Using your textbook, define these words on your flashcards. (45 words)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1.</td>
<td>learning</td>
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<td>2.</td>
<td>habituation</td>
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<td>3.</td>
<td>associative learning</td>
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<td>4.</td>
<td>classical conditioning</td>
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<td>5.</td>
<td>behaviorism</td>
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<td>6.</td>
<td>unconditioned response (UR)</td>
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<td>7.</td>
<td>unconditioned stimulus (US)</td>
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<td>8.</td>
<td>conditioned response (CR)</td>
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<td>9.</td>
<td>conditioned stimulus (CS)</td>
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<td>10.</td>
<td>acquisition</td>
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<td>11.</td>
<td>higher-order conditioning</td>
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<td>extinction</td>
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<td>generalization</td>
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<td>19.</td>
<td>operant behavior</td>
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<td>20.</td>
<td>law of effect</td>
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<td>operant chamber (Skinner box)</td>
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<td>22.</td>
<td>shaping</td>
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<td>discriminative stimulus</td>
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<td>24.</td>
<td>reinforcer</td>
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<td>25.</td>
<td>positive reinforcement</td>
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<td>negative reinforcement</td>
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<td>primary reinforcer</td>
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<td>28.</td>
<td>conditioned reinforcer</td>
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<td>continuous reinforcement</td>
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<td>partial (intermittent) reinforcement</td>
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<td>31.</td>
<td>fixed-ratio schedule</td>
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<td>variable-ratio schedule</td>
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<td>fixed-interval schedule</td>
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<td>34.</td>
<td>variable-interval schedule</td>
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<td>35.</td>
<td>punishment</td>
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<td>36.</td>
<td>cognitive map</td>
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<td>latent learning</td>
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<td>intrinsic motivation</td>
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<td>extrinsic motivation</td>
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<td>biofeedback</td>
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<td>42.</td>
<td>observational learning</td>
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<td>43.</td>
<td>modeling</td>
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<td>44.</td>
<td>mirror neurons</td>
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<td>45.</td>
<td>prosocial behavior</td>
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</table>
Directions: Answer the following questions in complete sentences on your own paper.

1. How did the sea slugs and seals exhibit associative learning?

2. Explain how onion breath can cause sexual arousal.

3. How did John Garcia's findings on taste aversion support Darwin's principle of natural selection?

4. Give two examples, from the reading, of how Pavlov's principles of classical conditioning apply to human health and well-being.

5. What are the major differences between classical conditioning and operant conditioning?

6. How did B. F. Skinner elaborate on Thorndike's law of effect?

7. Explain the process of shaping by using the example in the text.

8. Explain the difference between positive and negative reinforcement and give two examples of each.

9. Explain the difference between primary and secondary reinforcers and give examples of each.

10. What are the drawbacks to physical punishment? What is more effective than physical punishment?

11. What effect does biological predispositions have on learning?

12. How can Skinner's principles be used to insure success in: school? sports? work? home?

13. Briefly explain Albert Bandura's experiment with the Bobo doll.

14. Who are we especially likely to imitate?

15. Studies indicate that T.V. viewing has increased violent behavior but they do not prove that viewing violence causes aggression. Why???
Unit 6 Learning

Learning = Conditioning
Conditioning is a form of learning

Learning is a permanent change in an organism's behavior due to experience

Classical Conditioning -
Automatic Respondent Behavior
The organism forms ______________ b/w behaviors it does not ______________.
This form of conditioning involves automatic responses to some stimulus.

The name, __________________, is familiar to some people. His experiments are
classical conditioning also known as ____________________________.
considered to be "______________" and what he discovered is what we call

With this, responses are learned by experiences in which one stimulus is ________
______________________________________________________________.

Experiment of Pavlov's Dogs - PAVLOVIAN CONDITIONING

Harnessing dogs in an apparatus....

Food placed on a dog's tongue, dog salivates ______________. This REACTION is
_______________. It's a ________________________________ called an __
______________________________ . (Unconditioned means "unlearned")

Food in mouth automatically, unconditionally triggers a dog's salivary reflex, so the
FOOD stimulus is an ________________________________.

A tone, buzzer, bell, doesn't trigger a response of salivation alone. This is called a
______________________________.

BUT, through repeated pairings of the neutral stimulus & the UCS, the dog acquires a
learned response- salivation in response to the tone alone. This is a __________________
______________________________.

A previously irrelevant tone stimulus becomes a _____________________________.
It's repeatedly paired with an unconditioned stimulus & begins to trigger the _____
______________________________.

REMEMBER.... CONDITIONED = LEARNED

UNCONDITIONED = UNLEARNED
TERMINOLOGY:
1. Unconditioned Stimulus (UCS)-
2. Unconditioned Response (UCR)-
3. Neutral Stimulus (NS)-
4. Conditioned Stimulus (CS)-
5. Conditioned Response (CR)-

Conditioning Processes
Pavlov also explored the causes & effects of classical conditioning. Their experiments identified 5 major conditioning processes:
1. Acquisition-
2. Generalization-
3. Discrimination-
4. Extinction-
5. Spontaneous Recovery-
6. Reconditioning-

Updating Pavlov-
~Conditioning involved cognition
~Conditioning is biological (we learn associations that enhance our survival and help us adapt to our environment)
Aversions (dislikes) - John Garcia
Phobias (often come from natural dangers)

John B. Watson - Conditioned Fear (Little Albert Experiment)
Operant Conditioning

A. B. F. Skinner (Behaviorism)
1.
2.
3.

B. Reinforcement
1. positive reinforcement
   a. primary (natural) reinforcement
   b. secondary (conditioned) reinforcement
2. negative reinforcement
   a.
   b.
3. punishment
   a.
   b.
   c.
   d.

