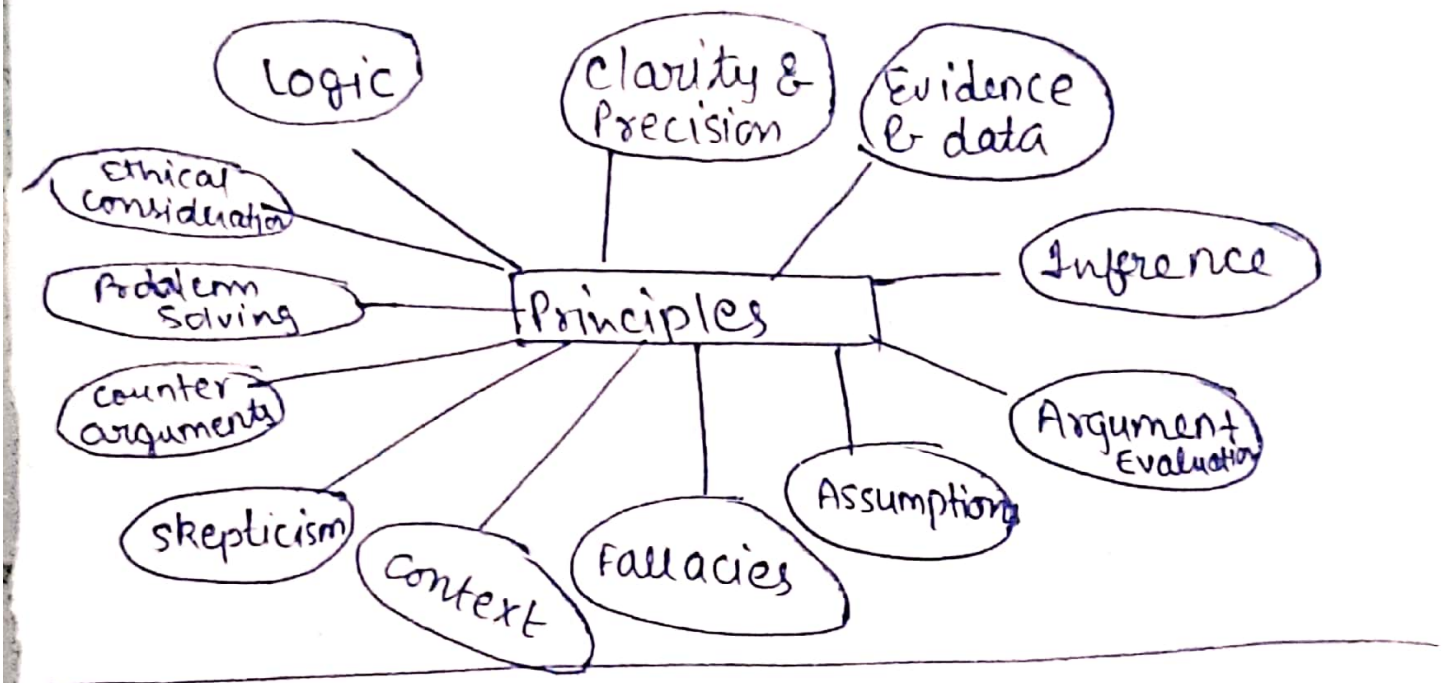
# CRST

**Critical Reasoning** - Fundamental cognitive skill hai jo involve karti hai ability logically think karne ki, Evaluate karti hai arguments and well informed decisions lene mai!!




1. **Logic** - Study of valid Reasoning, Provide Karta hai structured framework or Evaluate Karta hai arguments inference bnala hai conclusion nikalta hai premises se.

2. **Clarity & precision** - Baton mein sentences mein clarity honi chaiee, Ambiguity & vagueness in language misunderstanding create karta hai.

3. Evidence & Data - Evidence hone chaiee & data bhi apni arguments & conclusions ko support karne ke lie.

4. Infrences - Conclusion or judgement jo evidence & reasoning se nikaalte hai yeh reasonable & well supported Infrences dete hai & avoid karte hai unwarrented assumptions ko.

5. Arguments Evaluation - Evaluate karti hai arguments ko unki strength & validy ko determine karti hai.

6. Assumptions - are unstated beliefs or premises underlie arguments

7. Fallacies - (Errors) lead to flawed arguments

8. context - context (Reason) of issue or problem.

9. Skepticism - questioning information, claims, arguments Rather than accepting them at face value.

10. ~~for~~ Counterarguments - oppose karna ~~jo apki~~ Engage karna un points ko jo samne wale ki baton ko oppose karte h

11. problem solving - formulate karti hai hypothesis, Evaluate evidences & make informed decision.

12. Ethical considerations - moral implication of decisions & actions, justice & well being of individuals & society.

Critical Reasoning Ek systematic approach hai disciplined bhi jo sochti hai decision leti hai, communicate Karti hai

## Types of Reasoning

1. Analyzing - Breakdown Karna argument ko piece of reasoning or pats mein. Identify Karte hai premises, conclusion assumptions or logical structure of argument ko.
   Goal → understand karna Kaise argument Bani hai or sound hai ki valid.

2. Evaluating - acess Karti hai Quality or vaidity of Reasoning determine Karti hai Evidence & logic jo use hue hai argument mein strong or relevent or sufficient hai ki nhi conclusion ko support karne ke lie.

3. Integrated - ability hoti hai ~~argument~~ ko synthesize & integrate karne ki information ko various sources se or critical thinking apply karte hai solve karne ke lie complex and multidimensional problems

include tasks → analyzing data, Evaluate arguments & making decision Based on a combination of Quantitive & Qualitive info.

| uncritical | critical |
| --- | --- |
| • No discipline | • discipline |
| • Not curious to know anything | • curious to know |
| • accepts & think whatever comes to mind witout fact and Evidence | • Assume facts, evidence analyzing the evidence in full detail. |
| • Not look for alternative or relvant info | • Adapat info followed by different approach |
| • closed minded thinking | • open minded |
| • get distract | clear focus. |

Scientific Reasoning - specific form of critical reasoning jo ki scientific inquiry mein use hoti hai. Formulate karti hai hypothesis, Experiments - conduct hote hai, collection & analyzing data, draw & valid conclusion. It emphesizes objectivity & scientific method.

Strategic - planning & making decisions with Goal in mind. Consider karta hai various factors, risks & potential outcomes, often in complex or competitive situations.

Analytical - focuses on breaking down complex problems into simpler for easier understanding & problem solving. Involves using data, statistics, Maths to draw conclusions.

Baises

# UNIT-2

## Arguments

- set of statements (Premises + conclusion)
- premises provide Evidens, Reasons, & grounds for conclusion.
- conclusion is what is being argued for.
- It attempts to draw some logical connection b/w premises & conclusion.
- Express an infrence: a process of Reasoning from the truth of premises to truth of conclusion.

**Premises**

↳ statements being offered in support for the conclusion (Reasons & facts providing ~~facts~~ Evidence for conclusion.)

