APPENDICES

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APPENDIX-I

A STUDY OF ACHIEVEMENT LEVEL IN MATHEMATICS OF CLASS IX TRIBAL STUDENTS OF KORAPUT DISTRICT, ODISHA

Name of the School: _____ **Region where the school located:** Urban / Semi Urban / Rural / Remote

Class: _____ **Subject:** _____ **No of Class Per Week:** _____ **Date:** _____

Student ID	Gender	Category (Tribal) Status	Age	Overall % of Marks (8th)	% of Marks in Mathematics (8th)	Overall % of Marks (9th) (if any)	% of Marks in Mathematics (9th)	Parental Education (Father)	Parental Education (Mother)	Economic Status (Monthly Income)	Main Occupation of Household	Geographical Location	Is there a well-constructed road to the school?	Problems Faced to Reach School	Distance to School (km)	Attendance Rate (%)
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																

Economic Status (Monthly Income):
1: Below ₹5,000
2: ₹5,001 – ₹10,000
3: ₹10,001 – ₹20,000
4: ₹20,001 – ₹50,000
5: Above ₹50,000

Main Occupation of Household:
1: Agriculture
2: Daily Wage Labor
3: Government Job
4: Private Sector Job
5: Business
6: Other (Specify)

Geographical Location:
1. Hilly Terrain
2. Plateau Region
3. Valley Areas
4. Plains
5. Remote/Isolated Villages
6. Seasonal Impact Zones

Problems Faced to Reach School: (Multiple responses can be allowed if required.)
1: Long Distance
2: Poor Roads or No Roads
3: Lack of Transportation
4: Seasonal Obstacles (e.g., floods, landslides)
5: Safety Concerns (e.g., wild animals, crime)
6: Other (Specify)

Is there a well-constructed road to the school? 1: Yes 2: No

APPENDIX-II

Observation Schedule for Classroom Observation

Date: _____   **Duration:** _____

Name of the Teacher: _____   **Class:** _____

Subject: _____

Research Study on "Achievement Levels in Mathematics of Class IX Tribal Students in Koraput District"

Section 1: Teaching Methods & Classroom Environment

Aspect Observed	Observation Notes	Rating (1-5)
Student participation in class (e.g., asking questions, answering, contributing)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Teacher's teaching method(s) (e.g., lecture, group work, problem-solving, practical applications)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Use of multimedia or teaching aids (charts, videos, etc.)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Teacher-student interaction (e.g., direct questioning, feedback)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Classroom organization (e.g., seating arrangement, student grouping)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Teaching resources availability (e.g., books, notes, tools)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Rating scale: 1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent

Section 2: Student Engagement and Behaviour

Aspect Observed	Observation Notes	Rating (1-5)
Student attention and focus during the lesson (e.g., actively listening, taking notes)	—	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Student interaction with peers (e.g., group work, discussions)	—	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Behaviour of students in the class (e.g., any disruptive behaviour, distractions)	—	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Student engagement with learning materials (e.g., textbooks, worksheets, practical activities)	—	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Signs of motivation and interest in mathematics (e.g., raising hands, volunteering to answer)	—	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Rating scale: 1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent

Section 3: Teaching Strategies and Adaptation to Student Needs

Aspect Observed	Observation Notes	Rating (1-5)
Teacher's effort to address students' diverse needs (e.g., slower learners, language difficulties)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Use of real-world examples or applications in mathematics		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Clarification of difficult concepts or doubts (e.g., teacher explaining in simpler terms)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Support for struggling students (e.g., individual attention, extra practice)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Rating scale: 1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent

Section 4: Student Performance and Achievement Indicators

Aspect Observed	Observation Notes	Rating (1-5)
Student response to questions or problems posed by teacher		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Level of understanding demonstrated by students (e.g., through their answers, participation)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Completion of assignments or tasks given during class		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Overall classroom achievement level (based on observations of student performance)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Rating scale: 1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent

Section 5: Challenges in Teaching Mathematics to Tribal Students

Aspect Observed	Observation Notes	Rating (1-5)
Language barriers affecting understanding		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Cultural factors influencing student engagement		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Limited access to resources (books, materials)		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Parental involvement or community support		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Overall impact of challenges on student performance		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Rating scale: 1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent

Section 6: Additional Observations/Comments

- **What are the strengths observed in the teaching and learning process?**

- **What are the areas that need improvement?**

- **Any other noteworthy observations or comments?**