicking on any of these hyperlinks will take the user directly to the beginning of that subsection. This allows teachers quick access to each subsection.
- -Bold print term hyperlinks: Every bold print term from the unit is included in this presentation as a hyperlink. While in slide show mode, clicking on any of the hyperlinks will take the user to a slide containing the formal definition of the term. Clicking on the "arrow" in the bottom left corner of the definition slide will take the user back to the original point in the presentation.

These hyperlinks were included for teachers who want students to see or copy down the exact definition as stated in the text. Most teachers prefer the definitions not be included to prevent students from only "copying down what is on the screen" and not actively listening to the presentation.

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## 112 **Teacher Information**

- · Continuity slides
  - -Throughout this presentation there are slides, usually of graphics or tables, that build on one another. These are included for three purposes.
    - •By presenting information in small chunks, students will find it easier to process and remember the concepts.
    - •By continually changing slides, students will stay interested in the presentation.

- To facilitate class discussion and critical thinking. Students should be encouraged to think about "what might come next" in the series of slides.
- Please feel free to contact me at <a href="mailto:kkorek@germantown.k12.wi.us">kkorek@germantown.k12.wi.us</a> with any questions, concerns, suggestions, etc. regarding these presentations. Kent Korek
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- 113 Division title (green print) subdivision title (*blue print*)
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- 114 Division title (green print) subdivision title (*blue print*)
- 115 Definition Slide
  - = add definition here
- 116 Definition Slides
- 117 🔲 Learning
  - = a relatively permanent change in an organism's behavior due to experience.

118 Habituation

= an organism's decreasing response to a stimulus with repeated exposure to it.

## 119 Associative Learning

= learning that certain events occur together. The events may be two stimuli (as in classical conditioning) or a response and its consequence (as in operant conditioning).

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1	<ul> <li>20 Classical Conditioning</li> <li>= a type of learning in which one learns to link two or more stimuli and anticipate events.</li> </ul>
1	21 Behaviorism
-	<ul> <li>the view that psychology (1) should be an objective science that (2) studies behavior without reference to mental processes. Most research psychologists today agree with (1) but not with (2).</li> </ul>
1	22 🔲 Unconditioned Response (UR)
	= in classical conditioning, the unlearned, naturally occurring response to the unconditioned stimulus (US), such as salivation when food is in the mouth.
1	23 🔲 Unconditioned Stimulus (US)
	<ul> <li>in classical conditioning, a stimulus that unconditionally – naturally and automatically – triggers a response.</li> </ul>
12	24 🔲 Conditioned Response (CR)
	= in classical conditioning, the learned response to a previously neutral (but now conditioned) stimulus (CS).
1	25 🔲 Conditioned Stimulus (CS)
	<ul> <li>in classical conditioning, an originally irrelevant stimulus that, after association with an unconditioned stimulus (CS), comes to trigger a conditioned response.</li> </ul>
1	26 🔲 Acquisition
	<ul> <li>in classical conditioning, the initial stage, when one links a neutral stimulus and an unconditioned stimulus so that the neutral stimulus begins triggering the conditioned response. In operant conditioning, the strengthening of a reinforced response.</li> </ul>
1	27 🔲 Higher-order Conditioning
	= a procedure in which the conditioned stimulus in one

stimulus, creating a second (often weaker) conditioned stimulus. For example, an animal that has learned that a tone predicts food might then learn that a light predicts the tone and begin responding to the light alone. (Also called second-order conditioning.)

# 128 Extinction

= the diminishing of a conditioned response; occurs in classical conditioning when an unconditioned stimulus (US) does not follow a conditioned stimulus (CS); occurs in operant conditioning when a response is no longer reinforced.

# 129 Spontaneous Recovery

= the reappearance, after a pause, of an extinguished conditioned response.

# 130 Generalization

= the tendency, once a response has been conditioned, for stimuli similar to the conditioned stimulus to elicit similar responses.

## 131 Discrimination

 in classical conditioning, the learned ability to distinguish between a conditioned stimulus and stimuli that do not signal an unconditioned stimulus.

