

## 1: Inductive And Deductive Methods Of Teaching - HUMAN ANATOMY CHART

*In logic, we often refer to the two broad methods of reasoning as the deductive and inductive approaches. Deductive reasoning works from the more general to the more specific. Sometimes this is informally called a "top-down" approach.*

Criminal Punishment Retribution A forensic investigation is carried out during the investigation examination of many criminal and civil cases. It is a practice of establishing the legal facts and evidences, which should be presented in the court. A forensic investigation is related to one of the most common and fully developed forms of forensics. The variety of physical, chemical and physicochemical methods is widely used during conducting forensics. Furthermore, the practice of manufacturing expert appraisals and experimental studies suggest that some of these problems can be solved using the methods of inductive and deductive profiling. Inductive profiling collects information that is based on some statistical data concerning past criminals, different types of past crimes and past analogous criminal and other offenses. In turn, deductive profiling focuses on the crime scenes and various real, tangible, physical evidences left by the criminal. This process takes a lot of time and is very slow because the criminalists should carefully examine and explore different forensic reports, various evidences left by an offender at the crime scene, etc. Thus, this paper introduces inductive and deductive profiling. It presents and examines the main characteristics of these two different methods, and draws a parallel and a comparison between inductive and deductive profiling. The background of using inductive and deductive profiling The development and implementation of new methods of investigation, based on the achievements of natural and engineering sciences, will undoubtedly help to strengthen the evidentiary value of the conclusions. This is a widespread fact that inductive and deductive profiling is mostly used in trace, forensic and ballistic analyses. In criminalistics, the following factors were the prerequisites for the use of profiling methods: The possibility of applying the instruments of industrial production, which naturally contributes to their rapid implementation in the practice; High sensitivity, accuracy and objectivity of these methods in measuring surface microprofiles; In some cases, the possibility of obtaining such information that cannot be obtained with the help of other methods. There are two directions in forensic studies of the individual offender: In addition, it is necessary to define the general requirements for all methods of forensic investigation of the individual. Methods that can be used to investigate the accused should be primarily scientific and legal. Special methods are used for learning and researching of individual phenomena, events or facts. In this context, modeling as a forensic method is also used in searching for an unidentified person who committed a crime. The process of compiling a probable psychological portrait of an unknown offender is called criminal profiling. Purposes and methods of criminal profiling The major purposes of criminal profiling are to identify strategies for a preliminary investigation. The process of criminal profiling is defined as a method of identifying unique and typical psychophysiological features of the offender who committed a crime under the non-obviousness conditions. The techniques of criminal profiling basically use already stored personal information about people who have committed various crimes. It is important to study behavior: It is not superfluous to mention that it is manifested in dynamics and may vary. The methods of making up and using a probable psychological portrait of an unknown perpetrator in the investigation process includes the following steps: The special methods of learning, in particular, forensic -psychiatric and forensic-psychological methods are used in drawing up a probable psychological portrait of an unknown offender. In addition to the above-stated information, it is possible to add that qualitative and quantitative analyses content analyses of documents are frequently used methods. The experts make up an average probable psychological portrait of a violent offender based on the results of a forensic psychological and psychiatric examination. Inductive profiling Let us focus our attention on inductive profiling and examine its main concepts and characteristics. In any case, inductive profiling is the result that is occurred through some statistical analysis. There are three main sources of information for making inductive criminal profiling: There are some advantages and disadvantages of inductive profiling. According to Turvey Inductive Profiling is a very easy tool to use, for which no specialized forensic knowledge, education, or training in the study of criminal behavior or criminal investigation is required. Additionally, general profiles can be assembled in a

