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BIOLOGY GRADE 12 LESSON 9

UNIT FIVE SUMMARY

LEARNED(AQUIRED) BEBAVIOR = Part 2

:- operant conditioning

:- latent learning

:- insight learning

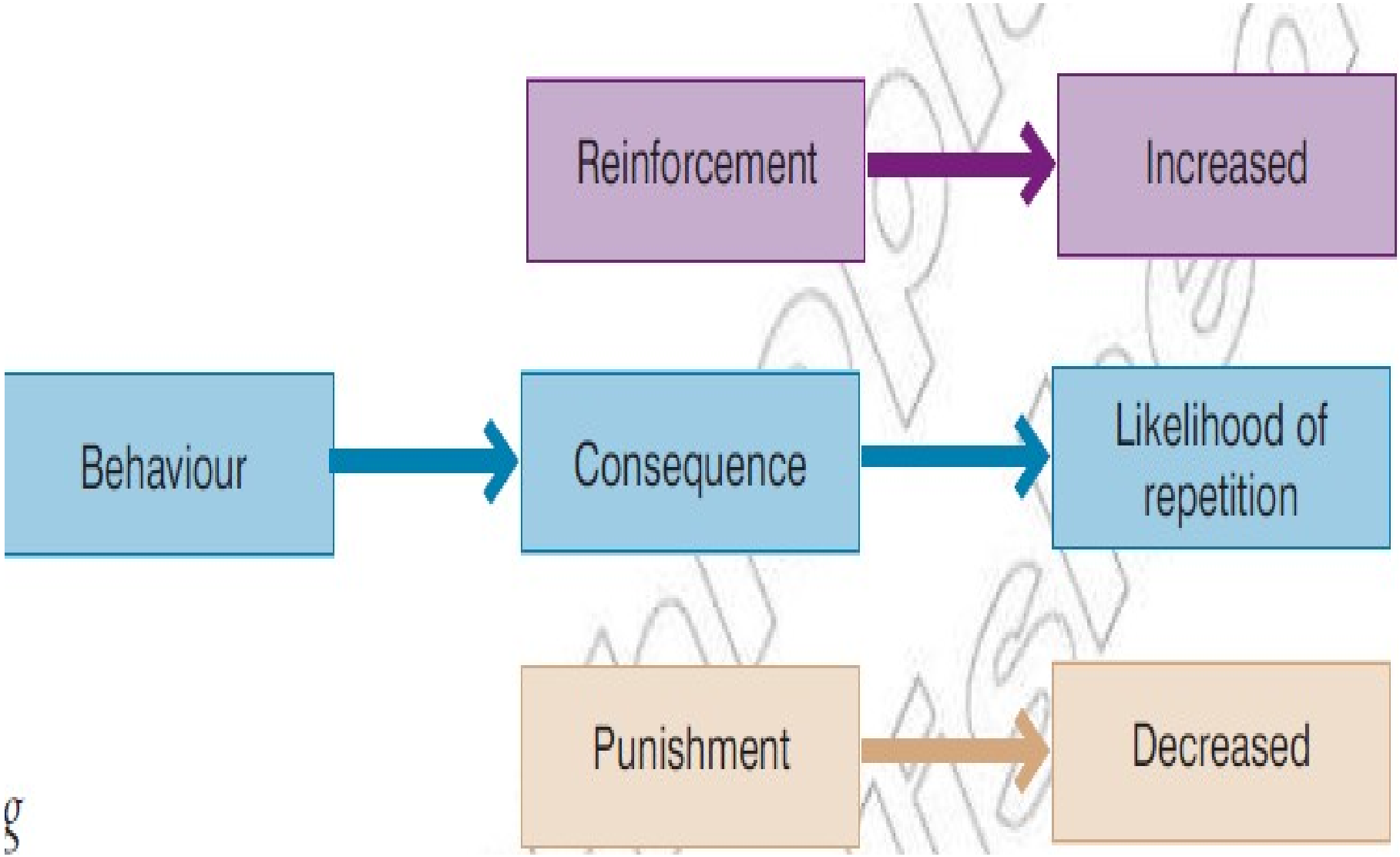
BY: ADDIS ABABA EDUCATION BUREAU

June 2020

Operant conditioning

- This is training an animal behavior by associating with a consequence (reward / punishment).
- It involves modifying an innate response by pairing it with a previously neutral stimulus.
- It is the result of trial and error.
- It is a condition in which an animal forms association between a particular behavior and a result that reinforce the behavior.
- A reinforce :-is a stimulus that alters the probability of a behavior being repeated.

