

Class 6 Science / Chapter 10: Living Creatures: Exploring their Characteristics

Curiosity Grade 6 / Notes + Activities ke Jawab / Notes by Abhishek Sir

1. Jeevit aur Nirjeev (Living and Non-living)

Avadhi ko ek shell mila. Uski mummy ne bataya ki shell kisi zinda ghonghe (snail) ka sharir ka hissa ho sakta hai. Jo cheez hilti nahi wo bhi jeevit ho sakti hai. Jeevit-nirjeev ko pehchanne ke liye hum khud ko car se compare kar sakte hain: car chalti hai par badhti nahi, saans nahi leti.

2. Jeevit praniyon ki visheshtayein (8 characteristics)

Characteristic	Matlab	Paudhon me example
Movement (gati)	Hilna-dulna	Phool khulna, Drosera ke baal keede ko pakadte hain, bel lipatna
Nutrition (poshan)	Khana, jisse vikas aur energy	Paudhe bhi khana banate hain
Growth (vridhi)	Aakar badhna	Paudhe ka bada hona
Respiration (saans)	Hawa andar-baahar; sabhi jeev karte hain	Patton ke chhed stomata se
Excretion	Kachra baahar nikalna (pasina, peshaab)	Patton par paani ki boondein (ghaas, gulab)
Response to stimuli	Kisi cheez par pratikriya	Chhui-mui chhoone par patte band; amla ke patte shaam ko jud jaate
Reproduction	Apne jaise naye jeev paida karna (jeevan ki nirantarta)	Beej se naya paudha
Death	Saari gatividhiyan band ho jaana	Paudha sookh jaata hai

Stimulus kya hai?

- Koi bhi cheez ya ghatna jo jeev ko pratikriya (response) karne par majboor kare.
- Example: kaanta chubhna, garam chai chhoona, roshni.

Dhyan rakho

- Jo cheez ye saari visheshtayein na dikhaye wo **nirjeev** hai.
- Jeev ke paas khana-hawa-paani ho phir bhi wo koi gun na dikhaye to wo **mrit (dead)** hai.
- **Beej (seed)** jeevit hai kyunki sahi halat me ugta aur badhta hai.

Trick / Yaad rakhne ka tareeka

- **M-N-G-R-E-S-R-D**: Movement, Nutrition, Growth, Respiration, Excretion, Stimulus response, Reproduction, Death.
- Car chalti hai par badhti nahi aur sans nahi leti, isliye nirjeev.

3. Beej ke ugne (Germination) ki shartein

Beej se paudha banne ko **germination** kehte hain. Activity 10.2 me 4 pots: **A** (dhoop, paani nahi), **B** (dhoop, bahut zyada paani), **C** (andhere me, geeli mitti), **D** (dhoop me, geeli mitti).

Pot	Air	Sunlight	Water	Germination?	Karan
A	Haan	Haan	Nahi	Nahi	Paani ke bina seed coat naram nahi hota
B	Nahi (paani me dooba)	Haan	Bahut zyada	Nahi	Mitti ke chhedon me hawa nahi bachti
C	Haan	Nahi	Sahi matra	Haan	Bean ke liye roshni zaroori nahi
D	Haan	Haan	Sahi matra	Haan	Hawa aur paani dono sahi

Nishkarsh

- Paani seed coat ko naram karta hai aur embryo ko badhne me madad karta hai.
- Hawa (mitti ke kano ke beech se) saans ke liye.
- Roshni zyadatar beejon ke liye **zaroori nahi** (par ugne ke baad paudhe ko chahiye). Coleus, Petunia ko roshni chahiye; Calendula, Zinnia ko andhera.

4. Paudhon me vridhi aur gati

Activity 10.3: Upright paudhe me root neeche, shoot oopar badhta hai. Ulte (inverted) paudhe me bhi root mudkar neeche aur shoot mudkar oopar jaata hai. Agar roshni ek hi taraf se aaye to shoot roshni ki taraf mudta hai, root neeche hi jaata hai. Shoot oopar aur roshni ki taraf, root neeche. J.C. Bose ne crescograph banaya jisse paudhon ki growth aur stimuli par response naapa.