relatively short period of time without any great effort or ability on the part of the profiler. The result is often a one or two page list of unqualified characteristics. These generalizations can accurately predict some of the non-distinguishing elements of individual criminal behavior, but not with a great deal of consistency or reliability. In addition, generalized profiles are compiled rather quickly. Of course, there are obvious disadvantages of this method: Moreover, it does not refer directly to any criminal proceedings and cannot serve for making up a psychological portrait of an individual. Furthermore, it contains inaccuracies, which could lead to the prosecution of an innocent person. This is a proven fact that the criminals who have committed a crime some time ago are similar to certain and current criminals according to their cultural nature. This is because they are influenced by the same environmental circumstances and the same common motives; The small groups of known criminals, who committed the same crimes in their lives as unknown perpetrators, have similar characteristics, which can be applied with respect to the unidentified offenders through the synthesis of information; Human behavior can be predicted on the basis of the initial statistical analysis of existing features; Behavior and motives do not change with time, in other words, they are static and predictable phenomena. Deductive profiling Observing deductive criminal profiling, it is necessary to emphasize that it is the statistical and scientific interpretation of the evidence taking into account demonstrative physical, tangible, etc. Any information on other similar criminals and crimes are not counted. The advantages of deductive profiling are obvious. The major disadvantages of deductive profiling can be viewed as follows: The costs of a large amount of time; The necessarily for knowledge in many areas of science; The engagement of experts; The availability of special training and skills in the field of criminology and forensic sciences; Crime scene reconstructions. The basic principles of constructing deductive criminal profiling are as follows: Inductive profiling versus deductive profiling Comparing and drawing a parallel between inductive versus deductive profiling, it is possible to state that inductive profiling prevails in the cases where information about the circumstances of the case is absent or very limited. In these cases, a criminalist builds different versions and models of events in accordance with individual fragments under the conditions of uncertainty and ambiguity between the proven facts. A complex use of investigative, scientific and technical methods has a special and significant importance for implementing this methodology. Especially, deductive profiling is effective in investigating different types of crimes committed by typical and repetitive ways. Thus, when criminalists investigate the murders that are connected with the dismemberment of corpses, a typical scheme of investigation is based on close relations between a victim and a criminal. They logically arise from the conditions and circumstances required for the dismemberment of corpses. The practice of constructing a psychological portrait amounts to hundreds of successful cases, including a large number of allegations, creatively using which, the expert makes up a probabilistic profile of an unknown subject that is very close to a real one. Meanwhile, it is very important to evaluate all available information in constructing a psychological portrait of an unknown perpetrator, since the same traces of the crime may indicate about different personality traits. Consequently, observing inductive versus deductive profiling it is necessary to say that these two methods are very important components for victimology, forensic reports, etc. Conclusion Taking the above-mentioned information into account, it is possible to sum up that inductive and deductive profiling is the essential components that are used in a forensic investigation and criminology as a whole. Hence, it can be emphasized that the major differences between inductive and deductive profiling are that deductive profiling cultivates some available information with the help of using personal experiences. This feature distinguishes it from inductive profiling that is based on all accessible samples of a crime. Retrieved June 4, , from [http: Theory, Research and Practice. Interpreting the calling cards of the serial murderer. The anatomy of dangerous persons, places and situations. An Outcome and Process Study. Law and Human Behavior, 14 3 ,](http://Theory, Research and Practice. Interpreting the calling cards of the serial murderer. The anatomy of dangerous persons, places and situations. An Outcome and Process Study. Law and Human Behavior, 14 3 ,)

## 2: Inductive and Deductive Method: Characteristics and Differences | Life Persona

*The scientific method uses deduction to test hypotheses and theories. "In deductive inference, we hold a theory and based on it we make a prediction of its consequences. Inductive reasoning is.*

Inductive teaching sometimes known as inquiry or discovery teaching involves giving the students examples of language and working with them to come up with grammatical rules. It is a more student centered approach to learning. Alternatively, deductive teaching begins by giving students the rules and working with them to produce language. This is more teacher centered. As a practical example, in an inductive classroom the teacher might give the students a number of examples of, say, the passive voice. The students then have to work out how a passive sentence differs from an active one. They can then be encouraged to convert active to passive by themselves. On the other hand, in a deductive classroom the teacher explains the process of converting an active to a passive and then gives the students a set of sentences and asks them to convert them.

**Inductive vs Deductive** The inductive approach is generally accepted to be more efficient in the long run than the deductive approach. Inductive activities are generally more stimulating and require greater student participation. Since students are more actively involved in acquiring knowledge rather than just passively sitting and receiving information in the end they end up learning with deeper understanding. However, although the inductive approach is generally accepted to be more beneficial to students it can sometimes take a little longer. Many more traditional classrooms rely heavily on the deductive approach and so bringing in a more radical inductive approach can sometimes be difficult both in terms of getting the students to think for themselves and work out the rules as well as persuading the management that this is the best approach in the long run.