C. Schedules of Reinforcement (timing and frequency)
1. continuous-
2. partial or intermittent-
   a. fixed-ration schedule-
   b. variable-ratio schedule-
   c. fixed-interval schedule-
   d. variable-interval schedule-
Cognitive Learning (thinking, information processing, problem solving, and mental imaging)

A. Insight Learning (aha) – Wolfgang Kohler
   1. the sudden understanding of a problem that implies the solution

B. Latent Learning – Edward Tolman
   1. hidden learning that exists without behavioral signs and only shows up when there is a reason to display it (reward)
      a. cognitive map (mental representation)

C. Observational Learning (Modeling) - Albert Bandura
   1. observing and imitating the behavior of others
   2. imitate models who we identify with
   3. imitate behaviors that are rewarded
## Four Schedules of Reinforcement

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<tr>
<th>Ratio Schedules (response based)</th>
<th>Definitions</th>
<th>Response Rates</th>
<th>Examples</th>
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</thead>
<tbody>
<tr>
<td>Fixed ratio (FR)</td>
<td>Reinforcement occurs after a fixed number of responses</td>
<td>Produces a high rate of response, but a brief dropoff just after reinforcement</td>
<td>Parents pay a child $10 after he washes 2 cars. In a laboratory, a rat receives a food pellet after pressing the bar 7 times.</td>
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<tr>
<td>Variable ratio (VR)</td>
<td>Reinforcement occurs unpredictably; the ratio (number and amount) varies</td>
<td>High response rates, no pause after reinforcement, and very resistant to extinction</td>
<td>Slot machines designed to pay out after an average number of responses (maybe every 10 times), but any one machine may pay out on the first response, then seventh, then the twentieth.</td>
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<table>
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<tr>
<th>Interval Schedules (time based)</th>
<th>Definitions</th>
<th>Response Rates</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Fixed interval (FI)</td>
<td>Reinforcement occurs after a fixed time has elapsed</td>
<td>Responses tend to increase as the time for the next reinforcement is near, but drop off after reinforcement and during interval</td>
<td>You get a monthly paycheck. Rat's behavior is reinforced with a food pellet each time it presses a bar after 20 seconds have elapsed.</td>
</tr>
<tr>
<td>Variable interval (VI)</td>
<td>Reinforcement occurs unpredictably; the interval (time) varies</td>
<td>Relatively low response rates, but they are steady because the non-human animal or person cannot predict when reward will come</td>
<td>Rat's behavior reinforced with a food pellet after a response and a variable, unpredictable interval of time. In a class with pop quizzes, you study at a slow but steady rate because you can't anticipate the next quiz.</td>
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### Positive Reinforcement
- Adds to (+) and strengthens behavior
- You're hungry and eat a delicious hamburger.
- Your boyfriend/girlfriend hugs you.
- You receive $200 as a bonus.
- You receive a good grade on your psychology exam.

### Negative Reinforcement
- Takes away (-) and strengthens behavior
- Sunglasses take away the pain of the bright sun.
- You take an aspirin for your headache, which takes away the pain.
- After high sales, your boss says you won't have to work on weekends.
- Professor says you won't have to take the final exam because you did so well on your unit exam.
For each of the following, identify it as an example of continuous reinforcement (CR), fixed-ratio (FR), variable-ratio (VR), fixed-interval (FI), or variable-interval (VI).

A person buys a lottery ticket in hopes of winning
A rat receives a food pellet every time it presses a lever
A dog is given a food reward after it turns around 4 times
A boy receives a gumball every time he puts a quarter into a machine
A rat gets a food pellet if it makes the response every minute
A teacher uses surprise “pop” quizzes to encourage students to study
A light comes on every time you flick a light switch
A pieceworker is given pay after completing 5 items
A person can win at a slot machine, but doesn’t know how many times it is necessary to play
A person gets a paycheck at the end of every week
A teacher gives attendance points every day a student is in class
A person sits by the phone waiting for a phone call
A woman asks men in a dance club to dance with her
A student receives grades at the end of every semester
A fisherperson sits in a boat waiting for a fish
For each of the following situations, identify it as an example of positive reinforcement (PR), negative reinforcement (NR), or punishment (PUN).

A dog is given a treat for shaking his paw
A dog is hit with a newspaper for going to the bathroom inside of the house
A child stops crying when a parent picks him up
An employee is given a bonus for finishing a project
A person is given a speeding ticket for driving over the speed limit
A husband stops nagging his wife once she takes out the trash
A teacher gives praise to a student
A parent yells at her child for getting poor grades
A rat stops receiving shock to his feet when he pushes a lever
After studying hard for a test, a student earns an “A”
A teenager is grounded for not getting in by curfew
A person takes aspirin to eliminate a headache