Intro & Research Unit Guide REV 2016

Essential Questions:

- How did psychology evolve as a science?
- What are the leading perspectives of psychology?
- How do psychologists scientifically study behavior?
- How do psychologists make ethical decisions about research and behavior of human and animal subjects?

1-1
Psychology, basic research, applied research

1-3
Psychoanalysis, behaviorism, humanistic psychology

1-5
Psychological perspectives, psychodynamic perspectives, behavioral perspective, humanistic perspective, cognitive perspective, biological perspective, social-cultural perspective

1-6
Behavior genetics, evolutionary perspective, positive psychology nature-nurture, natural selection

2-1
Scientific method

2-2
Confirmation bias, critical thinking, participant bias, naturalistic observation

2-3
Case study

2-4
Correlational study, positive correlation, negative correlation

2-5
Survey method, population, sample, random sample

2-6
Longitudinal study, cross-sectional study

2-7
Experiment, hypothesis, operational definition, independent variable, dependent variable, experimental group, control group, random assignment, confounding variable, double-blind procedure, placebo, statistically significant, replicate

2-8
Ethics, animal research

Names to know:
Wundt
James
Rogers
Freud
Darwin
Pavlov
Watson
Skinner
Maslow
Piaget

Psychology Scavenger Hunt

Welcome to Psychology class. Your first job is to find someone in class that has either done, experienced, or fits each one of the qualities listed below. You may not use the same person for more than one item on the list. Once you've found someone for an item, ask them to sign their name on the line next to it. Good Luck!

Someone who…

1. **Has had an MRI or a CAT scan**

   _____

2. **Sleeps more than 8 ½ hours a night**

   _____

3. **Has suffered a concussion**

   _____

4. **Has had a dream that their teeth fell out**

   _____

5. **Is afraid of spiders**

   _____

6. **Remembers something that happened to them before they were three**

   _____

7. **Has already taken their ACT or SAT**

   _____

8. **Knows their IQ score or has taken an intelligence test**

   _____

9. **Is an only child**

   _____

10. **Is the oldest child**

    _____

11. **Is the youngest child**

    _____

12. **Learned to ride a bike before age 5**

    _____

13. **Trained their dog or cat to do a trick**

    _____

14. **Knows the names of all the planets (and can prove it)**

    _____

15. **Has had a role in a play or musical**

    _____

16. Is a starter on an athletic team

_____

17. Wants to pursue a career in medicine or science

_____

18. Enjoys working with young children

_____

19. Is a dancer

_____

20. Plays an instrument in a band

_____

21. Can quote a famous line from Napoleon Dynamite

_____

22. Resembles a famous person (who is it? _____)

_____

23. Has a Type A personality

_____

24. Enjoys solving crossword puzzles

_____

25. Has taken a yoga class or meditated

_____

Science of Character

Psychology is about the study of individual behavior. This semester you will learn many concepts about what shapes your behavior.

Step 1: After watching the video clip, go to the following link to begin the inventory: http://tinyurl.com/hhldlc2

Step 2: After completing the inventory, fill out the chart for your top five and your bottom two characteristics according to the survey.

List your top five characteristics:	Describe each characteristic:	Some of these may surprise you, while others may not. How accurately do you think this characteristic describes you? Give examples of why you think it is or is not accurate.
List your bottom two characteristics:		

Step 3: Answer the following questions about your Science of Character results:

1. How can you use your character strengths to improve your life?

2. How can you use them to improve your academic life?

3. Different cultures value different character strengths. What are the most valued character strengths in your culture?

4. The film describes a fixed mindset (when you think you can't change who you are) and a growth mindset (when you believe you can change and improve things about yourself). Is there an area in your life that you have a fixed mindset about, like "I'm no good at sports," or "I just can't do math"? Can you think of a way you can use your character strengths to improve in that area?

5. The film ends by asking you to complete this sentence: I want to be _____. What do you want to be? What character strengths will help you achieve that, and how will you use them?

PSYCHOLOGY'S PERSPECTIVES

BEHAVIORISM Description: Famous Names:	**SOCIAL-CULTURAL** Description: Famous Names:
PSYCHOANALYSIS Description: Famous Names:	**HUMANISTIC** Description: Famous Names:
COGNITIVE Description: Famous Names:	**BIOLOGICAL** Description: Famous Names:

What is Psychology?

The word psychology is officially defined as "*the science that studies the behavior of organisms*." If we break down this definition, we can gain a better understanding of what it means:

1. Science

   Psychology is a science because psychologists carry out experiments in order to gather data to test their hypotheses. Its conclusions are based on information that has been planned, controlled, and replicable experiments.