**Teaching an Inductive Class** As a teacher you do not explicitly state any rules, but rather your job is to guide the students towards the rule getting them to become aware of it. Firstly you need to have clearly in your mind the concept or rule which needs to be discovered. Then you create a series of clear examples which demonstrate use of the rule. Suppose you are getting the class to work out how to convert a passive to an active sentence. You might begin by writing up: The window was broken by the boy. Get students involved in looking for the rule, brainstorming ideas and suchlike. There are 4 words in the sentence. It begins with a capital letter and ends in a full stop. Then add further examples which either confirm or deny previous observations: My car was stolen yesterday. The cake was eaten by Elsa. As a teacher you then need to guide them to the rule so they become aware of it. The boy broke the window. Finally you can explicitly confirm the rules the students have discovered. You will not have told them these rules, you will have merely guided the class towards them.

## 3: Deductive and Inductive Arguments | Internet Encyclopedia of Philosophy

*Deductive versus Inductive comparison chart; Deductive Inductive; Introduction (from Wikipedia) Deductive reasoning, also called deductive logic, is the process of reasoning from one or more general statements regarding what is known to reach a logically certain conclusion.*

Deductive reasoning involves starting out with a theory or general statement, then moving towards a specific conclusion. Inductive reasoning, on the other hand, takes a series of specific observations and tries to expand them into a more general theory. This is not actually the case, but given the available information, one might be forgiven for thinking it. The next step in this logic might involve attempting to find things which disprove the assertion that all cows are spotted, as might be done by asking other people if they have seen cows which are not spotted. Ad Inductive reasoning is commonly seen in the sciences when people want to make sense of a series of observation. Isaac Newton, for example, famously used inductive reasoning to develop a theory of gravity. Using observations, people can develop a theory to explain those observations, and seek out disproof of that theory. As can be seen in the cow example above, one of the major flaws with inductive reasoning is that it is dependent on observations, and when observations are incomplete, unsound results may be formulated. In a famous example of inductive reasoning, some people in the ancient world believed that meat spontaneously gave rise to maggots. Their conclusion was based on the observation that if meat was left out, maggots would appear on it. Someone else decided to test this theory by seeking for disproof “ would it be possible to leave meat out and not have maggots appear? By sequestering meat in various containers next to fully exposed meat, the scientist realized that the maggots were, in fact, the result of eggs laid by flies.

**Deductive Reasoning** With deductive reasoning, one takes a general theory or idea, tests it, and moves through a sequence of ideas to arrive at a specific conclusion. It is possible to arrive at an unsound result by using an initial premise which is false, as in this case: Every animal that eats mice is a cat. Therefore, Rover is a cat. The goal of deductive reasoning is to arrive at a valid chain of reasoning, in which each statement holds up to testing, but it is possible for deductive reasoning to be both valid and unsound. Both Useful Approaches The brain is so adept at both deductive and inductive reasoning that it often does it on a level which people are not fully aware of. Especially in the case of children, this type of reasoning is used to make sense of the world and the things observed in it. As can be seen, it is possible to use both approaches to explore a logical problem.

## 4: Compare and Contrast Inductive Versus Deductive Profiling | Essay Writing Blog

*The main difference between inductive and deductive approaches to research is that whilst a deductive approach is aimed at testing theory, an inductive approach is concerned with the generation of new theory emerging from the data.*

Katharina Homenick Posted on May 13, He Inductive method and the deductive method Are two approaches opposed to investigation. Each method has its advantages and its use will depend on the situation to be investigated, the field you want to study or the approach you want to have. Deductive reasoning works by working from the most general to the most specific. You can begin by thinking of a theory on some topic of interest. It then boils down to some specific hypothesis that you want to test. On the other hand, the inductive method works in the opposite way: In inductive reasoning, we begin with specific observations and measures to arrive at some general conclusions. These two methods are very different and offer different elements when carrying out an investigation. By its nature, the inductive method allows to be more flexible and lends itself to the exploration, mainly at the beginning. The deductive method is more closed by nature and is more oriented to test or confirm hypotheses. Although some particular study seems purely deductive, as an experiment designed to test the hypothetical effects of some treatment or outcome, most social research requires both deductive reasoning and inductive reasoning. In almost all studies it is likely that both processes have been resorted to at some point. Even in the most closed experiments, researchers can observe patterns in the information that can lead them to develop new theories. Concept of inductive method and deductive method Inductive method Inductive reasoning is the reasoning in which premises are viewed as a way of providing strong evidence for the truthfulness of a conclusion. While the conclusion of an inductive argument is certain, the truth of that conclusion in an inductive argument is likely, based on the evidence provided. Many sources may define the inductive method as one in which general principles are derived from specific observations. In this method, broad generalizations are made from specific observations, so it can be said that it goes from the specific to the general. Many observations are made, a pattern is perceived, a generalization is made, and an explanation or a theory is inferred. This method is also used in the scientific method; Scientists use it to form hypotheses and theories. Deductive reasoning allows them to apply theories or assumptions to specific situations. An example of a deductive reasoning may be as follows: All known biological life forms depend on liquid water to exist. Therefore, if we discover a new biological life form it will depend on liquid water to exist. This argument could be made every time a biological form of life is found and would be correct. However, it would be possible in the future to find a biological life form that does not require liquid water. Types of inductive reasoning Generalization Generalization comes from a premise on a sample from which a conclusion about a population is reached. To estimate their number, a sample of four balls is drawn - three are black and one is white. If we use inductive generalization, we could conclude that there are 15 black balls and 5 white balls in the jar. This premise has a bias since it is taking a small sample of a larger population. Statistical syllogism Statistical syllogism originates from a generalization to a conclusion about an individual. A proportion Q of population P has an attribute A. An individual X is a member of P. Therefore, there is a probability corresponding to Q that X has A. Simple induction It comes from a premise of a small sample to a conclusion about another individual: A proportion Q of the known population P has an attribute A. Individual I is a member of P. Hence there is a probability corresponding to Q that I has A. Argument from analogy This process involves taking into account the shared properties of one or more things and from there infer that they also share other properties. P and Q are similar with respect to properties a, b and c. Then Q probably also has the property x. Casual inference A casual inference draws a conclusion about a causal connection based on the conditions of the existence of an effect. Premises on the correlation of two things may indicate a causal relationship between them, but other factors must be established to be confirmed. Prediction We come to a conclusion about an individual future from a past sample. Deductive method In this process reasoning starts from one or more statements to arrive at a conclusion. The deduction connects the premises with the conclusions; If all premises are true, the terms are clear and the rules of deduction are used, the conclusion must be true. In a deduction, one begins with a general argument or hypothesis and examines the possibilities

to arrive at a specific and logical conclusion. The scientific method uses deduction to test hypotheses and theories. An example of a deductive argument is as follows: All men are mortal. The individual  $x$  is a man. Therefore, the individual  $x$  is mortal. Types of deductive reasoning Law of detachment A single statement is made and a hypothesis  $P$  is proposed. The conclusion  $Q$  is deduced from this argument and its hypothesis:

**5: What is the Difference Between Inductive and Deductive Reasoning?**

*In the TEFL classroom, inductive and deductive teaching methods are two different approaches used in teaching grammar. Inductive teaching (sometimes known as inquiry or discovery teaching) involves giving the students examples of language and working with them to come up with grammatical rules.*

