School Children Fight Water Contamination

A Rapid Assessment

Table of Contents

Summary	3	
Objective of the Survey	3	
Methodology	4	
Survey Design	4	
Pre-test of Survey Questionnaire	4	
Brief Survey Guidelines	4	
Limitations of the assessment	4	
Statistical Analysis	5	
Knowledge	6	
Practice	9	
Case Study	12	
Annexure	15	
Surveyor's Observation	16	
Teacher's Evaluation	17	
Student's Evaluation	18	
Photo Gallery	22	

Statistical analysis

52

Summary

Teachers and students alike commend and emphasize the importance of concerted efforts to improve the unhygienic living conditions and introduction of easy technology to treat water to combat the problem of diarrhea and other associated diseases.

Many teachers see the integration of the **10 activity program** into the regular school curriculum as of paramount importance. The change in pedagogy provided the teachers with a totally different experience, allowing a pinch of enjoyment while teaching and receiving spontaneous positive reactions from the students. The headmasters view the project as a long-term sustainable assignment due to the numerous follow up visits conducted by the hygiene promoters.

Students were zealous. Most students delivered meritorious demonstrations of the hand washing poems while the Sodis animation video has proven to be an effective method to imprint the SODIS message in the children' mind. A significant increase in the KAP is witnessed, reinforced by the colorful posters across their classrooms and corridors.

Most students and teachers believe the program to have a potentially greater impact if were given more time for implementation. The interactiveness of the program is a major contributing factor to the accelerated dissemination of the messages and the transfusion of the ideal behaviors. A positive change on health was echoed by the headmasters, teachers, students and guards as well.

Pretest of the survey questionnaires		
Boys	79	
Girls	43	
Survey		
Boys	152	
Girls	130	

Statistical summary:

Objective of the Survey

The four main issues the survey seeks to capture and assess are:

- The infrastructural availability, water and sanitation conditions
- The effectiveness of the program and its approach
- The extent to which the teachers' role has been played
- The extent to which a change in KAP has been achieved

The survey aims to provide a platform that funnels suggestions, by the teachers and students, on improving the efficiency and effectiveness of the project. It also allows the expression of any challenges faced during implementation of activities.

Methodology

The selection of schools was aligned with the community sessions being conducted in each village; hence the closet school to the session venue was surveyed. A sample size of 12 schools was taken i.e. 10% of the total. A pre-test of the survey questionnaire was conducted in 4 schools, 2 in each district. Furthermore, the modified survey was conducted in 8 schools, 4 boys and 4 girls.

Survey Design

The survey comprises of three components:

- On-site assessment ; observed by the surveyor
- Teachers' assessment
- Students' assessment

(An excerpt of the questionnaire attached in the annexure).

The on-site assessment made by the observer mainly captures data on the infrastructural availability while the teacher and student assessment measures the impact made on KAP by the project.

Pre-test of Survey Questionnaire

A pretest of the questionnaire has been conducted in four schools, 2 girls and 2 boys. The analysis of the survey has shown a positive response on the level of knowledge as well as the adoption of practices by the students. Out of 21 questions half were based on their level of knowledge while half were based on the adoption of practices. Subjective questions such as, the activity the enjoyed the most, were found to be difficult for the younger students to answer. They had known the answer but found it difficult to write. Hence such feedback has been incorporated in the survey questionnaire to simplify the data response by the students.

Brief Survey Guidelines

- Two schools will be monitored per visit
- The survey will be conducted with the aid of the teachers who implemented the activities, in case of unavailability of relevant teacher the survey must be conducted with the beneficiaries.
- The surveyor's observation must be completed anytime during the stay in the school.

Limitations of the assessment

- With the limited time in hand, a random sample of schools closest to the community training venue was taken.
- Some implementing teachers were not available.

