

BORANG SOAL SELIDIK

(KAJIAN RINTIS)

Tajuk : Penukaran Kod dalam kalangan guru-guru Sekolah Jenis Kebangsaan Tamil.

Arahan : Sila baca soalan dengan teliti, kemudian tandakan (/) di dalam kurungan yang berkaitan sahaja.

Bahagian A : Maklumat Peribadi

1. Jantina : () Lelaki
() Perempuan

2. Umur : _____

3. Mata pelajaran yang diajar : _____

4. Tahap Pendidikan Tertinggi. Tandakan (/) dipetak yang berkenaan.

STPM	()	Ijazah	()
Sijil	()	Ijazah Sarjana	()
Diploma	()	Doktor falsafah	()

5. Bahasa Ibunda : _____

Bahagian B : Penggunaan bahasa

1. Tahap penguasaan bahasa. Tandakan (/) dipetak yang berkenaan.

Bahasa		Bahasa Melayu			Bahasa Inggeris			Bahasa Tamil			Lain-lain :		
Bil	Tahap Bahasa	L	S	B	L	S	B	L	S	B	L	S	B
1	Lisan												
2	Pemahaman												
3	Penulisan												

L – Lemah

S - Sederhana

B – Baik

2. Bahasa pengantar yang digunakan semasa belajar.

Bil	Tahap	Bahasa Pengantar
1	Sekolah Rendah	
2	Sekolah Menengah	
3	Maktab	
4	Kolej	
5	Uviversiti	

3. Penggunaan bahasa di rumah.

Bagi soalan 3 dan 4, Bulatkan kekerapan penggunaan bahasa mengikut skala yang diberikan.

1- Tidak pernah 2- Jarang 3- Kadang kala 4- Kerapkali

Bil	Situasi	Bahasa dan Kekerapan											
		Bahasa Melayu				Bahasa Inggeris				Bahasa Tamil			
A	Bersama ahli keluarga	1	2	3	4	1	2	3	4	1	2	3	4
B	Bersama suami/isteri	1	2	3	4	1	2	3	4	1	2	3	4
C	Bersama anak-anak	1	2	3	4	1	2	3	4	1	2	3	4
D	Bersama kawan-kawan	1	2	3	4	1	2	3	4	1	2	3	4

4. Penggunaan bahasa di Tempat kerja.

Bil	Situasi	Bahasa dan Kekerapan											
		Bahasa Melayu				Bahasa Inggeris				Bahasa Tamil			
A	Ketika komunikasi dengan rakan sejawat	1	2	3	4	1	2	3	4	1	2	3	4
B	Ketika komunikasi dengan majikan	1	2	3	4	1	2	3	4	1	2	3	4
C	Ketika komunikasi dengan ibu bapa pelajar	1	2	3	4	1	2	3	4	1	2	3	4
D	Ketika komunikasi dengan orang luar	1	2	3	4	1	2	3	4	1	2	3	4

Bahagian C : Penukaran Kod (Percampuran bahasa)

5. Adakah anda menggunakan lebih daripada satu bahasa (percampuran bahasa) semasa pengajaran dan pembelajaran? Ya / Tidak

6. Percampuran bahasa tidak seharusnya berlaku dalam komunikasi. (Setuju / Tidak setuju)
Sebab

7. Penukaran bahasa secara selang seli tidak seharusnya berlaku di dalam aktiviti pengajaran dan pembelajaran. (Setuju / Tidak setuju)

Sebab _____

8. Percampuran bahasa akan mewujudkan suasana perbualan yang lebih mesra.
(Setuju / Tidak setuju)

Sebab _____

9. Senaraikan 3 faktor yang menyebabkan anda menukar kod sewaktu komunikasi.

i. _____

ii. _____

iii. _____

10. Apakah mendorong anda untuk menukar dari bahasa yang sedang bertutur ke bahasa yang lain?

11. Apakah implikasi pendengar apabila anda mencampur bahasa semasa perbualan?

12. Apakah impak yang akan terjadi kepada ketulenan sesuatu bahasa sekiranya fenomena Penukaran Kod terus berlaku?

TERIMA KASIH DI ATAS KERJASAMA ANDA

Borang Soal Selidik.

Kajian Soal selidik ini adalah bertujuan untuk mengumpulkan data yang berkaitan berdasarkan dengan tajuk kajian iaitu **Penukaran Kod di kalangan Guru-guru Sekolah Jenis Kebangsaan Tamil**. Semua maklumat yang diperolehi daripada responden akan dirahsiakan dan hanya digunakan sebagai data kajian untuk mencapai objektif kajian ini. Maklumat yang diperolehi daripada responden menerusi borang soal selidik ini dianalisis mengikut tujuan kajian.