5. Paudhe ka life cycle

Seed → germination → patte → phool → phal (pod me seeds) → naye paudhe. Phal ke baad paudha peela hokar sookh jaata hai. Seeds se phir naya cycle chalta hai.

6. Janwaron ka life cycle

Machhar (mosquito) - 4 stages

- Egg → Larva → Pupa → Adult.
- Egg paani par/paas rakhe jaate hain, isliye ruka hua paani na hone do.
- Larva aur pupa paani me rehte hain par saans lene sateh par aate hain.
- Mitti ka tel (kerosene) paani par parat bana kar hawa rok deta hai, larva-pupa marr jaate hain.
- Adult 10-15 din jeeta hai.
- Silk moth ki bhi 4 stages hain; larva dhaaga banakar lapetta hai, wahi silk hai.

Mendhak (frog) - 4 stages

- Egg (spawn) → Embryo → Tadpole (pehle pooch, phir pair) → Froglet → Adult frog.
- Spawn = mendhak ke anday ka jelly jaisa samuh.
- Tadpole ki pooch tairne me madad karti hai; adult me pooch gayab aur pair mazboot (koodne ke liye).
- Adult paani aur zameen dono par rehta hai.

7. Activities ke Jawab

Q. Activity 10.1 - Table 10.1 (jeevit/nirjeev)

Ans. Pencil - Nirjeev (badhti nahi, saans nahi leti); Book - Nirjeev; Pigeon - Jeevit (khata, saans leta, badhta hai); Car - Nirjeev; Plant - Jeevit (badhta, saans leta, response karta).

Q. Kya sirf chalne se koi cheez jeevit ho jaati hai?

Ans. Nahi. Car bhi chalti hai par badhti nahi, khata nahi. Aur paudhe ek jagah se doosri jagah nahi chalte par phir bhi jeevit hain, kyunki unme doosri visheshtayein hain.

Q. Seed jeevit hai ya nirjeev? Kyun?

Ans. Jeevit. Wo sahi paani-hawa milne par ug sakta hai (growth, respiration), aur naya paudha banata hai.

Q. Activity 10.2 - Pot prediction/observation

Ans. Prediction/observation: A - Nahi ugega, B - Nahi ugega, C - Ugega, D - Ugega. Sirf sahi paani aur hawa chahiye; roshni zaroori nahi.

Q. Activity 10.3 - Table 10.3

Ans. A: shoot oopar, root neeche. **B (ulta):** shoot mudkar oopar, root mudkar neeche. **C (ek taraf se roshni):** shoot roshni ki taraf, root neeche.

Q. Activity 10.4 - Bean ka life cycle

Ans. Seed ugti hai, patte aate hain, phool aate hain (kuch hafton me), phool ke bachhe hisse **phali (pod/fruit)** bante hain jisme seeds hote hain. Phal ke baad paudha peela hokar sookh jaata hai. Naye seeds boye to naya paudha.

Q. Activity 10.5 - Larva ya pupa pehle?

Ans. Larva aur pupa ko alag-alag dibbon me rakho, roz dekho. Larva badalkar pupa banta hai, to larva pehle aata hai. Order: Egg → Larva → Pupa → Adult.

Q. Activity 10.6 / Table 10.5 - Frog ke stages

Ans. Order: A (spawn/egg), F (embryo), B (tadpole with tail), C (tadpole with tail aur 2 pichhle pair), D (froglet), E (adult frog). Shortest stage: embryo (din 3-4). Habitat badalta hai: pehle paani, phir paani+zameen.

8. Let us enhance our learning - Answers

Q. Q1. Paudhon aur janwaron ke life cycle me samanta/antar

Ans. Samanta: dono ki shuruaat ek naye jeev se (seed/egg), growth, reproduction, aur ant me mrityu. **Antar:** paudhon me seed ugti hai, patte-phool-phal aate hain; janwaron me egg/baby se shuru, kuch me stages me body badalti hai (larva, tadpole); paudhe ek jagah rehte hain, janwar chalte hain.