Knowledge



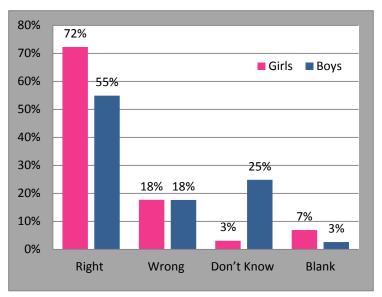
Due to the difference in the scope and purpose of the survey

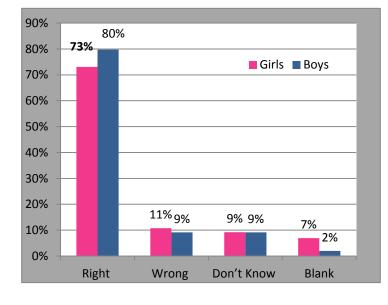
questionnaires used in the pre-test and rapid assessment survey, a slight difference occurs in the findings and interpretation of the two. The analysis reveals the following:

- The difference in KAP analysis before and after the intervention
- The difference in the level of understanding between the girls and boys

I. Are there germs present in your class room

This question examines the student's level of awareness of invisible germs that exist in their closet surrounding i.e. their classroom. In response to this, females responded more accurately, i.e. 72% as compared to the boys, 55%.





2. Can there be invisible germs present in visibly clean water

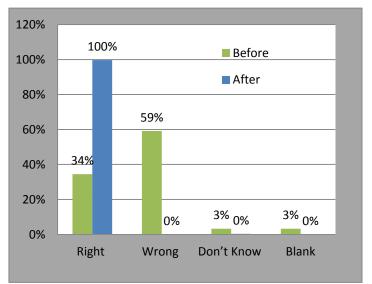
Visibly clean water is safe for drinking purposes - a belief that mostly prevails among the rural areas. This question inquires the student's definition of clean water and his/her indicators of contamination. A high percentage of boys, 80% and girls, 73% answered accurately.

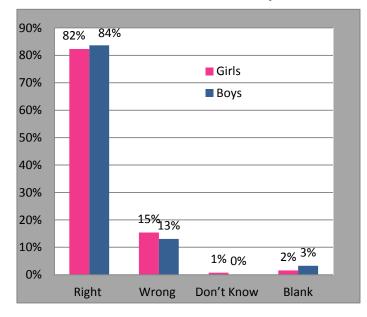
3. Importance of washing hands with soap before food

Washing hands with soap before food is one of the critical behaviors the project seeks to inculcate within the beneficiaries.

In comparison of the pre and post knowledge of the importance to wash hands with soap before food, a major transformation was witnessed.

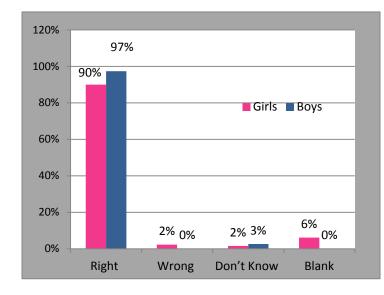
100% of the students, which means an additional 66% to the 34%, were fully aware of the importance of hand washing with soaps after the intervention of the project.





4. Duration to wash hands with soap

A similar kind of response was received by both the genders when asked to choose the right duration for hand washing between the different options given. 84% of the boys answered accurately and 82% responded likewise from the girls' side.

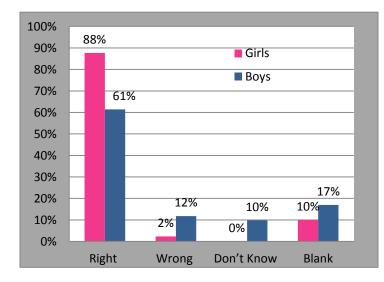


5. The number of germs on your hands increase after using the latrine

The use of mathematicsincrease/decrease in number of germs, aims to gauge the students' level of understanding on how germs transfer.

97% of the boys were of the view that the number of germs increase after using the latrine and 0% were wrong. On the girls' side, 90% answered accurately while only 2% were wrong.

