

## INSTRUCTIONS FOR THE TEACHER

Biology is to be learned by **Guided Observation**. *Biology starts and ends in nature*. Students should be guided to record their observations (any new fact relative to that particular student). Observations could be written in their own style, in their own native language and in their own convenient format and all observations should have a date, location and time. If a camera is available in any form, students should also be encouraged to take photographs of their observation.

At the end of Biology curriculum, the teacher is requested to compile all these facts into a single document in a bullet-points format. Each of these points could be read aloud on stage after the morning school gathering every day followed by the citing the group (who first made the observation). This could lead to a wealth of original knowledge being accumulated spanning couple of years. These could also be shared with students of others schools also. Students should be motivated to own pets or tend to injured animals in their surroundings.

For all the activities included in this section the teacher should take students on field trips which are critical. The field trips could be to any or all (if possible):

1. Local Zoological Park.
2. Domestic parks.
3. A veterinary clinic.
4. Cattle shed, Swine shed, Horse shed, donkey shed and Poultry shed
5. Aquarium, local fisheries, shrimp farms
6. Vermi-compost facilities.
7. Fancy birds' outlets.

Students should be encouraged to interact with their milkman who owns cattle shed.

Students should be encouraged to visit their friends or relatives who own pets or aquariums.

This manual also aims in introducing **Lines & Shapes in Biology**. Children would already be aware of straight lines, angles, circles, sphere, pyramid, ellipse (bent circle), triangle, cubes, spirals (spring) from every day observation and their mathematics class teaching. It would be a great science activity if children could draw living beings or describe by using these shapes. Some samples have been done for children. The teacher is encouraged to stimulate them to think in those terms.