## 132 🔲 Learned Helplessness

= the helplessness and passive resignation an animal or human learns when unable to avoid repeated aversive events.

# 133 🔲 Respondent Behavior

= behavior that occurs as an automatic response to some stimulus.

# 134 Operant Conditioning

= a type of learning in which behavior is strengthened if followed by a reinforcer or diminished if followed by a punisher.

# 135 Law of Effect

= Thorndike's principle that behaviors followed by favorable consequences become more likely, and that behaviors followed by unfavorable consequences become less likely.

# 136 Operant Chamber

= in operant conditioning research, a chamber (also known as a Skinner Box) containing a bar or key that an animal can manipulate to obtain a food or water reinforcer; attached devices record the animal's rate of bar pressing or key pecking.

137 Shaping

= an operant conditioning procedure in which reinforcers guide behavior toward closer and closer approximations of the desired behavior.

#### 138 Discriminative Stimulus

= in operant conditioning, a stimulus that elicits a response after association with reinforcement (in contrast to related stimuli not associated with reinforcement).

#### 139 Reinforcer

= in operant conditioning, any event that strengthens the behavior it follows.

- 140 **Positive Reinforcement** 
  - = increasing behaviors by presenting positive stimuli, such as food. A positive reinforcer is any stimulus that, when presented after a response, strengthens the response.

# 141 Negative Reinforcement

= increases behaviors by stopping or reducing negative stimuli, such as shock. A negative reinforcer is any stimulus that, when removed after a response, strengthens the response (Note: negative reinforcement is NOT punishment).

142 Primary Reinforcer = an innately reinforcer stimulus, such as one that satisfies a
biological need.
143 Conditioned Reinforcer
<ul> <li>a stimulus that gains its reinforcing power through its association with a primary reinforcer; also known as a secondary reinforcer.</li> </ul>
144 🔲 Continuous Reinforcement
= reinforcing the desired response every time it occurs.
145 🔲 Partial (intermittent) Reinforcement
<ul> <li>reinforcing a response only part of the time; results in slower acquisition of a response but much greater resistance to extinction than does continuous reinforcement.</li> </ul>
146 🔲 Fixed-ratio Schedule
<ul> <li>in operant conditioning, a reinforcement schedule that reinforces a response only after a specific number of responses.</li> </ul>
147 🔲 Variable-ratio Schedule
<ul> <li>in operant conditioning, a reinforcement schedule that reinforces a response after an unpredictable number of responses.</li> </ul>
148 🔲 Fixed-interval Schedule
<ul> <li>in operant conditioning, a reinforcement schedule that reinforces a response only after a specific time has elapsed.</li> </ul>
149 🔲 Variable-interval Schedule
<ul> <li>in operant conditioning, a reinforcement schedule that reinforces a response at unpredictable time intervals.</li> </ul>
150 Dunishment
= an event that decreases the behavior that it follows.
151 Cognitive Map

<ul> <li>a mental representation of the layout of one's environment.</li> <li>For example, after exploring a maze, rats act as if they have learned a cognitive map of it.</li> </ul>
152 🔲 Latent Learning
<ul> <li>learning that occurs but is not apparent until there is an incentive to demonstrate it.</li> </ul>
153 🔲 Insight
= a sudden and often novel realization of the solution to a problem.
154 🔲 Intrinsic Motivation
= a desire to perform a behavior effectively for its own sake.
155 Extrinsic Motivation
<ul> <li>a desire to perform a behavior to receive promised rewards or avoid threatened punishment.</li> </ul>
156 Dbservational Learning
= learning by observing others. Also called social learning.
157 D Modeling
= the process of observing and imitating a specific behavior.
158 Mirror Neurons
= frontal lobe neurons that fire when performing certain actions or when observing another doing so. The brain's mirroring of another's action may enable imitation and empathy.
159 Prosocial Behavior

= positive, constructive, helpful behavior. The opposite of antisocial behavior.