Operant conditioning



- **The term operant conditioning was first used by B.F Skinner, a behavioral psychologist.**
- **Skinner identified three types of operant**

1) **Neutral operant :-neither increase nor decrease the probability of a behavior being repeated.**
2) **Reinforcers :- increase the probability of a behavior being repeated. Reinforcers can be either positive or negative.**
3) **Punishers :- responses from the environment that decrease the probability of the behavior being repeated.**

Skinner's box



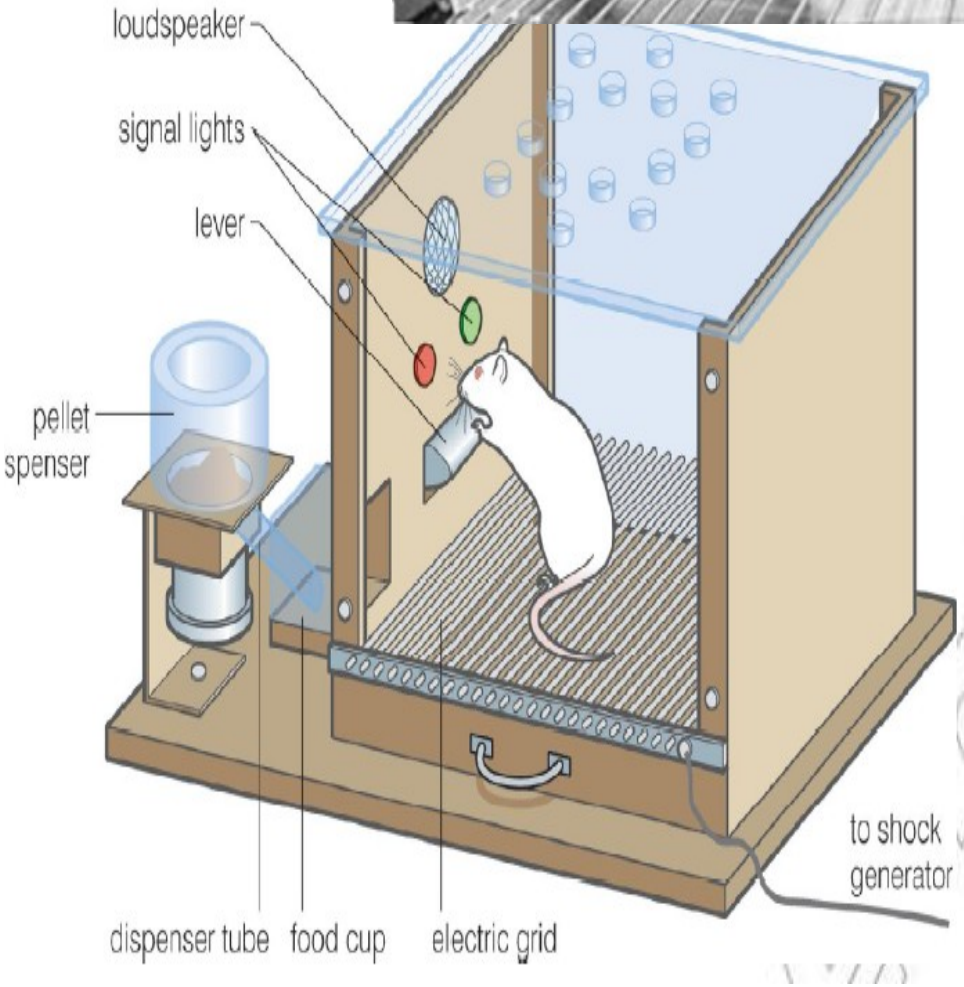
- Skinner has conducted a research on rats
- He used different stimuli like