6. How long the bottles should be kept in the sunlight for purification



In response to the time required for SODIS water purification method, the girls answered more accurately than the boys. 61% of the boys and 88% of the girls answered accurately.

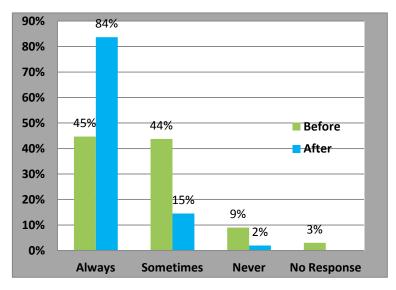




PRACTICE

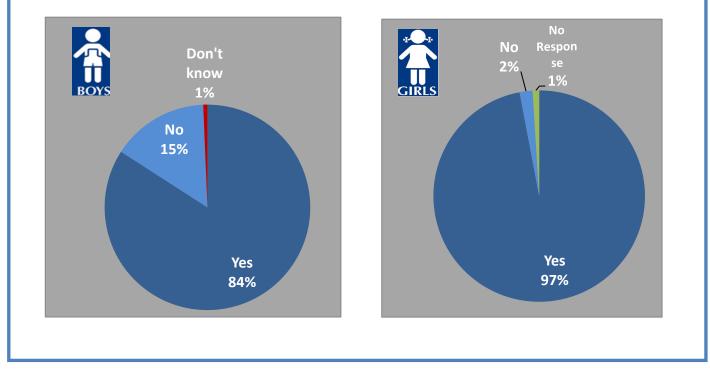
How often do you wash your hands with soap before eating

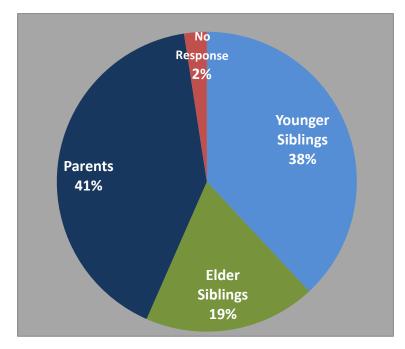
A change of almost 50% has been noticed in the student's hand washing practice before eating food. Before the intervention, only 45 % of the students claimed to wash their hands while after the intervention 84% claimed to do so. A larger portion of the "Sometimes" transitioned to the "Always" practice.



Do you protect your parents, brothers and sisters from germs?

A fun question posed to the young students, received an overwhelming positive response from the students. It was realized that students were mentally prepared and were taking the responsibility of the health of their family. Girls being more responsible towards performing duties at home, 97% of them replied yes, almost close to an ideal 100%. While Boys were also keen in performing their role- 84% replied yes.





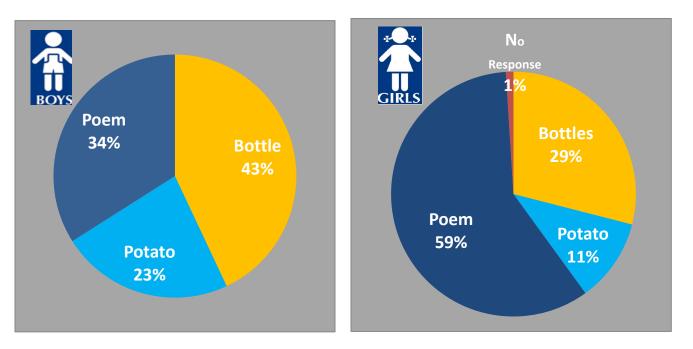
Who acted upon your advice?

Capturing a child' analysis on who at home acted upon his/her advice revealed fascinating findings...

Technically, students were allowed to choose only one from the given options but most of them replied that more than one person acted upon their advice at home.

77 % of the total students chose more than One option while only 23% selected one from the given options

Which of the following activities did you enjoy the most?



An interesting difference lies between the choice of most enjoyed activity where 43% of the boys voted for the SODIS (bottles) activity and 59% of the girls voted for the poem. Upon asking most students did recall the potato activity but due to its unusual methodology of interactive learning

Nasreen, Arifabad:

Nasreen is one of the many students who have witnessed a drastic change in her sisters' health after practicing SODIS. As is customary for elder siblings to baby sit the younger ones during school hours, both Nasreen and Zahra are two change-agents sent to one household. Nasreen complains of her younger sister, Zahra to stay sick most days in a month symptomised by stomach pains. Today, encouraged by the Zahra's cure she practices SODIS on 5 bottles at home to fulfill the entire family's need. 2 of the bottles were provided by the project while additional 3 Coke bottles are recycled for SODIS. Being the eldest sibling, Nasreen have taken the charge to force her mom to properly wash her hands when the both of them prepare food in the evening.



Arifabad, is one of the best schools in Nowshera. This school is being run by a single teacher, who actively displays all the poster boards in the corridor and safeguards it in a locker after school. In this school, even the guard is also aware of SODIS and Hand washing activities going on in the school. The guard mentioned the difficulties confronted due to lack of clean water. He has also been drinking SODIS water, purified in school premises. This classroom is also very ideal because each desk had 2 SODIS bottles and all the students drank from those bottles. Most bottles had the SODIS stickers on them. The teachers had pasted the SODIS notebook stickers on her attendance register which re-iterated "SODIS se Jaraseem PHURRR!" Laila, a teacher of grade 4 & 5 claims that her student Nadia has been doing very well in class and has not fallen sick for once ever since the use of SODIS in school.

Adil, the only boy in this school of girls feels extremely shy due to the gender imbalance but is extremely proud of all the activities he has participated at the school.

These girls have become "Fair and Lovely by washing themselves so many times a day with soap", Kausar, Headmistress, Tora Para

Tora Para, a school of 50 female students and two teachers, sets a perfect example by practicing 100% of the ideal behavior on hygiene and safe drinking water. Witnessing the SODIS bottles lay on the concrete floor for purification; the teachers explained that it is a routine for them to begin their day by filling the bottles and keeping it in the sun for radiation. All the students join their teachers in this morning activity. Due to the small number of students, all classes from 2-5 were taught SODIS, hand washing and air-drying. All students in this school were well-versed with the technical information *like duration to wash hands* and how to perform SODIS. A spot check on the monitoring sheet was also conducted and 100 % students proved their evidence. The monitoring sheets were checked by the teacher on a daily basis. In response to the question on

hand washing behavior of the students, the headmistress replied: They have become Fair and lovely by washing so many times a day.



Bara Banda: Kuttar Pan:

GGPS kotar panr, one of the first schools to implement the activities in the later added UC, Bara Banda. The school structure is a composition of the primary and secondary section which allows the headmistress to advocate the messages to a wide audience ranging from Grade I-9 at the daily assembly session.

Headmistress, Shaheen Kausar, is very obliged to be a part of this hygiene and clean drinking water project and gives the credit to

the dedicated Hygiene promoters who frequently come to administer the implementation of activities. She has rated the project unique from all other typical NGOs due to the monitoring approach.

She mentioned practicing SODIS at home and impressing her 5 year old son with such an easy technology. She claims her son to be promoting the concept in his school where the access to clean water in unavailable.

Spot-checks at the classroom activities allowed the team to assess the teachers' delivery on the SODIS demonstration, which was graded as very well. The students were quizzed on a number of questions and were invited to perform on "Aao Aao Aao" and Sodis Demonstrations. Younger students of grade Prep- 2,(who were not intentionally targeted)were seen imitating the actions air-drying after hand washing. Annexure

Date of visit: _____

SURVEYOR'S OBSERVATION

Name of the UC: _____

- Does the school have toilets/latrines? Yes /No
- 2. If No- Why? ____
- 3. Are there signs of open defecation in or near the school grounds? Yes/No
- 4. Where?
- 5. Is there a place to wash your hands at school? Yes/No
- 6. Is it near the toilets?
- Yes/No
- 7. Is there enough water to wash hands **Yes/No**
- 8. Is there soap?

Yes/No

- 9. Is there water available for drinking?
 - Yes some water, but not enough
 - No water at all
- 10. Water Source for drinking water :
 - Hand pump
 - Тар
 - Cooler
 - Bucket
 - Bring SODIS purified water from home
- II. The use of hygiene promotion material and methods
 - No materials for hygiene promotion available or used in the school
 - Programme provided booklets and other written material available but not used
 - Programme provided booklets and other written material are available and are used in hygiene promotion
- 12. Number of Poster boards visible
- 13. Placement of the Posters :
 - Together
 - Distant
- 14. Positioning of the poster boards
 - Front with Blackboard
 - Side
 - Back of the Class
 - In corridor, visible to all
- 15. Is its visible:

Yes/ No

 Do teachers have the Teachers Training Manual and Activity Book Yes/No

TEACHER'S EVALUATION

- I. Class: 4 / 5
- 2. Number of Students at time of survey: _____
- 3. Does the school have toilets latrines? Yes /No
- 4. If No- Why?
- 5. Is there a place to wash your hands at school? Yes /No
- 6. Is it near the toilets? Yes /No
- 7. Is there enough water to wash hands Yes /No
- 8. Is there soap? Yes/No
- 9. Is there water available for drinking?
 - Yes some water, but not enough
 - No water at all
- 10. Do you think your students can carry similar activities at home with their siblings/family?

Yes /No

II. Have you asked your students to start similar activities at their homes?

Yes /No

- 12. If yes, What
- I3. Result of the activity:
- 14. Do you monitor your students regularly? Yes /No
- 15. Do you check their Monitoring sheets?
- 16. Did any student provide any feedback/ complain about the project? Yes/No
- 17. Did you notice any change after the performing of the activities?Yes/No:
- 18. Which activities do your students enjoy the most?Why:
- 19. Which activity was least interesting? Why:

- 20. Suggest changes that can be made to improve the effectiveness of the program :
- 21. Is SODIS an effective method to purify water? Yes /No
- 22. Why?
- 23. Do you practice SODIS at home? Yes/No
- 24. Do student understand SODIS? Yes/No
- 25. What is the best thing about SODIS?
- 26. How to improve the teaching of SODIS?

STUDENT'S EVALUATION

Age: _____

KNOWLEDGE:

- I. Are there germs present in your classroom?
 - True
 - False
- 2. It is important to wash your hands with soap before food?
 - True
 - False
- 3. It is important to wash your hands with soap after playing in the fields?
 - True
 - False
- 4. It is important to wash your hands with soap after defecation?
 - True
 - False
- 5. It is important to wash your hands with soap after cleaning your nose?
 - True
 - False
- 6. It is important to wash your hands with soap after touching the animals?
 - True
 - False
- 7. For how long should you wash your hands with soap?
 - 5 seconds
 - I0 seconds
 - 20 seconds
- 8. Can there be invisible germs present in visibly clean water
 - True
 - False
- 9. Germs spread by shaking hands?
 - True
 - False
- 10. After using the latrine, the number of germs on your hands increases
 - True
 - False

- II. For how long should the bottles be kept in the sunlight for purification?
 - In sunny weather:______
 - In rainy weather :_____

PRACTISE:

- 12. Do you wash your hands with soap before eating?
 - Never
 - Some time
 - Every time
- 13. Do you wash your hands with soap after defecation?
 - Never
 - Some time
 - Every time
- 14. Do you air dry your hand after washing?
 - Never
 - Some time
 - Every time
- 12. Do you put your bottle in the sun for the purification of drinking water?
 - Never
 - Some time
 - Every time
- 15. Do you protect your parents, brothers and sisters from germs?
 - Yes
 - No
- 16. Who acted upon your advice?
 - Parents
 - Younger brothers and sisters
 - Elder brothers and sisters
- 17. Which of the following activities did you enjoy the most?
 - Bottles
 - Sand
 - Poem

