

SCIENCE

ACTIVITY-12

REPRODUCTION IN PLANTS

Class: VII

Duration-30 minutes

Nature of activity: Group

Learning Outcome: Students will be able to identify that the method of reproduction where only one parent is involved is known as asexual reproduction. The yeast reproduces asexually by the formation of a bud and so the process is known as budding.

What we have to do?

Study the mode of reproduction in yeasts.

What do we require?

A beaker, warm water, dehydrated yeast powder, micro-slide, dropper, glass cover (cover slip), Compound Microscope.

What do I need to know?

Yeast reproduces by the process of asexual reproduction.

Teacher's Activity: The teacher will arrange ten kits. Each kit will have the following things – one teaspoon of dehydrated yeast powder, a dropper, a beaker and micro-slide. A microscope will be arranged for each of the ten groups. Teacher will give instructions regarding the activity.

How will you proceed?

Student's Activity:

1. Take some warm water in a beaker.
2. Dissolve a spoonful of sugar in it.
3. Now add about 1 g of dehydrated yeast powder into the solution.
4. Keep the beaker in a warm place for about an hour.
5. With the help of a dropper, place a drop of the solution on a clear micro-slide.
6. Place a cover glass on it taking care that air bubbles do not enter beneath the cover glass. Observe the slide under the microscope.

What have you observed?

A number of minute, rounded _____ yeast cells with a _____ like projection can be observed. They appear like chains of _____ cells.

What have you learned?

A bulb –like projection develops on the adult yeast cell called the _____ and this method of asexual reproduction of buds is called _____.

What more can we do?

- Observe the permanent slide showing budding in hydra and compare it with the slide of yeast cells.
- Observe the permanent slides of reproduction in other organisms, such as Spirogyra, Amoeba, and Paramecium etc. Note down the type of reproduction you observe in them and fill in the following table.

S No.	Organism	Type of reproduction observed	What you observed?

Extended learning worksheet

A. Answer the following questions:

(i) What would happen if we conduct the above activity in cold water?

_____.

(ii) Is yeast an autotroph or a heterotroph?

_____.

B. State whether the following statements are true or false. If false, correct the statement:

(i) Yeast is a fungus that has heterotrophic mode of nutrition.

(ii) Yeast can reproduce by budding and binary fission.

(iii) The buds remain attached to the parent yeast cell and appear like a chain of cells.

C. Complete the following analogy:

1. Spores: Asexual reproduction : : _____ : Sexual reproduction.
2. _____ : Corn : : Potato : tuber .
3. Cucurbita : : Unisexual : : _____ : Bisexual.

D. Write the type of reproduction for the following organisms:

1. Algae _____.
2. Fungi _____.
3. Spirogyra _____.
4. Yeast _____.