   It is important that these experiments are repeatable, so that any information obtained from those experiments can be considered reliable and not a one-off or random occurrence.

   Controlled experiments are needed so that certain variables can be tested, without becoming contaminated by other factors which could produce inaccurate or misleading results.

2. Behavior

   Psychologists are interested in understanding why people behave the way they do. Often this will involve studying abnormal behavior.

   Behavior is composed of three aspects:

   Cognitive Processes – This includes how a person thinks and what they think of.
   Emotional States – This includes what a person feels and what causes them to feel that way.
   Actions – This includes what a person does and what causes them to do something in a particular way.

   If we put all these components together, we can see that psychology studies how people think, feel, and act.

3. Organisms

   In psychology, we don't just study people, as all living creatures can help us to better understand behavior. An organism is defined as a form of life, or in other words, any living creature. Psychology is therefore the study of living things, which includes both people and animals.

   From the definition that "*psychology is the science that studies the behavior of organisms*," we can see that psychology is the study of everything around us and how those interact with each other. This is why psychology is thought to be such an important subject, because it is directly relevant to every aspect of life.

   Through studying psychology, we are essentially studying ourselves and the world we live in. In turn, this can enable us to gain a better understanding of ourselves and of other people.

Goals of Psychology

Modern day psychology has four main goals: describe, explain, predict, and control behavior.

1. Describe
   The first goal is to describe how someone is behaving.

   e.g. *John seems unable to concentrate fully on his work.*

   By describing behavior, we can then focus our attention on it and move on to the second goal.

2. Explain
   Once we have described a behavior, we can then attempt to explain some possible reasons as to why it may have occurred.

   e.g. *John seems unable to concentrate on his work because he watches too much TV.*

   By thinking of possible reasons why someone may be behaving in a particular way, we can try to change that behavior by modifying the factors which we think are causing it.

3. Predict
   If our explanation as to why John is unable to concentrate on his work is because he watches too much TV, we can then move on to our third goal by predicting how John's behavior will change if he reduces the amount of TV he watches.

   e.g. *I predict that if John stops watching TV he will be able to concentrate better, because I suspect that there is a link between the amount of hours someone watches TV and their ability to concentrate.*

4. Control behavior
   Now that we have described a behavior and predicted how that behavior could be changed, we can then try to control it by modifying the variables which we had previously identified.

   e.g. *Take away John's TV so that he spends more time on his work rather than watching TV all day.*

   If we find that taking away John's TV results in no change to his behavior, we can then conclude that our prediction of TV negatively affecting John's ability to concentrate was incorrect.

   At this stage, we can then go back to steps 2 and 3 and come up with a new explanation for John's behavior.

   Although I have used one variable in this example, it is possible that John's behavior is affected by multiple factors such as TV and something else, which are both negatively affecting his ability to think.

   In real life, you will often find that there are many possible explanations for someone's behavior, and so this should be taken into consideration because very rarely do things occur insolation unless they are performed under controlled laboratory conditions.

Name_____

Perspectives in Psychology

I. Match each statement to the correct psychological perspective.

_____ 1. How the body and brain enable emotions and sensory experience.

_____ 2. How the natural selection of traits promotes the perpetuation of one's genes.

_____ 3. How thinking and behavior vary across situations and cultures.

_____ 4. How much our genes and environment influence our individual differences.

_____ 5. How our thought process works and how we store and remember information.

_____ 6. How behavior springs from unconscious drives and childhood conflicts.

_____ 7. How each individual has great freedom of choice and a large capacity for personal growth.

_____ 8. How we learn observable responses.

A. Cognitive
B. Behavioral
C. Biological
D. Humanistic
E. Psychodynamic
F. Social- Cultural
G. Evolutionary
H. Behavior Genetics

II. Match each question to the correct psychological perspective.

_____ 1. How can someone's personality traits and disorders be explained in terms of sexual or aggressive drives or unfulfilled wishes and childhood trauma?

_____ 2. How does a human being reach their full potential as a person?

_____ 3. How is our society different from other societies in the world?

_____ 4. How is blood chemistry linked with moods and motives?

_____ 5. Does nature or nurture play a more prominent role in our development?

_____ 6. How does evolution influence behavior tendencies?

_____ 7. How do we use information in remembering, problem solving, and reasoning?

_____ 8. How do we learn to do things or not to do things through rewards and punishment?

E. Cognitive
F. Behavioral
G. Biological
H. Humanistic
E. Psychodynamic
F. Social- Cultural
G. Evolutionary
H. Behavior Genetics

Addiction—Biologically or Behaviorally caused?