Arahan : Sila baca soalan dengan teliti, kemudian tandakan (/) di dalam kurungan yang berkaitan sahaja.

Bahagian A : Maklumat Peribadi

1. Jantina : () Lelaki () Perempuan

2. Umur : _____

3. Mata pelajaran yang diajar : BT () PM () KH ()
BI () SV () PS ()
BM () KT ()
MT () MZ ()
SN () PJ ()

4. Tahap Pendidikan Tertinggi. Tandakan (/) dipetak yang berkenaan.

Sijil () Diploma ()
Ijazah () Ijazah Sarjana ()
Doktor falsafah ()

5. Bahasa Ibunda : _____

Bahagian B : Penggunaan bahasa

1. Tahap penguasaan bahasa. Tandakan (/) dipetak yang berkenaan.

Bahasa		Bahasa Melayu			Bahasa Inggeris			Bahasa Tamil			Lain-lain :		
Bil	Tahap Bahasa	L	S	B	L	S	B	L	S	B	L	S	B
1	Lisan												
2	Pemahaman												
3	Penulisan												

L - Lemah

S - Sederhana

B – Baik

2. Bahasa komunikasi yang digunakan semasa belajar.

Bil	Tahap	Bahasa Komunikasi
1	Sekolah Rendah	
2	Sekolah Menengah	
3	Maktab	
4	Kolej	
5	Uviversiti	

3. Penggunaan bahasa di rumah.

Bagi soalan 3 dan 4, Bulatkan kekerapan penggunaan bahasa mengikut skala yang diberikan.

1- Tidak pernah 2- Jarang 3- Kadang kala 4- Kerapkali

Bil	Situasi	Bahasa dan Kekerapan											
		Bahasa Melayu				Bahasa Inggeris				Bahasa Tamil			
A	Bersama Ibu bapa	1	2	3	4	1	2	3	4	1	2	3	4
B	Bersama suami/isteri	1	2	3	4	1	2	3	4	1	2	3	4
C	Bersama anak-anak	1	2	3	4	1	2	3	4	1	2	3	4
D	Bersama saudara	1	2	3	4	1	2	3	4	1	2	3	4

4. Penggunaan bahasa di Tempat kerja.

Bil	Situasi	Bahasa dan Kekerapan											
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C	Ketika komunikasi dengan ibu bapa pelajar	1	2	3	4	1	2	3	4	1	2	3	4
D	Ketika komunikasi dengan orang luar	1	2	3	4	1	2	3	4	1	2	3	4

Bahagian C : Penukaran Kod (Percampuran bahasa)

6. Bahasa yang anda kerap digunakan secara selang seli (Bahasa campuran) dalam perbualan adalah ?

Bahasa Tamil – Bahasa Melayu () Bahasa Tamil – Bahasa Inggeris ()

Bahasa Inggeris – Bahasa Tamil () Bahasa Melayu – Bahasa Tamil ()

Bahasa Tamil – Bahasa bahasa lain. Nyatakan : _____ ()

7. Apakah faktor yang mendorong anda untuk menukar dari bahasa yang sedang bertutur ke bahasa yang lain? Tandakan jawapan anda. Boleh tanda lebih daripada satu.

- Telah menjadi perkara biasa ()
- Terpengaruh dengan bahasa / dialek oleh orang yang bertutur ()
- Bagi mewujudkan suasana mesra ()
- Untuk menjelaskan sesuatu istilah yang tidak difahami ()
- Untuk mendapatkan jawapan dari murid ()
- Mendorong murid-murid mengambil bahagian dalam aktiviti pengajaran dan pembelajaran ()
- Dipengaruhi oleh bahasa yang ditutur di rumah ()

Soalan 8 hingga 12 mengenai pandangan Penukaran kod.

