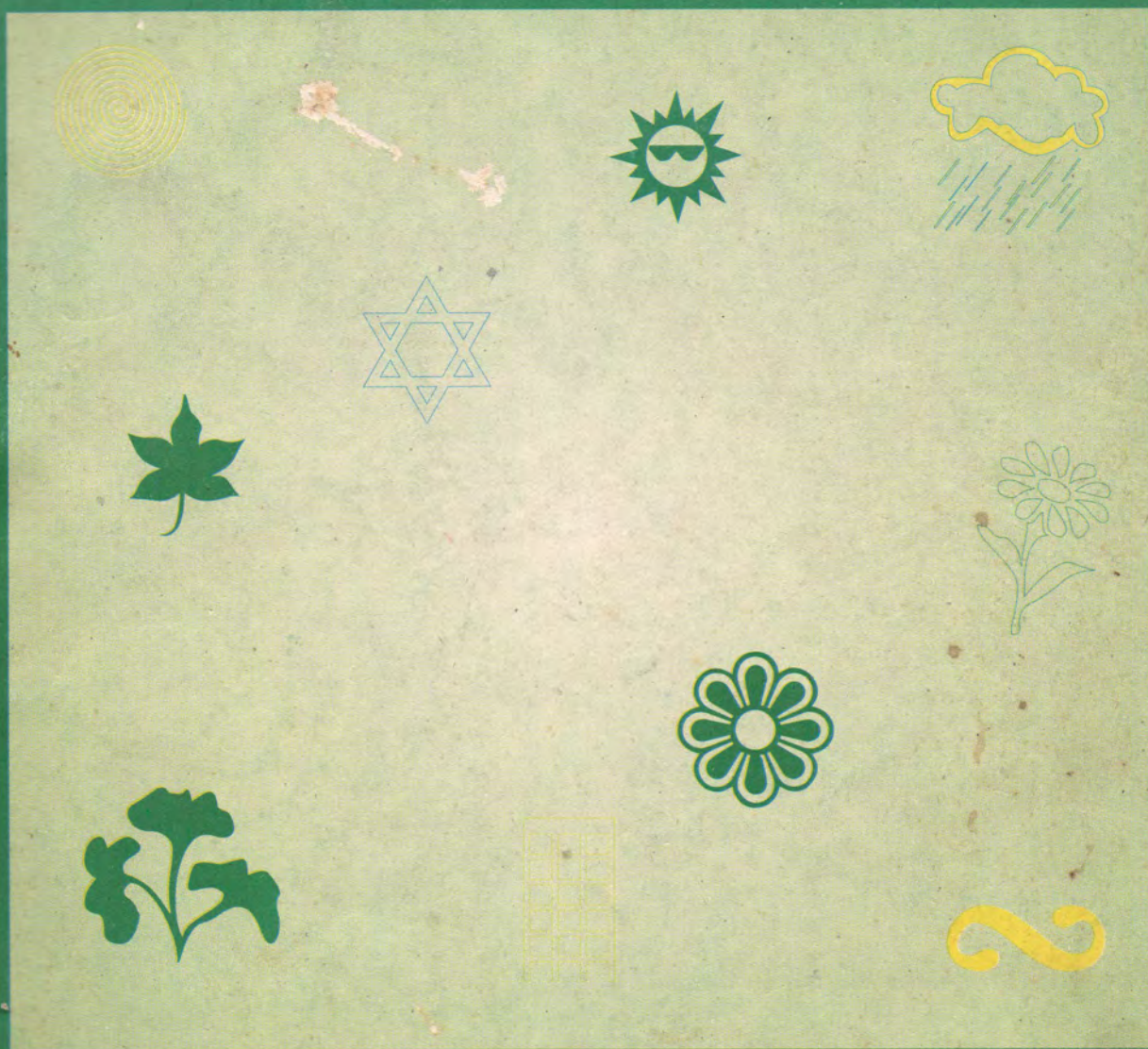


# BAL VAIGYANIK

## CLASS VIII



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# Bal-Vaigyanik

**Class-8**

**Dedicated to all those  
teachers and students  
whose participation in  
Hoshangabad Science  
Teaching Programme  
during the last twenty  
eight years has made this  
edition possible.**

**EKLAVYA  
2000**

Dear children,

I received lots of letters from you. Some of you must have received my replies too. You have reached class eight now. I wish this exchange of letters between us continues in the coming years too. Perhaps, by now a 'sawaliram' may have also started dwelling in your mind, which would henceforth keep prodding you to ask questions and look for their answers.

*Bal Vaigyanik* has been written for you by your teachers, some scientists and a few other people. After you have completed class eight, do not forget to send me your opinions and suggestions about these books so that they may be improved upon.

Studying *Bal Vaigyanik* does not only mean that one does the experiments given in it and writes answers to the questions in a note book. More important is to learn the methods to understand phenomena and things, near and far.

After doing experiments given in *Bal Vaigyanik* yourself, you shall have to search for answers to questions given in it. Moreover, you yourself have to decide, through discussions with your friends and teacher, whether your answers are right or wrong. Now, if you get answers to your questions from somewhere without doing anything of this sort at all, would you ever be able to learn how to search for answers? Reaching the goal alone is not important, the idea is to reach there through your own efforts. Now think for a moment, whether a person who hands you down ready-made answers does you harm or good?

It is generally believed that science experiments cannot be done without costly equipment. It would please you to know that all the experiments of your book can be done with very inexpensive things! In fact, some experiments do not even need any particular instrument. Whatever little stuff that is required for such experiments, you shall be able to procure easily from your own home or village. The Life Cycles of Animals, An Eye in the Sky, Time and Pendulum, Soil, Work Made Easy - Machines, Principle of Balance, Living and Non-living, Reproduction in Animals, Motion in Graphs etc. are examples of chapters having such experiments. These chapters contain quite a few experiments which even college

and university students only get to read about. However, some equipment is indeed needed. But surely we must accept that certain minimum expenditure has to be incurred in order to provide good education. When you reach class nine, you may have to face some problems. I now wish to say a few words about them.

Firstly, there you would not get the opportunity to learn through experiments. Everything would have to be learnt through books alone. One must add a thing here - doing experiments is not the only way to learn. There are lot of experiments that can not be done everywhere and under all circumstances. Further, we can not always insist that we will learn and agree about something only after we ourselves have done an experiment on it. We also learn by reading about experiments done by other people. That is why reading books is also a way of learning. But surely cramming a book without understanding, can not be called a sensible thing. Thus, in the coming classes, you would need to read and understand books carefully. Also, you must ponder over things that they say. *Hoshangabad Vigyan* emphasises thinking, reasoning, mutual discussions and understanding. It is possible that in next classes, you do not get such an atmosphere. But then, one gets the right atmosphere only if one strives to build it. Both you and me need to work together to create this atmosphere.

Keep your class six and seven books and note books safely. You can carry and use your books and note books of all the three classes during examinations. Therefore you do not need to cram the books or the answers. Just focus on understanding things.

(Sawaliram)

P.S. : You must be knowing my address. Write to me, won't you?

Sawaliram  
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Hoshangabad 461 001