بلو يو چھتا ہے اس مروب كامتصد كسى كاامتحان ليمانيين بلكداب يروكرام كى كاميابي جانتا ب- آب كوا ينانام للصف كى كوتى ضرورت نبيس ب، س مقابلة بين كرنا بلكدايما نداري بصرف جواب دينا ب-الله مطوم في x 20 U1 *-- ひょうものやってのいろしろしろ 1 th الله مطوم تين U *---2- كمانا كمات ي يبل بالحوصاتان - دهوتا شرورى -× 50 الله مطوم فيس し、☆-----3- كيلي كريوماتن ت ومواخرورى -🖈 ٿي ا مطوم مطوم محلوم الم い ネーーー 4- ليترين استعال كرف ك بعد بالحد صائن ب دمونا شرورك ب الله في الله معلوم في 5- جالورول كوبالحد لكاف كريعد الله معلوم فيس x \$ 6- \$ ك. صاف *كرف كي يو* シャオー 年20 章 年10 章 -182 -182 -1 ¥5 ☆-الله فين الله مطوم فين シャオー 8- كياصاف بانى شرائطرند فد والے جرائم موضح إن -الله مطوم في A 20 こ かー 9- بالملائ مالمكل كتان -الله مطوم فيس 1 th 小学— 10- ليترين كاستنال ك بعد باتحول يرترا محم كي تعداد باده موجا تي --- * داور عر: دان * بادلون عر: دان 11- يانى كوساف كرت ك لي تى دريتك دهوب ش دكمتا يا ب AS. # 165 # **-12- آب کھانے سے بلے اتحصائن ساہوتے ہی -A.S. # 16.S. # 13- ليزيناستول كرن تربعد الحوصائن ستدهوت بي -赵 第一 ية مطورتين A to 14- ش باتعمان سع 2 2 بعد بواش فتك كرتا بول ____ \$ ال d' to 15- آپيانىماف كرنے كے يكن اور ش ك اي いな ____ 1 \$ 16- كياآ باين والدين اور بكن بحائيل كويراتكم ت يحات n _ * مجرف من جانى * ير يمن جانى * الاياب 17- كمرش يرك في المات يكل كما 18 - آب أو مر ركرى ش ب = ذياده مزا آيا 4 2 A A AL J2 2 1 4 打会

ببلو پو چھتاہے اس سرو ی کا مقصد کسی کا امتحان لینانہیں بلکہ اپنے پروگرام کی کا میابی جاننا ہے۔ آپ کوا پنا نام لکھنے کی کوئی ضرورت نہیں ہے، سمى ب مقابلة بين كرنا بلكها يماندارى ب صرف جواب دينا ب-1 1 \$ الله مطوم فيل 山谷 1- كمانا كمات ي يل الحد وحونا شرورى ب م میں الله مطوم فيس 山林 2- كيلغ كي بعد باتحد وواشرورى ب الله معلوم بيس * * 山谷 3- لیٹرین استعال کرنے کے بعد ہاتھ دھونا ضروری ہے ی میں 4- جانوروں كوباتھ لكانے كے بعد الله معلوم مح いか الله مطوم فيس 1 20 5-تاك صاف كرتے كے بعد 山林 ¥20 ☆ ¥10 ☆ 经5 ☆ 8- 18 B - 25 - 18 - 18 ی نیں ي معلوم في 7- اگر یانی میں کوئی رنگ، بواور دائلت ند مواد کیا ہے بیٹے کے لیے صاف ب 山谷 1 2 8-دستى ياريان جراميم - يعلق ي الله مطوم في 山女 الله مطوم في x 20 Utt 9- كيا آب آلودويا في صاف كر كن قان * ماموم من كظ * ايرآلودوم من كظ 10-يانى كوصاف كرت ك لي تتى ديرتك دموب ش دكمنا باب 3. the 1. 1. the 北京 11-آب كمان - يبلي باتحد ح تاي 13.5. 2 16.5.2 ** 12-ليغرين استعال كرتي يعد ماتحد موت جن اكرفين توكيون الله فين الله مطوم فين 山谷 13- ي باتحد حوف ع بعد اواش فتك كرتا اون المرا الايون الم عكول كے فلك 14- آپ سکول می بینے کے لیے بانی کمال سے لیتے ہی \$ \$ 15- كول مى ينكاياتى مال ب 山谷 1 \$ 山谷 16-آب يانى صاف كرت ك لي سود س كرت يس اگرمان، کیوں — اكريس، كيون. 17-آب كوكن مركرميون شى سب فادوم اآياب 20. 18- آب أوكن مركر ميون ش مب ي مم مزا آيا . 20 19- كياآب اي تحروالول كو باتحدد وف ادرموذس كابينام دية بي A to 山谷 1 4 小士 20- كمرش يحى فرا بكايات يكل كما 21 - 20 بات يقلكما الم باتد وحوف والى いかな