**Nyatakan pandangan anda mengenai Penukaran Kod (percampuran bahasa).
Sila tandakan pandangan anda mengikut skala yang diberikan.**

1- Sangat tidak setuju 2- Tidak setuju 3- Tidak pasti
4- Setuju 5- Sangat setuju

Bil	Perkara	Pandangan				
8	Penukaran bahasa akan memberikan kesan kepada kedua-dua bahasa tersebut	1	2	3	4	5
9	Percampuran bahasa dalam perbualan menjadi perkara biasa dan ia tidak dapat dielakkan.	1	2	3	4	5
10	Penggunaan bahasa-bahasa lain secara selang seli diperlukan jika tiada perbendaharaan kata yang sesuai dalam bahasa yang ditutur	1	2	3	4	5
11	Penukaran bahasa tidak seharusnya berlaku didalam aktiviti Pengajaran dan Pembelajaran	1	2	3	4	5
12	Percampuran bahasa dalam aktiviti Pengajaran dan Pembelajaran membantu murid-murid memahami isi pelajaran.	1	2	3	4	5

13. Apakah implikasi pendengar apabila anda mencampur bahasa semasa perbualan?

Pilih jawapan anda mengikut keutamaan. (1, 2, 3, 4,)

- () Pendengar akan terikut menukar ke bahasa yang anda tutur.
- () Pendengar masih bertutur bahasa asal yang digunakannya.
- () Pendengar menukar ke bahasa lain.
- () Pendengar menggunakan kedua dua bahasa tersebut secara selang seli.

14. Adakah anda menggunakan lebih daripada satu bahasa (percampuran bahasa) semasa pengajaran dan pembelajaran? Ya / Tidak

Jika Ya, mengapa digunakan?

15. Apakah impak yang akan terjadi kepada ketulenan sesuatu bahasa sekiranya fenomena Penukaran kod terus berlaku?

***** TERIMA KASIH DI ATAS KERJASAMA ANDA *****

TRANSKRIP 1

- Tajuk : Parts of body, Five senses, Good habits, Sounds, Tastes, Touching. (Revision for exam)
- Tahun : 1P
- Peserta: : G- Guru M – Murid Individu MM – Murid-murid
- Petunjuk : Bahasa Inggeris (Times New Roman)
Bahasa Tamil (*Italic*)
Bahasa Melayu (HURUF BESAR)
- UJ1 M : Class, get ready >>> Good morning sir.
- UJ2 MM : Good morning sir.
- UJ3 G : Good morning, class. How you all today?
- UJ4 MM : Fine sir.
- UJ5 G : Today we want to do revision for exam. As, I told u, the question based on topic ourselves. Like our body parts, my five senses and good daily habits. Ok, class *eppa namba enna seiyaporom?//*
- UJ6 MM : Revision.
- UJ7 G : Yes, *miiLpaarvai*. So, I want you all pay attention. So, today what we goin to do, *namba padicha miiNdum miiLpaarvai seiya poorom*. Why?
- UJ8 MM : Exam
- UJ9 G : HA TAHU PUN. You all want goin to sit for exam. Im the one, prepared exam paper for you. So, I already set the exam paper./ *keeLvikaL....* Very easy. If you BETUL-BETUL study smart..*kandipa neengal* answer *paNnalaam*. Class, the exam paper ...very...
- UJ10 MM : Very easy.
- UJ11 G : Yes, *rombe sulabama erukum*. Ok, total time...*neeram...1* hour and 15 minutes. *1 maNi neeram 15 nimidam*. But if u really do revision within *araimaNi neeraththilee* u can finish that exam. Because, exam paper *mika mika sulabam*. *Mika...*

- UJ12 MM : *sulabam.*
- UJ13 G : Yes. Ok, open page...
- UJ14 MM : // page....page
- UJ15 G : Ok, *pakkam* twenty one on your text book. Who never bring the text book?
- UJ16 MM : ()Sir.....*evan*.....Sukumar.
- UJ17 G : Sukumar, *yeen* book *eduththuvarala*?
- UJ18 M : *athu...vanthu...booku.... Kaanum.*
- UJ19 G : *ennaathu?*
- UJ20 M : *naan vanthu schoole vacirunthe....book....kaanum.(.....)*
- UJ21 G : You must have your responsibility. *ungkaLuku antha poRuppu irukkanum.* Please check properly, don't simply give reason. *Teevaiyillaatha karaNam kodukkaathe. Puriuthaa? sari, kavaNi,* page twenty one. I want Abbetha read.

(murid bernama Abbetha membaca)

- UJ22 G : Ok, the rest follow Abbetha, and read. *Ellorum padikanum.*
- UJ23 M : Healthy food
- UJ24 MM : Healthy food
- UJ25 G : *saththuLLa uNavu*
- UJ26 MM : *saththuLLa uNavu*
- UJ27 G : *saththamaa padingka.* They cant here you. Ok, why we must eat? For our.....
- UJ28 MM : Healthy.....healthy
- UJ29 G : For our energy and we can eat for grow. *Namma valara veeNdumaanal saappida veeNdum.* Ok, *growna ennathu?...* *vaLarvathu.* Then to get energy. *Sakthi kidaikkum. Enna kidaikkum?*
- UJ30 MM : *sakthi kidaikum.*
- UJ31 G : We have different with 10 years boy and 20 years men. 10 *vayathu*

Paiyan eppadi iruppan?

- UJ32 MM : *sinnatha*
- UJ33 G : Twenty *vayathu*.....men
- UJ34 MM : *periya aaLu*.
- UJ35 G : So, what different ?.... energy and eating meals. *Vilangkuthaa?* Ok, *adutahtu kavani*, Ok, what are the food there? We have also drink lot of water.
- UJ36 MM : Banana
- UJ37 G : Ok, banana. Next.....what?
- UJ38 MM : (()) Oren, apple, roti, salad, rice..
- (Semua murid bising)
- UJ39 G : /Class, *satham podathe. Ingka kavani*. Ok, There are some example of food. Ok, turn page twenty two...
- ())
- UJ40 G : Ok, meals time. *Appadina ennathu?*
- ())
- UJ41 G : *Saappidukira neeram*. Ok, how many time we want eat?
- UJ42 MM : //three.....four.....three
- UJ43 G : Three times only. Morning we eat.....calling what?
- UJ44 MM : Breakfast.
- UJ45 G : In noon.....afternoon
- UJ46 MM : Lunch
- UJ47 G : Lunch. In nite time?
- UJ48 MM : Dinner.
- UJ49 G : So, mainly we have three meals only. But sometimes human being Eat.many time. *Summaa-summaa sappiduvathu*.

(>>)

- UJ50 M : Sir, my mum only eat two times.
- UJ51 G : Why?
- UJ52 M : I don't know.
- UJ53 G : You tell la must eat three times.
- UJ54 M : She never like to eat.
- UJ55 G : Ok, class there are three meals. Number 1 breakfast, number 2 lunch, number 3 dinner.
- UJ56 M : Sir, what exam questions?
- UJ57 G : No, *athu* secreat. *Romba –romba rakasiyam.*
- <<< (Guru menyanyi lagu tamil : *rakasiyama.....rakasiyama....paritsa thaaL rakasiyamaa*)
- <<< (Semua murid ketawa)
- UJ58 G : Ok, *sari / kavanama keeLu*. Ok, open your page one, In your worksheet book.
- UJ59 MM : Book *onnaa*?
- UJ60 G : Yes book one. *Ellam page onnu paaru*. Ok, *yaaru* homework *ennum seiyala?.....().....*Ok, where is arm? Show on your body.
- <<< (Murid-murid menunjukkan arm di dalam badan)
- UJ61 S : Where is the finger? ...ok, where is the leg?.....ok, good. Turn page 3.
What is the first line?
- UJ62 MM : Leg
- UJ63 G : *Legna ennathu?*
- UJ64 MM : *kaalu.*
- UJ65 G : Ok good, *kaalu*. What is number two?
- UJ66 MM : Hear
- UJ67 G : Very very good

<<<< (Semua murid ketawa)

- UJ68 G : Page four. Ok, see you must ling what?
- UJ69 MM : Eye.
- UJ70 G : Yes. Eye. *kaNkaL*. Their ask five senses right?
- UJ71 MM : Yes.
- UJ72 G : Smell
- UJ73 MM : Norse
- UJ74 G : Norse. Ok, turch
- UJ75 MM : Feel
- UJ76 G : Taste
- UJ77 MM : Tongue
- UJ78 G : Ok, very good. Last one...ears
- UJ79 MM : Hear.
- UJ80 G : /...*ellam seithu mudiciddiyaa?*
- UJ81 M : *aam*
- UJ82 G : *nan vanthu parppeen ippa. viiddu padaam seiyalanaa ippa vaangka poore. Ok, number five,nee senchitiya?*
- UJ83 M : () ..*aam*
- UJ84 G : Ok, *mudichaavanggaluku* congratulation, *vaaltugal. Mudikathavanggal...lazy.*
- UJ85 G : What are they can make sound?
- UJ86 M : (()) ...TV.....radio
- UJ87 G : Ambulans
- UJ88 MM : Yes
- UJ89 G : Anything else that can make sound ? How about BAJU KURUNG?

- UJ90 M : Yes
- UJ91 G : BAJU KURUNG make sound ha?
- UJ92 MM : No
- UJ93 G : / *Yen seiyale?....Sollu?..Yanda seiyale?....nee senjaya?*
- UJ94 M : *aam*
- UJ95 G : Ok, this lorry....What is the smell? Nice smell or bad?
- UJ96 MM : Bad
- UJ97 G : Ok, very good. How about ice-cream?
- UJ98 MM : Nice smell.
- UJ99 G : Match the words to the picture...Sweet, sour, salty and bitter. How about the salt?
- UJ100 MM : ()
- UJ101 G : Ok class. Sweet-*inippu*, Sour-*puLipu*, Salty-*uppu*, Bitter-*kasappu*. How about cake?
- UJ102 MM : Sweet
- UJ103 G : How about peel?
- UJ104 MM : Bitter
- UJ105 G : The lemon?
- UJ106 MM : Sour.
- UJ107 G : *Aduthathu kavani* page fifty. *Aimbathavathu pakkam*. Touching... rough.What is the rough?
- UJ108 MM : Make it very rough
- UJ109 G : OK, how bout very smooth?
- UJ110 MM : ()
- UJ111 G : Very smoothe. Ok, the marble, smooth or rough?
- UJ112 MM : //Rough.....smooth.....rough

- UJ113 G : Smooth. <<< Nadia don't talk. Number two..... What?.. Smootha or rough?
- UJ114 MM : Rough
- UJ115 G : Smooth...hai...rough...rough...ok, the glass?... (...). Why you never Answer athan *Paadathule kavanam seluthu*. You must answer ...*Sikiram ..sikiram..sikiram seiyu*. Ok, bottle?
- UJ116 M : // Rough...smooth
- UJ117 G : Hai, / *ellatikum kaatitu erukathe. KetkiRa kelviku mattum sariya Pathil sollu*. Ok, now we go to healthy food. How bout rice?
- UJ118 MM : Good
- UJ119 G : How bout ice-cream?
- UJ120 MM : Good.....bad....
- UJ121 G : Now about burger?
- UJ122 MM : Bad
- UJ123 G : How about the,... we call KEROPOK all. *Nooruku theeni... theriyuma?*

<<< (Guru menyanyi lagu nooruku theeni dalam bahasa Tamil)

<<< (Semua murid ketawa)

- UJ124 G : What he do? He take biscuit from dirty place. Is this good habits or bad habits?
- UJ125 MM : Bad habits.
- UJ126 G : Ok, can you copy from the white board?
- UJ127 MM : Can.
- UJ128 G : Ok, u can copy now.
- ()
- UJ129 M : Nasi lemak
- UJ130 G : Hai, bukan nasi lemak lah

<<< (Semua murid ketawa)

- UJ131 G : Finish or not? *Eduthidu vaa*
 <<< (Murid membawa buku)
- UJ132 G : Hai....very good.....*mudinjatha ma?*
- UJ133 M : () mmm
- UJ134 G : *Mudinjathuna eduthidu vaa*
- UJ135 M : Sir, *ethuvum seiyanuma sir?*
- UJ136 G : *eruvaren.... eduthidu vaa.....yes.*
- UJ137 M : Sir.....
- UJ138 M : Hai teacher.....Sir..... teacher
- UJ139 G : Ok, class, we continue on next week. So, please do your revision for your exam. Ok, Abbeta collect all the books.
 <<< (Murid mengutip buku)
- UJ140 G : Not, now later..on your free time...ok, class stand up. Ok, thank you class.
- UJ141 MM : Thank you sir.

TRANSKRIP 2

Tajuk : Colour
Tahun : 1 V
Peserta: : G – Guru M – Murid Individu MM – Murid-
murid
Petunjuk : Bahasa Inggeris (Times New Roman)
Bahasa tamil (*Italic*)
Bahasa Melayu (HURUF BESAR)

UJ1 G : Good morning, class.
UJ2 MM : Good morning, teacher.
UJ3 G : How are you all today ?
UJ4 MM : Fine teacher.
UJ5 G : Then.... *appuRam enna sollanum ?*
UJ6 MM : ()
UJ7 G : Fine.... Thank *younu sollanum*. Ok, *maRupadiyum*. How are
you class ?
UJ8 MM : Fine, thank you.
UJ9 G : Ok, today, we are going to start our lesson with a song. First
of all, song means what ?
UJ10 MM : // *Paatu..... paatu..... paatu..... enna paatu teacher ?*
UJ11 G : Yes, *paatu*. The song is about colours.
UJ12 MM : Colourra ?
UJ13 G : Colour..... WARNA....
UJ14 M : Oh, yellow, *karuppu, sivappu*, red, *pachai*.....
UJ15 G : Ok. <<<() all of you, *inge gavaninggaL*. What colour is this

- UJ16 M : *Karuppu*, white.....
- UJ17 G : Ahh.. is this white ? see properly.
- UJ18 MM : // No. *karuppu* teacher . *karuppu*.
- UJ19 G : Yes. *Karuppu* in English.... ?
- UJ20 M : // Purple...
- UJ21 G : No.
- UJ22 M : HITAM, teacher.
- UJ23 G : *Malaay moḷilathan* WARNA HITAM. Englishle...?//
- UJ24 G :Ok. This is black colour. In Malay, we call it as WARNA HITAM..In tamil, we call it as *karuppu niRam*. Ok. Come again, what colour is this ?
- UJ25 M : Black.
- UJ26 G : <<< (*murid bising*). Sari amaithi / which part of body is in black colour ?
- UJ27 M : ()
- UJ28 G : *UngkaL udambule, enthe uruppu* black colourle *irukku* ?
- UJ29 MM : *mudi*, teacher, *mudi*... teacher *kaNNu*... AruN, Megala teacher (...)
- UJ30 G : *Yaaru Arunnu sonnathu* ? *naan unγκαL udambula* / silent // *Odambuna ethu* ?
- UJ31 M : // Body, hair, leg, hand.
- UJ32 G : Ok. Only your hair and eyes RETINA are black in colour. *Ellaam inge gavani*. Arun is not a body. Arun is a boy. *viLangkiyathaa* ?
- UJ33 M : *Aaam*.
- UJ34 G : Arun's skin is in dark brown colour. *Avar black illai. Puringhathaa?* *Appadi ellaam peesa koodathu. Sariyaa* ?
- UJ35 M : *Sari* , teacher
- UJ36 G : Ok, what colour is Kamalesh's shirt ?

- UJ37 MM : ()
- UJ38 G : Ravi, *eḷun̄thu n̄illungaL*. Teacher *ippe enna soneen ?*
- UJ39 M : ()....*Avanoode satthai colour kettaṅgaL*.
- UJ40 G : *Yenna colourru ?*
- UJ41 M : *VeLLai*
- UJ42 G : *VeLLaina ? //*
- UJ43 G : *VeLLaina... white. White colour. Ok, what colour is this pencil?*
- UJ44 M : Red, / ().... pink...
- UJ45 G : No... *ithu pinkka ?*
- UJ46 M : *Illai. red colour.*
- UJ47 G : Clever ! the pencil is red in colour. What colour is this leaf ?
- UJ48 M : *Paccai.*
- UJ49 G : Good. In English ? What we call this ?
- UJ50 M : Yellow
- UJ51 G : No.
- UJ52 M : *Ootha*
- UJ53 G : *Illamma. The leaf is in green colour. Sari ippol̄uthu n̄ambe colour paththina paaddu paada pooRom. Ellaam thayaara irukkingkaLa ?*
- UJ54 M : Thayaar.
- UJ55 G : *Muthalle teacher paadalai paaduren nenggal pinthodar̄n̄thu paadanum.*

<<< (Guru menyanyi lagu) .

- UJ56 M : <<< (the students sing the song together with teacher)
- UJ57 G : Sun is in yellow colour. Sun means what ?
- UJ58 M : *Sooriyan.*

- UJ59 G : Yes, *sooriyan. Amaranukku oru kaitatthal kodungkaL.*
- UJ0 MM : ()
- UJ61 G : Ok, rose... what colour is it ?
- UJ62 M : *Rojapoo.*
- UJ63 MM : Red colour.
- UJ64 G : *Ellaarum nalla paaduninggal. Vaal teacher, white boardle *cile cardslaam otuRen. Athu enna colourro in*the colourless photo *koodei Naikkanum.* For example, *ithu enna padam?**
- UJ65 MM : Apple.
- UJ66 G : Apple *enna colourle irukkum ?*
- UJ67 MM : Red colour, green
- UJ68 G : *Inge* green colour *irukka ?*
- UJ69 MM : *illai.*
- UJ70 G : So, red colour cardde *yeduthu apple pakkathule ottanum.Okva?* *Puriyithaa*
- UJ71 M : *Puriyitu,* teacher.
- UJ72 G : *Oru oru aaLa vaange.* Start from Sumitha. *Munnukku vaange. (...)* // ()
- UJ73 G : Ok. Take out your exercise book.
- UJ74 M : Teacher, *itha ?*
- UJ75 G : *Illamma. Ithe maathiri, namme payirchi seivome anthe bookku./*
- UJ76 M : *//Eruku* teacher.
- UJ77 G : All of you turn to page thirty one. *Muppathu onRu*
- UJ78 M : Teacher thirty *onna?*
- UJ79 G : *Muppathu onRu. Ange paarungaL. Anthe boxle kettirukkiRe* colourre *eduthu varNam thittanum.* For example....*vaasingaL.*
- UJ80 M : R.e.d (spell)

- UJ81 G : R.e.d, red. Red means what ? ok, before that... all of you please take out your colour pencils. *neRRu* teacher *eduthu vara sonnele Ellaarum eduthu vanthingala?*
- UJ82 M : Teacher, Raman *eduthu varale*.
- UJ83 G : / ... *Yenya kondu varale?*
- UJ84 M : () ...*Maranthuten* teacher.
- UJ85 G : Ok next time, *marakamal kondu varanum*. Okya?
- UJ86 M : <<< (*menganggukkan kepala*)
- UJ87 G : *Ninge Kanchanakiterunthu* PINJAM *pannikinge. MudiungaLa, Kanchana ?*
- UJ88 M : *Mudiyum*, teacher.
- UJ89 G : Ok, *unggaLode* colour pencille *ethu* red colour, *kaatunggaL paarpom*.
- UJ90 M : *Itho...ithu*, teacher.
- UJ91 G : Raj, *tavaruya. Athu enna colourru ?* teacher red colorre *ketten*.
- UJ92 M : ()
- UJ93 G : *Aam. Sari*. Red colourre *eduthu ante* boxla colour *adikanum Puriyitha ?*
- UJ94 M : *Aam*.
- UJ95 G : Ok. start doing. *SeyingaL*.
- UJ96 G : // *ellaRom senji mudicitingaLa ?* Jegan, collect everybody's book.
- UJ97 M : Aah....
- UJ98 G : (.....)
- UJ99 M : Teacher, *koduke maatrang*.
- UJ100 M : // *Innum senji mudikale* teacher.
- UJ101 G : *Paravalema. Puthagathai kodungaL. Sari, anaivarum vtule poi miiLparvai seiyanga*. Ok, Thank you class.

TRANSKRIP 3

Tajuk : Living Things
Tahun : 2 P
Peserta : G – Guru M – Murid Individu MM – Murid-murid
Petunjuk : Bahasa Inggeris (Times New Roman)
Bahasa tamil (*Italic*)
Bahasa Melayu (HURUF BESAR)

UJ1 G : Good afternoon, class.
UJ2 MM : Good afternoon, teacher.
UJ3 G : Ok, sit down. Ok, class *Ellarom sutti parunga*
UJ4 MM : *Ennge* teacher?
UJ5 G : Please look around. *Unggale sutti erukiratu parungga.*
UJ6 MM : (...)
UJ7 G : What can you see?
UJ8 MM : ()
UJ9 G : Class, *nan unggakitataan pesitu iruken. Velanggalaya? In the Vagupule ethai paarkuRingal?*
UJ10 M : ().. Fan, ALMARI, table, *naRkali.*
UJ11 G : Ok, yes. Table, chair, cupboard. What else?
UJ12 M : White board teacher.
UJ13 G : Ok, *naaNru.* What else?
UJ14 M : Teacher... (...) duster.
UJ15 G : Ok, enough. What are the living things in this class?
UJ16 M : Teacher, light.
UJ17 G : *Enn keelvi puriyalaya?living things na uyurulla porul.* Light

ungakude pesutha? anRadam saapidutha?