**Deductive and Inductive Arguments** When assessing the quality of an argument, we ask how well its premises support its conclusion. More specifically, we ask whether the argument is either deductively valid or inductively strong. An argument in which the premises do succeed in guaranteeing the conclusion is called a deductively valid argument. If a valid argument has true premises, then the argument is said also to be sound. All arguments are either valid or invalid, and either sound or unsound; there is no middle ground, such as being somewhat valid. Here is a valid deductive argument: The conclusion follows the word "So". The two premises of this argument would, if true, guarantee the truth of the conclusion. However, we have been given no information that would enable us to decide whether the two premises are both true, so we cannot assess whether the argument is deductively sound. It is one or the other, but we do not know which. Here is a mildly strong inductive argument: There is no standard term for a successful inductive argument, but this article uses the term "strong". The argument also will be stronger the more times there were when I did walk by the dog. The argument will be weaker the fewer times I have walked by the dog. It will be weaker if relevant conditions about the past time will be different next time, such as that in the past the dog has been behind a closed gate, but next time the gate will be open. An inductive argument can be affected by acquiring new premises evidence, but a deductive argument cannot be. For example, this is a reasonably strong inductive argument: Today, John said he likes Romona. So, John likes Romona today. The distinction between deductive and inductive argumentation was first noticed by Aristotle. The difference between deductive and inductive arguments does not lie in the words used within the arguments, but rather in the intentions of the arguer. That is, we assess the argument to see whether it is deductively valid and whether it is inductively strong. The concept of deductive validity can be given alternative definitions to help you grasp the concept. Below are five different definitions of the same concept. It is common to drop the word deductive from the term deductively valid: An argument is valid if the truth of all its premises forces the conclusion to be true. An argument is valid if it would be inconsistent for all its premises to be true and its conclusion to be false. An argument is valid if its conclusion follows with certainty from its premises. An argument is valid if it has no counterexample, that is, a possible situation that makes all the premises true and the conclusion false. Some analysts prefer to distinguish inductive arguments from "conductive" arguments; the latter are arguments giving explicit reasons for and against a conclusion, and requiring the evaluator of the argument to weigh these competing considerations, that is, to consider the pros and cons. This article considers conductive arguments to be a kind of inductive argument. The noun "deduction" refers to the process of advancing or establishing a deductive argument, or going through a process of reasoning that can be reconstructed as a deductive argument. Although inductive strength is a matter of degree, deductive validity and deductive soundness are not. In this sense, deductive reasoning is much more cut and dried than inductive reasoning. Nevertheless, inductive strength is not a matter of personal preference; it is a matter of whether the premise ought to promote a higher degree of belief in the conclusion. Think of sound deductive arguments as squeezing the conclusion out of the premises within which it is hidden. For this reason, deductive arguments usually turn crucially upon definitions and rules of mathematics and formal logic. Consider how the rules of formal logic apply to this deductive argument: That argument is valid due to its formal or logical structure. Here is the form of any argument having the structure of modus ponens: P If P, then Q So, Q The capital letters should be thought of as variables that can be replaced with declarative sentences, or statements, or propositions, namely items that are true or false. The investigation of logical forms that involve whole sentences and not their subjects and verbs and other parts is called Propositional Logic. The question of whether all, or merely most, valid deductive arguments are valid because of their logical structure is still controversial in the field of the philosophy of logic, but that question will not be explored further in this

article. Inductive arguments can take very wide-ranging forms. Some have the form of making a claim about a population or set based only on information from a sample of that population, a subset. Other inductive arguments draw conclusions by appeal to evidence, or authority, or causal relationships. There are other forms. Here is a somewhat strong inductive argument having the form of an argument based on authority: The police said John committed the murder. So, John committed the murder. The witness said John committed the murder. Here is a stronger inductive argument based on better evidence: Two independent witnesses claimed John committed the murder. John confessed to the crime. From the barest clues, the English detective Sherlock Holmes cleverly "deduced" who murdered whom, but actually he made only an educated guess. Strictly speaking, he produced an inductive argument and not a deductive one. Charles Darwin, who discovered the process of evolution, is famous for his "deduction" that circular atolls in the oceans are actually coral growths on the top of barely submerged volcanoes, but he really performed an induction, not a deduction. Proofs that make use of mathematical induction typically take the following form: Property P is true of the natural number 0. When such a proof is given by a mathematician, and when all the premises are true, then the conclusion follows necessarily. Therefore, such an inductive argument is deductive. It is deductively sound, too. The difference does not have to do with the content or subject matter of the argument, nor with the presence or absence of any particular word. Indeed, the same utterance may be used to present either a deductive or an inductive argument, depending on what the person advancing it believes. Consider as an example: Dom Perignon is a champagne, so it must be made in France. It might be clear from context that the speaker believes that having been made in the Champagne area of France is part of the defining feature of "champagne" and so the conclusion follows from the premise by definition. If it is the intention of the speaker that the evidence is of this sort, then the argument is deductive. He or she may merely believe that nearly all champagne is made in France, and may be reasoning probabilistically. If this is his or her intention, then the argument is inductive. As noted, the distinction between deductive and inductive has to do with the strength of the justification that the arguer intends that the premises provide for the conclusion. Another complication in our discussion of deduction and induction is that the arguer might intend the premises to justify the conclusion when in fact the premises provide no justification at all. Here is an example: All odd numbers are integers. All even numbers are integers. Therefore, all odd numbers are even numbers. Therefore, this argument is still deductive. It is not inductive. Given a set of premises and their intended conclusion, we analysts will ask whether it is deductively valid, and, if so, whether it is also deductively sound. If it is not deductively valid, then we may go on to assess whether it is inductively strong. We are very likely to use the information that the argument is not deductively valid to ask ourselves what premises, if they were to be assumed, would make the argument be valid. Then we might ask whether these premises were implicit and intended originally. Similarly, we might ask what premises are needed to improve the strength of an inductive argument, and we might ask whether these premises were intended all along. If so, then we change our mind about what argument existed was back in the original passage. So, the application of deductive and inductive standards is used in the process of extracting the argument from the passage within which it is embedded. The process goes like this: Extract the argument from the passage; assess it with deductive and inductive standards; perhaps revise the decision about which argument existed in the original passage; then reassess this new argument using our deductive and inductive standards. Implicit premises and implicit features of explicit premises can play important roles in argument evaluation. Suppose we want to know whether Julius Caesar did conquer Rome. In response, some historian might point out that it could be concluded with certainty from these two pieces of information: Caesar was the general of the Roman Legions in Gaul at that time. That would produce a valid argument. But now notice that, if "at that time" were missing from the second piece of information, then the argument would not be valid. Maybe Caesar was the general at one time, but Tiberius was the general at the time of the river crossing and Rome conquering. See also the articles on "Argument" and "Validity and Soundness" in this encyclopedia. Author Information The IEP is actively seeking an author who will write a more elaborate replacement article. An encyclopedia of philosophy articles written by professional philosophers.

### 6: Inductive vs Deductive Methods in TEFL

*By nature, inductive reasoning is more open-ended and exploratory, especially during the early stages. Deductive reasoning is more narrow and is generally used to test or confirm hypotheses. Most social research, however, involves both inductive and deductive reasoning throughout the research process.*

Deductive Language Teaching and Learning Inductive and deductive language teaching and learning are very important in education. They are two distinct and opposing instructional and learning methods or approaches. The biggest differences between the two methods are the focus and flow of information as well as the roles of the teacher and student. Inductive teaching and learning means that the direction of the flow of information is from specific to general. In terms of teaching, the lesson is started with activities or experiments. It is mostly focused on the students and their capacities and abilities, rather than on the teacher. There are many advantages of inductive teaching and learning; knowledge is acquired naturally by exposure, and students are encouraged to utilize their reasoning skills, prior knowledge, intelligence, and mental focus. This method also measures how a student makes connections based on the information presented. Concepts under this method can be personalized and easily remembered and understood. Inductive teaching is perfectly suited for a small group of students with a competent and experienced teacher who knows how to make adjustments throughout the lesson. The counterpart of inductive teaching and learning is deductive teaching and learning. The flow of information in this method is from general to specific. The deductive method is the traditional method of teaching and learning. Knowledge is taken from a general reference or source and then communicated to the learner. Information is based on facts, statements, and pre-determined logic. The method is easy to apply, leaves little room for mistakes, and the information being taught is valid. There is also a clear and defined scope; the method requires little preparation on the part the teacher. However, deductive teaching also has its disadvantages, which include a very structural and predictable flow. This method also leaves little room for interaction, which makes is most effective for larger groups of students. In terms of application in language, both methods are applied in different language modes, concepts, and instances. For example, the inductive method is applied in developing a story or work. On the other hand, the deductive method can be useful in explaining literary work. Deductive and inductive methods of teaching and learning differ in many aspects. In inductive learning, the flow of information is from specific to general, and it is more focused on the student. The deductive method introduces a concept and its process before applying it in a test or activity. Meanwhile, in the inductive method, the activity or test is introduced first before a discussion of the concept is initiated. The deductive method is used in a large classroom setting, while the inductive method is effective when used on small groups of students. The deductive method is traditional, structured, and predictable, while the inductive method is personalized, and the concepts are easily remembered and understood. If you like this article or our site. Please spread the word.

## 7: Social Research Methods - Knowledge Base - Deduction & Induction

*3 Research Methods Research Types Deductive Approach Inductive Approach In research, we often refer to the two broad methods of reasoning as the deductive and inductive approaches.*