STUDENT'S EVALUATION- URDU Version

اساتذہ کے لیے اس سردے کا مقصد کسی کاامتحان لیانہیں بلکہ پر دگرام کی اہمیت ادر کامیابی جانتا ہے۔اپنے پردگرام کو بہتر بنانے کے لیے آب کی رائے اور تجاویز جانا جاتے ہیں 1- بچون کى تعدا د چۇتمى كاي يا نچو يى كاي 2- سكول مين ليثرين موجود - (بال النيس) اگر نیں: کیوں.... 3- سکول میں ہاتھ دہونے کی جگہ ہے (ہی انٹیں) 4- كياييجد باتحد حوف كتريب (بالثين) 5- كياباتحددون م لي إنى كان - (بارايس) 6- كياباتحددون كم لي صابن ميسر - (بال اليس) ۲- کیا بنے کے لیے انی میر - (بال ٹیں) 8- پینے کے مانی کے کیاذ رائع موجود میں 9- کیا آپ کولگتا ہے کہ بیج سیکھانے ہوئے (سوڈس اور ہاتھ دشونے) کے پیفامات گھر میں بہن بھائیوں اور دالدین تک بہنچا سکتے ہیں 10 - كيا آب ني يون كوايدا كر في كوكها (بال اليون) 11 - اگر ہاں، کن سرگر میوں کی تجویز دی 12 - کن بیغامات کو پھیلانے کی تجویز دی۔۔۔۔۔ 13 - کیا آپ بجوں کے روئے میں تبریلی دیکھتے ہیں (بل انیس) 14 - بيتبديلي بچوں ميں سب بے زيا دہ کب د کیھتے ہیں 15 - کیابچوں کی حاضری میں کوئی اضاف ہواہے (باں نیس) 16 - كيا آب يجون كى بياريوں ميں كونى كى ديکھتے ہيں (بل انتشر) 17 - بچوں کوکن سرگر میوں میں سب ہے ذیا دہزا آیا ہے۔۔۔۔۔ کیوں 18 - بچوں کوکن مرگر میوں میں سب ہے کم مزا آیا ہے۔۔۔۔ کيوں 19 - كياسودس يانى صاف كرف المان اور مور طريقه - (بال المعد) كيوں 20- كيا آب واس كوريد يالى كوساف كرت بي (بل المن) (بارانين) 21- كيابيح سولاس أسماني سيمجه مات بين 22- آب كوسولاس كے تعلق سب سے زيا دەكمالىپند ہے 23- سوڈیں کی تربت کو پہترینانے کی تجویز دیں 24 - پروگرام کومزید بااثر اور بهترینانے کی تجویز دیں