Are drug addiction and abuse inherited diseases? Or are they the result of environmental factors such as upbringing, education, and economic status?

The Biological Element
By: Kevin T. McCauley, M.D.

People often disagree with the idea of calling addiction a disease in the same way we call conditions like diabetes a disease. The behavior of addicts is frustrating, ugly - even criminal. How can driving drunk be a symptom of a disease?

The best argument against calling addiction a disease states that addicts make the choice to use drugs and that their inability to stop is simply immature and irresponsible behavior. Type I Diabetics, for instance, do not have a choice about whether or not to have a high blood sugar. These arguments make sense, and are often embraced for their intuitive appeal alone.

With *brain disorders,* however, it is not that simple.

Our understanding of brain disorders has not kept pace with our understanding of other diseases - like diabetes. A big part of our difficulty in calling addiction a "disease" stems from the fact that no one could ever find the defect in the brain that caused addiction. Without a physical brain defect to point to, addiction never earned the status of "disease" like diabetes did. The addict's symptoms were assumed to be due to their intrinsic badness – their immaturity, their irresponsibility, or worse.

But guess what? In the last ten years, we have learned a lot more about the brain. We know what the physical defect of addiction is and where in the brain it is. Addiction is a defect in the hedonic system, or the system that perceives pleasure, which is deep in the part of the brain that handles basic survival. Because of this defect, the addict unconsciously thinks of the drug as life itself. A beer is not just a beer anymore – the addict needs the beer to get through life and when the beer is unavailable they *crave* it.

While it is true that the addict may have a choice in whether or not to use drugs, they do not have the choice over whether or not to crave. If craving gets bad enough, even the strongest-willed, most mature and most responsible person will return to using drugs. No brain can ignore that survival imperative.

If you are in medical school and you write, "addiction is not a disease" on one of your exams – you will flunk. In medicine, we now know that the addict's brain really is different than normal brains, and from a physiologic standpoint we now know *how* it is different. This explains a lot of the symptoms we see in full-blown addiction and helps us develop better, more effective treatments to help the addict recover. It also means that addiction fits the Disease Model of illness as well - if not better - than many other diseases.

Like say, diabetes.

Biological Theories
By: R.J Craig

In the 1950s, the American Medical Association declared alcoholism to be a disease without offering scientific arguments or evident to explain the designation. Other social behaviors also have been considered diseases. For example, in the antebellum South, a runaway salve was considered afflicted with a disease for which the treatment, on return, was lashing. Whether alcoholism is or is not a disease hinges on the definition of alcoholism.

American Psychiatric Association definition: Alcoholism is a disease typified by impaired control over drinking, preoccupation with alcohol, continued use of alcohol in the face of adverse consequences, and distorted thinking.

The essential sign of alcoholism is loss of control, and until the biological mechanism has been discovered that results in loss of control, this will remain a theory and not a fact. The following is evidence for the biological cause of alcoholism:

1. Animal studies demonstrate that a strain of rats can become physically alcohol dependent; their offspring over time and successive generations are born with an apparent predisposition to physical dependence on alcohol

upon exposure. Researchers can also breed a strain of rats that are averse to alcohol. This suggests that physical dependence on alcohol can be genetically transmitted and inherited.

2. In studies of the familial incidence of alcoholism, alcoholics were more likely to have a near relative who was alcoholic than any population of non-alcoholics. From 2% to 50% had fathers who were alcoholics and 5% had mothers who were alcoholics. The rates of sibling alcoholics consistently were higher than all types of other relationships and all types of non-alcoholics. Studies show a persistent low frequency of parental alcoholism in families of non-alcoholics. Alcoholism is more prevalent among near than distant relatives. However, 47% to 82% of alcoholics do not come from families in which one or both parents were alcoholic. These studies demonstrate that alcoholism tends to run in families.
3. In general, identical twins show greater similarities in alcoholism rates than fraternal twins. However, twin studies have not been consistent in determining the relative contribution of genetics and environmental influences.