**Conclusion** - The statement being argued for.

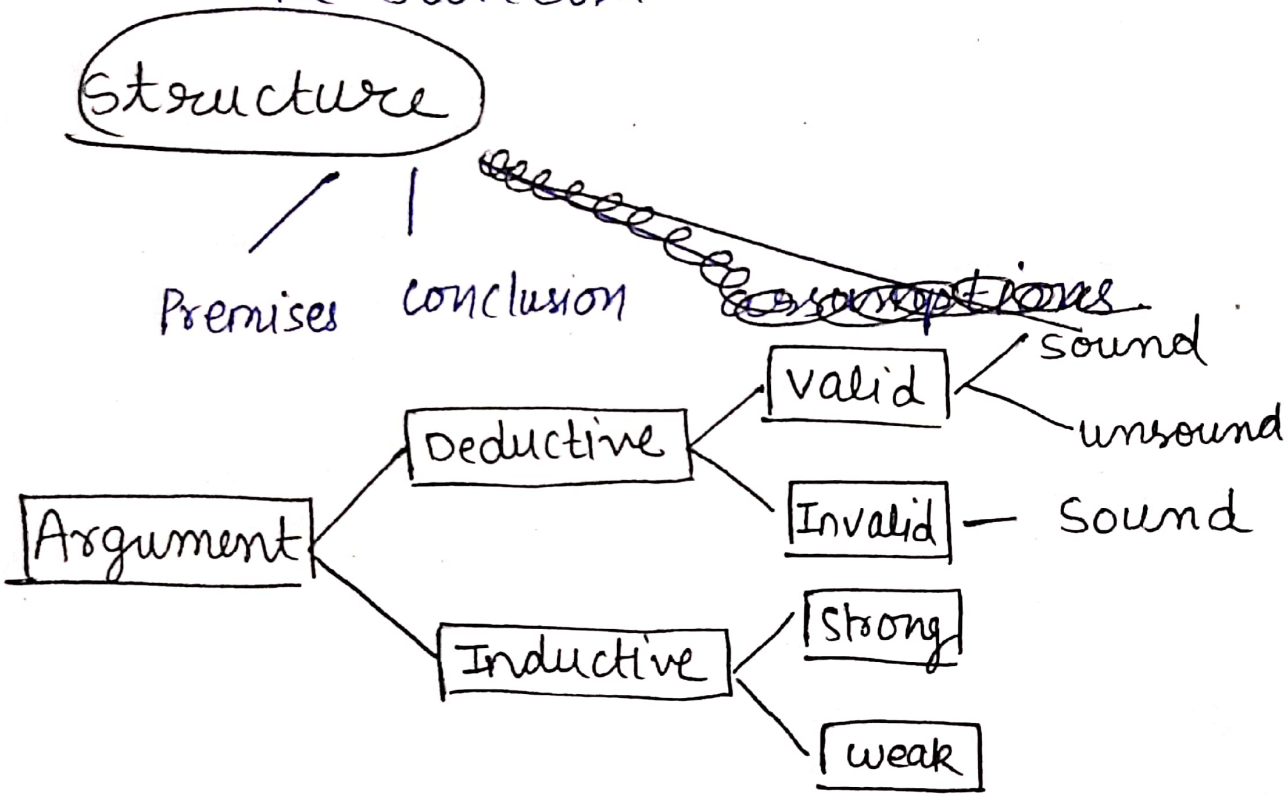
## Statement

↳ can be determined to posses or lack truth. (True or Fals)

**Example**

It is below 40'F outside.

I like Barccoli



## Deductive arguments –

- Structure – ~~It~~ structured in the way that if the premises are true, then the conclusion must also be true. (strict logical pattern)
- Certainity – provide strong certainity. If Premises are true the conclusion is garunteed to be true. No room of Error.

Ex: Premise 1: All men are mortal.
Premis 2: Socrates is man
conclusion: Socrates is mortal

## Inductive :

- Structured in a way that the premise provide Evidence or support for the conclusion, conclusion is not garunteed to be true. (Probabilistic)
- Provide weaker certainity If Premises are true, there is always some level of uncertainity associated with conclusion.
- Example :
  Prenise : the sun has risen in the East everyday as long as we can remember.
  Conclusion: the sun will rise in East tomorrow.

## Valid

- when the conclusion logically follow from its premises.
  the premises are true, the conclusion must be true. It has sound logical structure.
- It'n not about truth but it's about the logical Relationship between Premises and conclusion.
- can have both true or false premises but as long as the structure is valid it ensures that if the premises are true, the conclusion must be true.

## Invalid :-

- An argument is invalid when condition doesn't logically follow from the premises if premises are true, the conclusion can still be false
- fails to Establish the truth of its conclusion Based on its premises.

Ex: Premise 1 : All cats have tails.
Premi's 2 : Fluffy has a tail
conclusion : Fluffy is a cat.

## Sound argument

- valid & has all true premises.

**Validity**: Premises (true) → conclusion (true)

**Truth of premises**: must be true statements or facts

Ex
- not only logically correct but also based on accurate & reliable information.

Ex: Premises 1: All humans are mammals.
Premises 2: John is a human.
Conclusion: Therefore john is a mammal.

## unsound

- ya to invalid hota hai ya 1 ya 1 se jyada false premises ho skte hai!! (done cheeze bhi ho skte hai)
- logical flaw ho skta hai ya false information hoti hai.
- cannot be relied upon to provide a valid or true conclusion.

for Exp Pr 1: All birds can swim underwater
Pr 2: Penguins are Birds.
conclusion: Penguins can fly.

| Describe | Explain |
| --- | --- |
| • Answers Questions like what, when, where, who. | Answers Question like How and why |
| • Req Good observation skills. | • Req both observation & analytical skills. |
| • Focous on presenting the information about subject. | Focous on underlying Principles or mechanism. |

## Illustrations

↳ visual representations (in the form of drawing, Pictures or other visual aids) used to clarify Explain or Enhance the understanding of concept, idea, Process or object.

↳ commonly used in various forms of communications. including textbooks, Education materials, books, Presentation websites and More.

↳ Primary Goal to make complex or abstract concepts more accessible & comprehensible to audience.

## Summary

↳ concise & condensed version of a longer text, document speech or piece of content that captures main points key ideas & Essential info whil ommiting unnecen - ~~informa~~ details. & Examples.

↳ It capture the Essence of the original content accurately & impartially. avoid personal opinions and interpretations.

↳ It should be clear & well organized & vary in length depending on depth of information.