APPENDIX-C

QUESTIONNAIRE FOR TEACHERS

Name .....................
Designation ..............
Address ...................

HINTS

1. The researcher has prepared this questionnaire to appraise the Science Curriculum of Class-III, Class-IV and Class-V of Orissa for his Ph.D. Degree.

2. A 'O' (circle) is given at the end of a question which requires "Yes/No" type of answer. For 'Yes' type answer give a √ (tick mark) in the circle viz: ☑ For 'No' type answer give a × (cross) in the circle Viz: ✗

3. A parenthesis is given at the end of a question to arrange items in order of their importance. Please write 1 for first, 2 for second, 3 for third .... etc. in the parenthesis viz: (1), (2), (3) ...

4. Blank space is left at the end of the openended question. Please give your independent opinion there.

5. If more space is required please use additional sheets and attach these with this questionnaire.

6. The Content of your answer will be kept strictly confidential and secret.

QUESTIONS

I-OBJECTIVES

1. Nine Objectives of teaching Science are presented in the following lines. Kindly arrange them in order of their importance.

   (a) To know some terms, facts, conventions, classifications generalisations etc. of science. ( )
   (b) To apply the laws of Science in day to day life. ( )
   (c) To observe the environment minutely ( )

   ........................

........................
(d) To experiment using simple things
(e) To draw diagrams of things and instruments
(f) To construct simple instruments using some cheap and available things
(g) To exhibit scientific attitudes in thinking, feeling and activities
(h) To show interest for scientific things, literature and activities
(i) To appreciate the boons of science and contributions of scientists for the mankind

2. Are there other objectives than those mentioned above? If your answer is affirmative please state those here.

II-CURRICULUM

3. Kindly write 1 for first, 2 for second 3 for third . . . etc. in the columns below comparing the following subjects to arrange those in order of their importance.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Knowledge</th>
<th>Attitudes</th>
<th>Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother Tongue</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Arithmetic</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>English</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Studies</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>General Science</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Drawing</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Is the content of the Science Curriculum adequate? If the content is more than adequate state the topics for deletion. If the content is less than adequate state the topics for inclusion.

5. Is the sequential arrangement of the Science Curriculum alright? If the arrangement is not alright kindly state the appropriate arrangement.

6. How is your Science Curriculum tried out?
   (a) Experimenting some new topics in some schools at the time of its preparation
   (b) Experimenting intensively many new topics in many schools after its preparation
   (c) Experimenting some new topics in may schools at the time of its preparation
   (d) Taking the opinion of some experts
7. Which of the following arrangements are there in Orissa?
   (a) Establishing Curriculum centres
   (b) Relation with Teacher Training Institution
   (c) Training of Inservice Teachers
   (d) Relation with the Government of Orissa
   (e) Relation with Inspector of schools
   (f) Relation with Examining Bodies
   (g) Relation with Teachers' Association
   (h) Relation with the State Council of Educational Research and Training
   (i) Relation with the National Council of Educational Research and Training

8. Which of the following arrangements are there in Orissa for updating the science curriculum?
   (a) Informing teachers about new innovations of science
   (b) News letters for teachers
   (c) Introducing new exercises and teaching strategies
   (d) Repair and Change of instruments

9. How does the Science Curriculum lose its effectiveness?
   Kindly number the following items in order of their importance.
   (a) When the Curriculum becomes ineffective in some regions
   (b) When the Curriculum does not fulfil some of its objectives.
   (c) When facts are proved untrue
   (d) When the result of the examinations is not satisfactory
   (e) When students express discontentment for the Curriculum
   (f) When neighbouring states adopt new curriculum
   (g) When teachers oppose the Curriculum vehemently
   (h) When the Social, economic and political life of the State changes.
   (i) When there is explosion of knowledge in Science
10. How is the Curriculum of science recycled? Number the items in order of their importance.
   (a) Making some changes here and there in the curriculum
   (b) Removing defects of the curriculum
   (c) Adopting a new curriculum
   (d) Deleting some topics
   (e) Including some new topics

11. Are there new arrangements for development of the Science Curriculum?
    If your answer is affirmative, kindly state those here:

III-INSTRUCTIONAL MATERIALS

12. Do you use the textbook in Science?
    If your answer is positive kindly state the occasions of use.

13. Is there the Science Kitbox in your school?
    If it is there, state its uses.

14. Do you prepare Science teaching aids?
    In case you prepare state some of those.

15. Do you use handbook for Science teachers?
    If you use it kindly state the occasions.

16. Do you diagnose learning defects in science of your pupils?
    If you diagnose state the remedial measures that you adopt for those