The Environmental Element
Source: Neuroanthropology.net

A careful study of the genetic causes of addiction can provide a wealth of knowledge about the subject; however, one must not forget about environmental triggers and experiences. Many social scientists have made the case that social conditions matter, that is to say, that addiction "runs along the fault lines of society." In an experiment, scientists showed that monkeys who were regularly dominated by other monkeys were much more likely to self-medicate with cocaine than those monkeys at the top of the social ladder. Therefore, they theorized that the "derived stress from being dominated" played a significant role in the likelihood of drug abuse and addiction. In the case of an addict, his constant urge to use could be a direct result of his low status within the social structure. Also, the very fact that he is on the fringes of "accepted society" may actually be both a cause as well as a result of his addiction.

Additionally, a great amount of research has been dedicated to environmental triggers of abusive behavior. In the case of alcoholics, "one of the signs…is a difficulty inhibiting responses for alcohol related stimuli." For example, even though a recovering alcoholic may have no problem controlling their addiction in the comfort of their own home, the overwhelming urge to use when they walk by a favorite bar may simply be too much for them to handle. The same is also true of addicts to other drugs. The stimuli from a smell, taste or place commonly attributed to an environment of drug use can often set off strong memories of drug abuse for the addict. This process ultimately results in a powerful desire to use, even if they have been away from drugs for a considerable amount of time.

Furthermore, consider the environment in which an addict first experiences the substance(s) they have become addicted to. The use of drugs and alcohol is most certainly a learned behavior, as demonstrated by the cultural emphasis on learning "how" to drink. Therefore, the environment in which a person acquires the knowledge of how to use must be important to the formation of an addiction.

As one website dedicated to the genetics and environmental causes of addiction puts it, "the biggest contributing factor to drug abuse risk is having friends who engage in the problem behavior." In the case of the addict introduced to the drug earlier in life, it is quite likely that his first experience with drugs occurred with his peers. In this situation, the mutual support of using as a group became a benefit in itself. Also, having friends that use drugs serves as a powerful cultural force for continued experimentation. Thus, the combination of positive reinforcement and a receptive environment for drug use ultimately results in an increased likelihood for addiction.

Behavioral Theories

By: R.J Craig

Learning and conditioning unquestionably play a role in the development of substance abuse. The issue is the degree of importance of these variables in the final pathway to being addicted. Wikler (1973) argues that drug use initially is socially reinforced and that this reinforcement eventually is replaced by biological reinforcement through suppression of withdrawal symptoms. The desire for positive feedback from peers begins to be replaced by using drugs to avoid the punishment (withdrawal symptoms). The following are some of the ways that behavior and reward systems encourage drug issue:

Reinforcement theory—Drugs are powerful reinforcers of behavior. Alcohol and drugs produce pleasurable sensations. According to the laws of reinforcement, whenever a stimulus (e.g., using alcohol or drugs) is followed by a reward (e.g., feeling good), that connection is reinforced, increasing the probability of repeating that behavior next time.

Primary reinforcers—food, water, sex—strengthen behavior independently. Secondary reinforcers are learned. Money, for example, has no natural value. It is merely paper or metal. Money has no inherent reinforcing properties. Drugs and alcohol are primary reinforcers.

Negative reinforcers—is a stimulus is followed by a response that is punishing, the probability of that response upon presentation of that simulates should decrease. This is a principle behind the use of Antabuse. Alcoholics who take Antabuse experience no ill effects. If, however, they drink alcohol when Antabuse is in their system they become violently ill. Thus, alcohol use should decrease in frequency because of the connection between taking alcohol and being negatively reinforced.

DESIGN AN EXPERIMENT: BUBBLES!

STEP #1: DEVELOP HYPOTHESIS
Your hypothesis:

STEP #2: DESIGN STUDY
What is your independent variable?

What is your dependent variable?

What is your control condition?

What is your experimental condition?

Your procedure:

STEP #3: COLLECT DATA
Make a chart with your results:

STEP #4: ANALYZE DATA
Your conclusions:

Identifying Independent and Dependent Variables

Directions: For each of the following experiments, identify the independent and dependent variables.

1. Developmental psychologists want to know if exposing children to public television improves their reading skills.

   IV:
   DV:

2. Behavioral psychologists want to know whether reinforcing comments will make people work harder on an assembly line.

   IV:
   DV:

3. Comparative psychologists study whether a young monkey will prefer to spend tie with a pretend monkey made of wire that also provides milk or a pretend monkey that is covered in cloth but provides no milk.

   IV:
   DV:

4. A clinical psychologist wants to know whether people who have psychotherapy are more or less likely to have problems in the future.

   IV:
   DV:

5. A social psychologist wants to know whether being polite or rude to people tends to make them more cooperative.

   IV:
   DV:

6. A personality psychologist explores whether extroverted people have more fun at parties.

   IV:
   DV: