

REPRODUCTION IN ANIMALS

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Before beginning this chapter, it is necessary to have completed all experiments in the chapter 'The Life Cycles of Animals'. You should also have completed all discussion of those experiments.

Reproduction - producing offspring like oneself

By this time, you have already performed a few experiments concerning reproduction in plants and animals. Answer the following questions on the basis of these experiments.

- Can flies be produced from cow dung? (1)
- Can fly eggs be produced without flies? (2)
- Can tadpoles and frogs be made without frog eggs? (3)
- Can mosquitoes be produced without mosquito larvae and pupae? (4)
- Do you think it possible for gourd (*lauki* or *gilki*) plants to produce seeds without flowering first? (5)

Actually the matter is very simple.

For an offspring of any plant or animal to be produced, it is necessary that a similar plant or animal exists beforehand. Needless to say that a mango tree produces only mango seeds, not plums or lemons. Similarly, a cow gives birth only to a calf, not to a lamb or rabbit. Can parrots or myna ever be hatched from the eggs of a pigeon?

Well, this is really all there is to reproduction.

The act of producing identical offspring by plants and animals and in this way increasing their numbers is called **reproduction**.

Can you think of any animal or plant which does not reproduce? Give reasons for your answer. (6)



Is the male necessary in reproduction?

You may have seen a cow, female buffalo, or female goat giving birth. You know that among other animals also, it is the female who always gives birth to the offspring.



Have you ever wondered what role does the male play in producing the offspring?

Let us first consider plants.

On the basis of experiments and observations in the chapters, 'Flowers and Fruits' and 'Reproduction in Plants', tell

- whether the seeds are produced in the gynoecium or in the androecium of plants? (7)
- what role does the male part of the flower play in making seeds or fruits? (8)

Is the union of male and female necessary in the act of producing offspring in animals, as was the case in plants? Let us look at some examples to find an answer to this question.

Generally, a male chicken is not kept among hybrid white hens. Even then, without mating with the male chicken, the hens continue to lay eggs. However, these eggs neither have an embryo nor do chickens hatch out of them.

Some people think of these eggs as 'vegetarian' eggs.

You will perhaps remember that while studying the development of embryo, you had collected eggs of only *desi* hens.

Why did you do this? (9)

Now explain why chicks are not produced from 'vegetarian' eggs. (10)

Some of you might have kept pet birds at home. You may have noticed that a female bird put in a cage does not lay eggs. Even if she does, these eggs never hatch.

Considering the examples of hens and pet birds, what conclusions can you draw about the role of male in animal reproduction? (11)

Artificial insemination

In order to improve the breed of cows, the government has opened 'artificial insemination centres'. Visit an artificial insemination centre with your teacher. There, see for yourself how cows brought by farmers are artificially inseminated.

Now tell how the role of male is fulfilled in the process of artificial insemination. (12)



Ask the doctors at the centre what they inject in cow's vagina through tubes.

Request the doctor to let you view, through a microscope, the substance which is injected and seek more information about it.

Earlier, in order to improve the breed of cows, the government used to keep one good quality stud bull in a central location for use of several villages.

Nowadays, instead of this, why is the government opening artificial insemination centres? Find out from the centre's doctor. (13)

What do you understand by the term hybrid cow? Get some information from the centre. (14)

What is the difference between hybrid cow and *desi* cow? (15)

You had yourself pollinated plants artificially. Artificial insemination in animals is a similar process.



Eggs or young ones?

Some animals lay eggs, while others give birth directly to young ones.

Divide the following animals into those that lay eggs and those that bear offspring directly -

dog, frog, chicken, cow, fly, crow, goat, tortoise, pigeon, humans, house lizard and cat. (16)

Comparison of reproduction in animals

Make the following table in your note book and complete it. (17)



Table 1

No.	Name of animal	Do they lay eggs or give birth to young ones?	Undergo Metamorphosis or not	After birth do parents take care of child or not?
1.	Frog			
2.	Flies			
3.	chicken			
4.	Cow			
5.	Mosquitous			
6.	Humans			
7.				
8.				

NEW WORDS:

vegetarian eggs

artificial insemination