:- different colored lights

:- a speaker to deliver sound stimuli

:-an electric grid in the floor to deliver mild electric shock

:- there is also a lever that the animal can press which is linked to the delivery of pellets of food (reward)



Shaping

- Animal trainers use this technique which is based on operant conditioning to perform in a specific ways.
- Each step in the learning process is called approximation.
- Examples :- training guide dogs for blind





TRAINING HORSES





TRAINING DOLPHINS











TRAINING ZOO ANIMALS













LATENT (HIDDEN) LEARNING

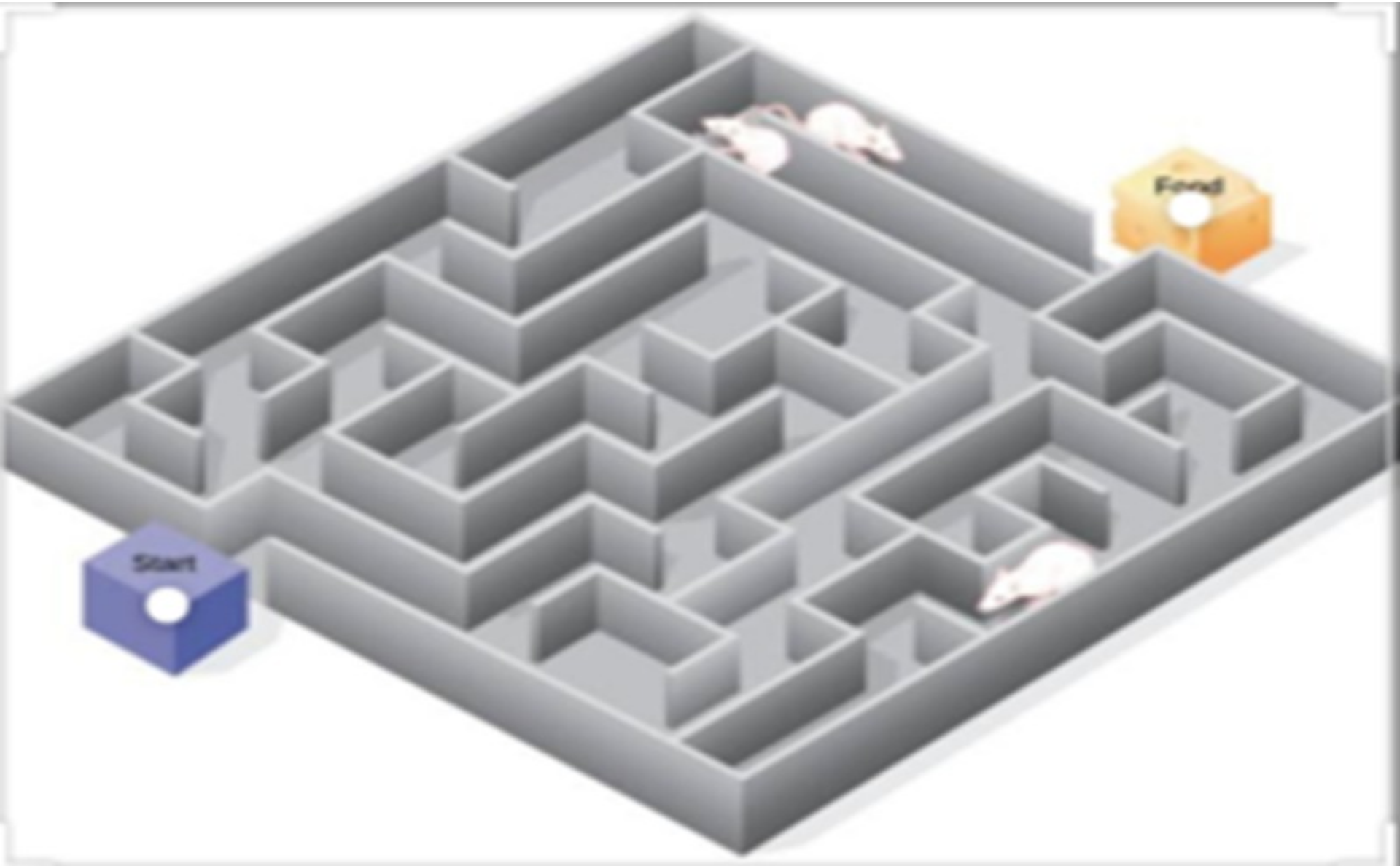
- **Latent learning :-is the subconscious retention of information without reward or reinforcement.**
- **The response is seen when it is needed.**
- **Proposed by Edward Tolman in 1938.**
- **The research was conducted on 3 groups of rats**
- **Group 1 = rewarded at the end of maze**