Q. Q2. Grows / respire table (examples)

Ans. 1. Na badhta, na saans: pathar, kursi, pen. **2. Na badhta par saans leta:** Sambhav nahi (jo saans leta hai wo jeevit hai aur wo badhta bhi hai). Seed aaraam me kam saans leta hai par jeevit hai. **3. Badhta par saans nahi:** Sambhav nahi (sirf jeevit hi badh sakta hai, wo saans bhi leta hai). Kuch log pahaadi ya kristal ko is tarah sochte hain par wo sirf bhaar se bade hote hain. **4. Badhta aur saans leta:** paudha, janwar, insaan.

Q. Q3. Anaaj aur dal ke bhandaran me ye gyan kaise?

Ans. Beej ko ugne se rokne ke liye sookha, thanda, band, aur kam hawa-paani wali jagah me rakhna chahiye. Anaaj ko sookha rakho aur dibbon/bori me band rakho, nami se

bachao, taaki wo ug na jaaye ya sad na jaaye.

Q. Q4. Tadpole ki pooch ka fayda

Ans. Pooch se tadpole paani me tair paata hai. Jab wo mendhak banta hai aur zameen par rehne lagta hai to pooch ki zaroorat nahi, isliye gayab ho jaati hai.

Q. Q5. Charan aur Charu (lakdi ka tukda)

Ans. Dono sahi nahi. Charan: sirf hilne se jeevit ya nirjeev nahi tay hota (paudhe bhi nahi chalte). Charu: lakdi paudhe se aayi hai par ab kata hua, mrit hai, wo khaata, badhta, saans nahi leta. Isliye lakdi ka tukda nirjeev (dead) hai, par wo kabhi jeevit paudhe ka hissa tha.

Q. Q6. Machhar aur mendhak ke life cycle me samanta/antar

Ans. Samanta: dono me 4 stages, dono me shuruaat egg se, dono me larva jaisi stage me body alag, dono ka jeevan paani se judta hai. Antar: machhar: egg, larva, pupa, adult; mendhak: egg, tadpole, froglet, adult. Machhar adult hawa me udta hai, mendhak adult paani aur zameen par rehta hai. Mendhak me pooch gayab hoti hai.

Q. Q7. Fig 10.9 - zameen ke saath rakha pot (horizontal paudha)

Ans. Ek hafte baad shoot mudkar oopar (roshni/aasmaan ki taraf) aur root mudkar neeche (zameen ki taraf) badhega. Karan: shoot roshni ki taraf aur root zameen ki taraf badhne ka gun rakhte hain.

Q. Q8. Fig 10.10 - Tara aur Vijay ka experiment

Ans. Beej ko alag-alag disha me (lete hue, seedha, tirchha) lagaya. Wo jaanna chahte hain ki beej ki disha ka root aur shoot ke badhne par asar padta hai ya nahi. Agar sab me root neeche aur shoot oopar jaaye to wo jaan jaayenge ki disha ka asar nahi padta.

Q. Q9. Temperature ka germination par asar - experiment

Ans. 3 pots lo, same mitti aur seeds, same paani. Ek fridge ke paas thanda (5°C), ek normal kamre (25°C), ek garam jagah (40°C). Baaki sab same rakho (paani, roshni). Roz dekho kis pot me pehle aur zyada beej ugte hain. Isse pata chalega kaun sa temperature sabse achchha hai.

9. Important Q&A (exam ke liye)

Q. Jeevit praniyon ki 5 visheshtayein

Ans. Movement, growth, respiration, excretion, response to stimuli, reproduction, nutrition.

Q. Germination kya hai? Zaroori shartein?

Ans. Beej ka ankur nikalna. Paani aur hawa (roshni zyadatar beejon ko nahi).

Q. Machhar ke life cycle ki stages

Ans. Egg, larva, pupa, adult.

Q. Mendhak ke life cycle ki stages

Ans. Egg (spawn), tadpole, froglet, adult frog.

Chapter ka Naam (copy-paste)

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