May or may not be valid. Structure Goes from specific to general Goes from general to specific Draws inferences with Probability Definition of Inductive Reasoning In research, inductive reasoning alludes to the logical process, in which specific instances or situations are observed or analysed to establish general principles. In this process, the multiple propositions are believed to provide strong evidence, for the truth of the conclusion. It is used to develop an understanding, on the basis of observing regularities, to ascertain how something works. These are uncertain arguments; that describes the extent to which the conclusions drawn on the basis of premises, are credible. In inductive reasoning, there are certain possibilities that the conclusion drawn can be false, even if the all the assumptions are true. The reasoning vests on experience and observations that support the apparent truth of the conclusion. Further, the argument can be strong or weak, as it only describes the likelihood of the inference, to be true. Definition of Deductive Reasoning Deductive Reasoning means a form of logic in which specific inferences are drawn from multiple premises general statements. It establishes the relationship between the proposition and conclusion. When all the proposed statements are true, then the rules of deduction are applied and the result obtained is inevitably true. Deductive logic is based on the fundamental law of reasoning, i. It implies the direct application of available information or facts, to come up with new information or facts. In this, the researcher takes into account a theory and generates a hypothesis, which can be tested, after that the observation are recorded, which leads to particular data, which is nothing but the confirmation of validity. Key Differences Between Inductive and Deductive Reasoning The points provided below, clarifies the difference between inductive and deductive reasoning in detail: The argument in which the premises give reasons in support of the probable truth of the conjecture is inductive reasoning. The elementary form of valid reasoning, wherein the proposition provide the guarantee of the truth of conjecture, is deductive reasoning. The initial point of inductive reasoning is the conclusion. On the other hand, deductive reasoning starts with premises. The basis of inductive reasoning is behaviour or pattern. Conversely, deductive reasoning depends on facts and rules. Inductive reasoning begins with a small observation, that determines the pattern and develops a theory by working on related issues and establish the hypothesis. In contrast, deductive reasoning begins with a general statement, i. In inductive reasoning, the argument supporting the conclusion, may or may not be strong. On the contrary, in deductive reasoning, the argument can be proved valid or invalid. Inductive reasoning moves from specific to general. Unlike, deductive reasoning moves from general to particular. In inductive reasoning, the inferences drawn are probabilistic. As opposed, in deductive reasoning, the generalisation made are necessarily true, if the premises are correct. Conclusion To sum up, inductive and deductive reasoning are the two kinds of logic, which are used in the field of research to develop the hypothesis, so as to arrive at a conclusion, on the basis of information, which is believed to be true. Inductive reasoning considers events for making the generalization. In contrast, deductive reasoning takes general statements as a base to arrive at an particular conclusion.

## 8: Deductive, Inductive and Abductive Reasoning - TIP Sheet - Butte College

*A deductive argument is one in which true premises guarantee a true conclusion. In other words, it is impossible for the premises to be true but the conclusion false. Thus, the conclusion follows necessarily from the premises and inferences.*

What is deductive Bible study? Using an inductive method, students take a verse or a passage, break it down, and examine its details to draw out the meaning. There are two kinds of reasoning: Deductive reasoning moves from the general to the specifics. Inductive reasoning moves the other way, from the specific to the general. Deductive reasoning starts with a general or universal statement and then goes looking for details to support it in order to make a specific application. Bob is a man. Therefore, Bob is mortal. If the general starting statement and the second statement are true, then the specific application is also true. If either is false, then the specific application is invalid. Inductive reasoning starts with the details and moves to a general conclusion. To illustrate, suppose a man has a bag full of objects and he pulls out one red stone from the bag. The next thing he pulls out is also a red stone, and so on. After four or five times of extracting a red stone, the man concludes that the bag is full of red stones. Inductive Bible study does the opposite. It starts with the details of Scripture and then builds a general or universal statement based on those details. He might cite Romans 5: If he finds that Scripture does indeed support his premise that sin leads to death, he can then make a more specific application: A weakness of the deductive method of Bible study has already been mentioned: The Bible mentions Michael the archangel Jude 1: In fact, the Bible never says that all angelic beings have wings; some angels do, but perhaps not all of them. Deductive Bible study, to be beneficial, must begin with a universal truth rooted in Scripture. If we begin with conjecture or our own ideas, then we end up with a possible falsehood. When misused, deductive Bible study takes on aspects of a priori reasoning and biblical eisegesis. Obviously, such a practice is dangerous and irresponsible because the conclusions that one might draw are often premature, subjective, and false. When used properly, deductive Bible study is akin to topical Bible study. We take a general topic, such as the love of God, and find all that the Bible or a book of the Bible says on that subject. From those gathered details, we can draw a conclusion. In this way, deductive Bible study is a useful tool in studying broad topics of Scripture.