17. What do you recommend to students to read beyond their text books in Science?
    (a) News papers
    (b) Encyclopaedia
    (c) Biography of scientists
    (d) Books of Science
    (e) Dictionaries of Science
    (f) Science magazines
    (g) Children's encyclopaedia
    (h) Wall-news magazines

18. Do your students play scientific games in the school?
    If they play kindly give a list of games.

19. Do you tell scientific stories to pupils?
    If you tell stories, kindly state these here.
20. Do you show teaching aids to your pupils at the time of teaching Science?

If you show aids kindly give a list here.

21. Which of the following items are there in your school for the teaching of Science?

(a) Museum
(b) Garden
(c) Zoo
(d) Films
(e) Slides
(f) Radio
(g) Gramophone
(h) Television
(i) Projector
(j) Aquarium
(k) Terrarium
(l) Tape recorder
(m) Microscope
(n) Telescope

22. Do you utilise the following community resources for the teaching of science?

(a) Forest
(b) Museum
(c) Research Laboratory
(d) Corn field
(e) Factory
(f) Dairy farm
(g) Open sky
(h) Motor garage
(i) Machine shop
(j) Telephone exchange
(k) Radio station
(l) Hill
(m) Power plant
(n) Hospital
(o) Water supply centre
(p) Lake
(q) Zoo
(r) Garden
(s) Dam
(t) Sea beach
(u) River
(v) Pond

23. Do you think that there are other devices for teaching than those mentioned above?

If your answer is positive state the other devices here.
IV-TEXT BOOK

24. Are the contents of the Science curriculum discussed adequately in the text book? 0
   State the topics which are discussed less adequately.
   State the topics which impart wrong information.

25. Are bold letters used to indicate chapters, topics, subtopics and important hints? 0
   If your answer is negative please state those with examples.

26. Are the Illustrations in the textbooks of Science appropriate? 0
   State the inappropriate illustrations for deletion.
   State the less appropriate illustrations for modification.

27. Are the pictures of the Science textbooks adequate? 0
   State the inappropriate pictures of the textbooks for deletion.
   State the instances where pictures should be given.

28. Are "What did you learn" appropriate in the textbook? 0
   State the inappropriate cases for modification.

29. Are the "Exercises" appropriate in the textbook? 0
   If your answer is negative state the exercises and changes to be brought about in those.

30. Are "Works for you" appropriate in the textbook? 0
   If your answer is negative please state the instances and changes to be brought about in those.

31. Are 'Do your-self' items appropriate in the textbook? 0
   If your answer is negative please write the instances and state changes to be inserted in those.
   If there are no "Do your-self" section in any chapter kindly state those chapters which require those items.

32. Is incorrect language used in the textbook? 0
   If your answer is positive kindly state instances giving page numbers.

33. Are spelling errors present in the Science textbook? 0
   If your answer is positive state the instances giving page numbers.
34. How old are you?
   (a) below 20 years
   (b) within 20-30 years
   (c) within 30-40 years
   (d) within 40-50 years
   (e) within 50-60 years

35. What is your length of teaching experience?
   (a) within 5 years
   (b) within 5-15 years
   (c) within 15-25 years
   (d) within 25-35 years
   (e) within 35-45 years

36. What is your highest qualification?
   (a) Below Matriculation
   (b) Matriculation
   (c) Matriculation Trained
   (d) I.A./I.Sc./I.Com.
   (e) Trained I.A./Trained I.Sc./Trained I.Com.
   (f) B.A./B.Sc./B.Com.
   (g) Trained B.A./Trained B.Sc./Trained B.Com.
   (h) M.A./M.Sc./M.Com.
   (i) Trained M.A./Trained M.Sc./Trained M.Com.