  -learned more quickly
- **Group 2 = only rewarded on 10th day**

  -demonstrated learning after receiving a reward
- **Group 3 = never rewarded**

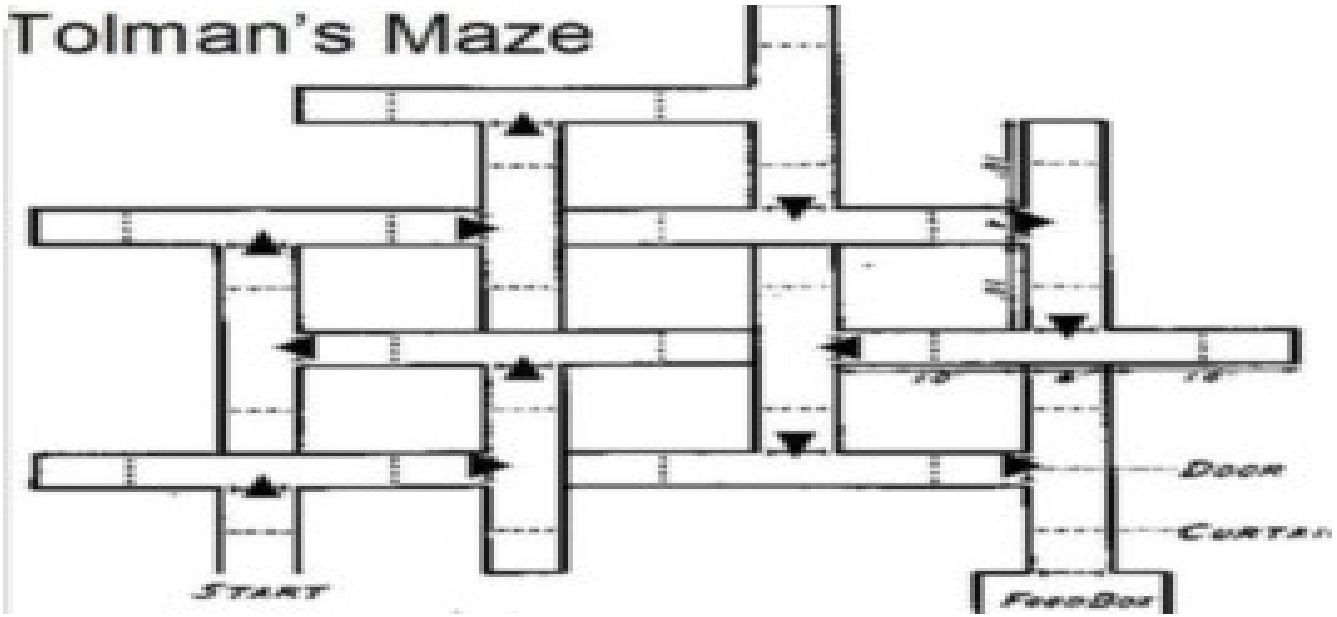
  - did not learn maze wells

Tolman's maze



Examples :-

- **a person is taught how to use a computer, but does not do so until given one as a gift.**
- **A dog is taught to sit, but does not do so until offered a treat as a reward.**