**9: Difference Between Inductive and Deductive Reasoning (with Comparison Chart) - Key Differences**

*Deductive steps are taken regarding the use of induction, inductive steps are taken in reaching patterns from practice, deductive steps are taken in identifying sample pools, and so on.*

Three methods of reasoning are the deductive, inductive, and abductive approaches. Deductive reasoning moves from the general rule to the specific application: In deductive reasoning, if the original assertions are true, then the conclusion must also be true. For example, math is deductive: As a matter of fact, formal, symbolic logic uses a language that looks rather like the math equality above, complete with its own operators and syntax. But a deductive syllogism think of it as a plain-English version of a math equality can be expressed in ordinary language: If entropy disorder in a system will increase unless energy is expended, And if my living room is a system, Then disorder will increase in my living room unless I clean it. In the syllogism above, the first two statements, the propositions or premises, lead logically to the third statement, the conclusion. Here is another example: A medical technology ought to be funded if it has been used successfully to treat patients. Adult stem cells are being used to treat patients successfully in more than sixty-five new therapies. Adult stem cell research and technology should be funded. A conclusion is sound true or unsound false , depending on the truth of the original premises for any premise may be true or false. At the same time, independent of the truth or falsity of the premises, the deductive inference itself the process of "connecting the dots" from premise to conclusion is either valid or invalid. The inferential process can be valid even if the premise is false: There is no such thing as drought in the West. California is in the West. California need never make plans to deal with a drought. In the example above, though the inferential process itself is valid, the conclusion is false because the premise, There is no such thing as drought in the West, is false. A syllogism yields a false conclusion if either of its propositions is false. A syllogism like this is particularly insidious because it looks so very logical—it is, in fact, logical. But whether in error or malice, if either of the propositions above is wrong, then a policy decision based upon it California need never make plans to deal with a drought probably would fail to serve the public interest. Assuming the propositions are sound, the rather stern logic of deductive reasoning can give you absolutely certain conclusions. However, deductive reasoning cannot really increase human knowledge it is nonampliative because the conclusions yielded by deductive reasoning are tautologies-statements that are contained within the premises and virtually self-evident. Therefore, while with deductive reasoning we can make observations and expand implications, we cannot make predictions about future or otherwise non-observed phenomena. You could say that inductive reasoning moves from the specific to the general. Much scientific research is carried out by the inductive method: Conclusions reached by the inductive method are not logical necessities; no amount of inductive evidence guarantees the conclusion. This is because there is no way to know that all the possible evidence has been gathered, and that there exists no further bit of unobserved evidence that might invalidate my hypothesis. Thus, while the newspapers might report the conclusions of scientific research as absolutes, scientific literature itself uses more cautious language, the language of inductively reached, probable conclusions: What we have seen is the ability of these cells to feed the blood vessels of tumors and to heal the blood vessels surrounding wounds. The findings suggest that these adult stem cells may be an ideal source of cells for clinical therapy. For example, we can envision the use of these stem cells for therapies against cancer tumors [ Rather, they are cogent: Nor are inductive arguments simply false; rather, they are not cogent. It is an important difference from deductive reasoning that, while inductive reasoning cannot yield an absolutely certain conclusion, it can actually increase human knowledge it is ampliative. It can make predictions about future events or as-yet unobserved phenomena. For example, Albert Einstein observed the movement of a pocket compass when he was five years old and became fascinated with the idea that something invisible in the space around the compass needle was causing it to move. This observation, combined with additional observations of moving trains, for example and the results of logical and mathematical tools deduction , resulted in a rule that fit his observations and could predict events that were as yet unobserved. Abductive reasoning yields the kind of daily decision-making that does its best with the information at hand, which often

is incomplete. A medical diagnosis is an application of abductive reasoning: Likewise, when jurors hear evidence in a criminal case, they must consider whether the prosecution or the defense has the best explanation to cover all the points of evidence. While there may be no certainty about their verdict, since there may exist additional evidence that was not admitted in the case, they make their best guess based on what they know. While cogent inductive reasoning requires that the evidence that might shed light on the subject be fairly complete, whether positive or negative, abductive reasoning is characterized by lack of completeness, either in the evidence, or in the explanation, or both. A patient may be unconscious or fail to report every symptom, for example, resulting in incomplete evidence, or a doctor may arrive at a diagnosis that fails to explain several of the symptoms. Still, he must reach the best diagnosis he can. The abductive process can be creative, intuitive, even revolutionary. Nevertheless, he appears to have been right-until now his remarkable conclusions about space-time continue to be verified experientially. Thagard, Paul and Cameron Shelley. Logic, visual thinking, and coherence. Philosophy Department, University of Waterloo,

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