37. Have you participated in the following programmes of Science?
   (a) Symposia
   (b) Seminars in Science
   (c) Workshops
   (d) Summer Science Institutes
   (e) All India Science Teachers' Association
   (f) Lecture programmes
   (g) Continuing Education Centre

38. Whom do you consult for the teaching of science?
   (a) College teachers
   (b) School Science teacher
   (c) Headmaster
   (d) College Science Method Teacher
   (e) School Science Method Teacher
   (f) Doctor
   (g) Agriculture Scientist
   (h) School Inspector
   (i) Scientist
   (j) Other person (Specify)

39. Which of the following co-curricular activities in science are organised in your school?
   (a) Science club
   (b) Science fair
   (c) Science Talent Search
(d) Field trip 0
(e) Science quiz 0
(f) Observation of nature 0
(g) Science magazine publication 0
(h) Lecture Programme 0

40. Do you discuss the following items with the Science Teachers ?

(a) Selection of method of teaching 0
(b) Problems of experimentation 0
(c) Problems of syllabus 0
(d) Problems of evaluation 0
(e) Problems of co-curricular activities 0
(f) Solution of difficult problems 0
(g) Improvisation of apparatus 0
(h) Selection of ancillary books 0
(i) Selection of teaching aids 0

41. Please give other qualifications, if any, for the efficiency of Science Teachers.

VI- METHODS OF TEACHING

42. Which of the following methods of teaching are adopted by you ?

Please use the following key in the parentheses.

Key:- 1 = Most of the times.
       2 = Some times.
       3 = On no occasion.

(a) Lecture Method 0
(b) Method of Inquiry 0
(c) Demonstration Method 0
(d) Discussion Method 0
(e) Project Method 0
(f) Laboratory Method 0
(g) Playway Method 0
(h) Story Telling Method 0

43. Do you think that the above list of methods is exhaustive ?

If your answer is negative, please, state other methods of teaching.

VII- TIME ALLOTMENT

44. Please write in the blank space the number of periods you require to complete the following Chapters.
Class-III

Class-IV

Class-V

45. How many periods are there in your school time table for the teaching of Science?

46. Kindly give information to count annual working days for teaching work in your school as per the following proforma.

<table>
<thead>
<tr>
<th>Occasions for closure of Teaching work</th>
<th>Number of Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Annual holidays</td>
<td></td>
</tr>
<tr>
<td>(b) Examination days</td>
<td></td>
</tr>
<tr>
<td>(c) Games, sports and drama</td>
<td></td>
</tr>
<tr>
<td>(d) Rainy days and natural calamities</td>
<td></td>
</tr>
<tr>
<td>(e) Other occasions (Specify)</td>
<td></td>
</tr>
</tbody>
</table>

47. Do you complete the Science Curriculum in time? 0

If the Curriculum is completed before time then kindly state how many periods do you get at your hand.

If the Curriculum is not completed in time how many periods are needed for its completion.

VIII- EVALUATION IN SCIENCE

48. Kindly write how many percent should be accorded to the following items for evaluation in science.
(a) Written test
- Oral test
- Practical test

(b) Cognitive Objectives
- Affective Objectives
- Psychomotor Objectives

(c) Essay Questions
- Short Answer Questions
- Objective type items

(d) Annual Examination
- Terminal Examination
- Quarterly Examination
- Monthly Examination
- Daily Examination

(e) Space Science
- Earth Science
- Physical Science
- Life Science

<table>
<thead>
<tr>
<th>(a) Written test</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral test</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Practical test</td>
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<td></td>
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<tr>
<td>Total</td>
<td></td>
<td></td>
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</tbody>
</table>

| (b) Cognitive Objectives |      |      |      |      |      |      |
| Affective Objectives    |      |      |      |      |      |      |
| Psychomotor Objectives  |      |      |      |      |      |      |
| Total                    |      |      |      |      |      |      |

| (c) Essay Questions |      |      |      |      |      |      |
| Short Answer Questions |   |      |      |      |      |      |
| Objective type items  |      |      |      |      |      |      |
| Total                |      |      |      |      |      |      |

| (d) Annual Examination |      |      |      |      |      |      |
| Terminal Examination  |      |      |      |      |      |      |
| Quarterly Examination |      |      |      |      |      |      |
| Monthly Examination   |      |      |      |      |      |      |
| Daily Examination     |      |      |      |      |      |      |
| Total                 |      |      |      |      |      |      |

| (e) Space Science |      |      |      |      |      |      |
| Earth Science    |      |      |      |      |      |      |
| Physical Science |      |      |      |      |      |      |
| Life Science     |      |      |      |      |      |      |
| Total            |      |      |      |      |      |      |

49. Is the evaluation in Science appropriate in the primary schools?

If your answer is negative kindly give suggestions for its improvement.

**IX-SUGGESTIONS**

At last kindly give your valuable suggestions for the all round development of the Primary School Science Curriculum of Orissa.

Full Signature of the Teacher with Date