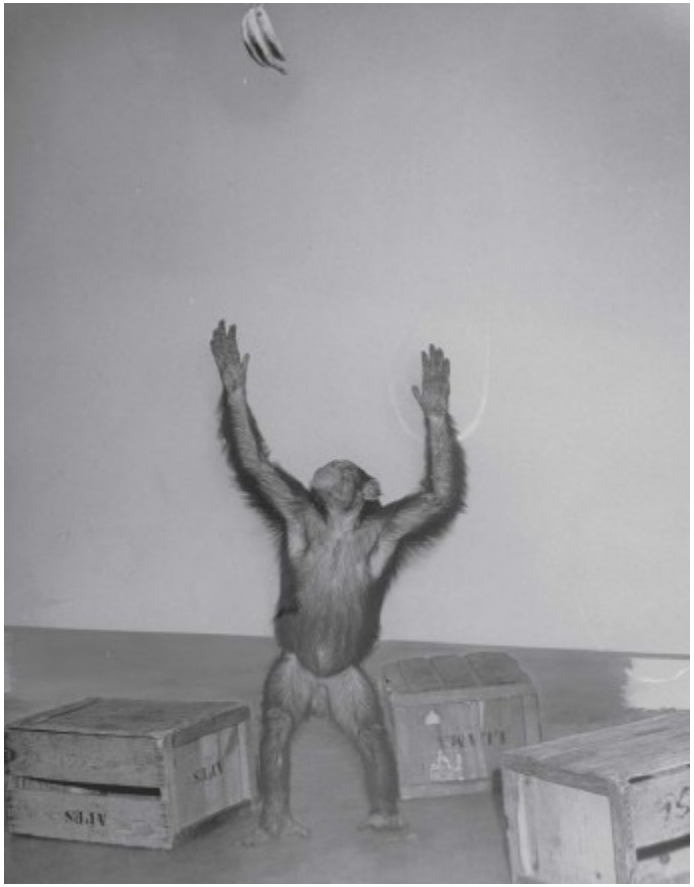
INSIGHT LEARNING

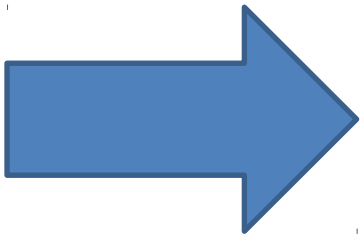
- It involves finding solutions to problems that are not based on actual experience.
- A sudden problem solving behavior of organisms.
- The solution appears almost “out of nowhere”. The “eureka” moment.
- Is the highest form of learning.
- It does not result from immediate trial and error.
- Learning based on information previously learned by other individual behavioral activities.
- it is based on thought and reasoning.

Wolfgang Kohler's experiment on chimpanzee

1. He put the chimpanzee in an enclosed area.
2. Kohler put desirable fruit outside the enclosure and out of their reach.
3. He placed a variety of objects that could be used to obtain it inside the enclosure.
4. The chimpanzee learned to use boxes to obtain bananas placed on the top of the enclosure.
5. The chimpanzee dragged the boxes under the banana and climbed on them to reach the fruit.

Example:- research of Wolfgang Kohler on chimpanzee

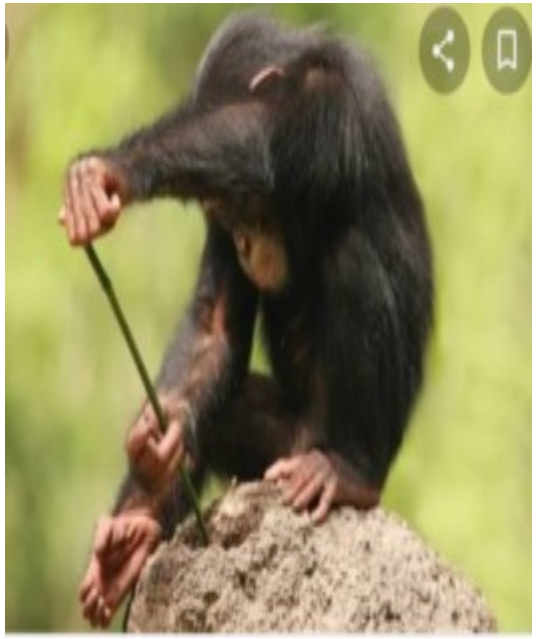












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