- UJ18 M : // No. *manusaalungaL*, teacher.
- UJ19 G : *manitharkaL*. Human being. Who you are?
- UJ20 M : / Ramani
- UJ21 G : Ok. Ramani. Are you a doctor or mother?
- UJ22 M : No, student.
- UJ23 G : And who am i?
- UJ24 MM : Teacher.
- UJ25 G : Ok, class. Students and teacher are living things In this class. *Nambe ellamethan uyiruLLavarkal.Aamaavaa?*
- UJ26 MM : *aam*.
- UJ27 G : Ok. All of you. *Oru thaaL edungkaL*.
- UJ28 M : Teacher ...*Bookka?*
- UJ29 G : *thaLuma. Readyya irukinggaLa?*
- UJ30 MM : mmm
- UJ31 G : Now, draw the living things in your classroom and out of your classroom. Teacher give two minutes *kodukiren. Ippe seyya start pannungaL*.
- UJ32 M : Teacher, *maram varaiyalama?*
- UJ33 G : *varaiyalam*. Teacher *than sonnelen*, class *suku veLeile irukum* living things *saiyum varaiyalamnu*.
- UJ34 M : Teacher, Kavi *ennai adikiRan*.
- UJ35 G : / *Yenye avarai* disturb *panringaL?*
- UJ36 M : *Illai* teacher.
- UJ37 G : Class, another one minute only. Finish or not?
- UJ38 MM : (...), Not yet teacher.
- UJ39 G : Who finish. Class can you show me your drawing.

<<<(Murid-murid menunjukkan gambar yang dilukis)

UJ40 G : Ok, that's good.

<<<(Ada murid sibuk melukis)

UJ41 G : Ok, class now u can stick your drawing on the white board . Ok,
PARA PELAJAR BOLEH MELEKATKAN HASIL LUKISAN
ANDA DI PAPAN PUTIH DI HADAPAN.

<<<(Murid-murid melekat lukisan di papan putih)

UJ42 G : Ok, class what can you see on white board here? *Yaarale sole mudiyum?*

UJ43 M : () ..Teacher, cat, baby, boy, *maram, naai apparam...*

UJ44 G : Ok, *veera enna teriyuthu?*

UJ45 M : *sedi. Manitarkal, maram...*

UJ46 G : Ok.*nadri, vaaltugal.* Ok, class what is this?

UJ47 MM : *//..Cat.*

UJ48 G : Yes, this is a cat. Let me ask questions. As we know, this animal are...are what?

UJ49 MM : ()

UJ50 M : Living things.

UJ51 G : Ha, living things. Very good. What you understand about the term of living things?

UJ52 M : */ Uyurulla porul.*

UJ53 G : Yes, living things means BENDA-BENDA HIDUP or we said *uyurulla porutkal.* Ok, another thing, how does a baby frog look like?

UJ54 MM : ()

UJ55 G : Ok, for example now you are boy. 10 years ago you are baby and; Another 10 years later your are man or women. Do you agree with me?

UJ56 MM : Yes teacher.

- UJ57 G : So, *uyurulla porutkal valarchi kanum thanmaiyai koNdullathu. Verethu valarchi kanum? Yaaravathu solle mudiyuma?*
- UJ58 MM : ()
- UJ59 G : Class, *unggakittathan kekireen.*
- UJ60 M : ((..aah...)) Teacher, chicken, cow, frog then... dog... *kuruvi ellamum grow pannum*
- UJ61 G : Very good. nandriya, please sit down.Ok, class what you can see here? First you can see a....
- UJ62 M : *paiyan*
- UJ63 G : Ok, *paiyan*. Good then...*nalla parungga.*
- UJ64 MM : *oru paapa.*
- UJ65 G : Ok, good. So, *evunggalum* are living things and in category of Human being *athavathu manitharkaL*. Understand or not?
- UJ66 MM : *puriyuthu* teacher.
- UJ67 G : Ok, now you all see this picture. This is show changes when a baby grow become a girl. *Babya eruntha neenga ellorum valarthu ippoo perusaa irukkingka and innum perusa varuvingga.. ennai pole*. Do you agree with me?
- UJ68 MM : Yes teacher.
- UJ69 G : One more things, as I told u all human beings, animals and plants are living things. How does living things can be alive? *Yaaravathu oru aal sollungga?*
- UJ70 M : () *saapadu sapidum.*
- UJ71 G : Yes, living things need food, air and water to live. Without this they wil die. *Engga yaaru saapadama, tannir kudikama, suvasikama uyir vaalra?Enggita sollunga parpom?.... Ha....so uyirvaala unavu, neer, kaaRRu mika avasiyam. Manitharkalai polave mirukanggalum thavarangalum ithanai payan paduththi uyir vaalkirathu.*
- UJ72 M : *aana* teacher *yen sedi vaadi poguthu?*
- UJ73 G : *sediku pothiya neer uutravillai endral athu vaadi pogum. piRaku Athanaal suyamaaka uNavu theedi koLLa iayalaathu. Apparam enna nadakum?*

- UJ74 MM : *sedi sethu poividum.*
- UJ75 G : *Manitharkalai pole, sedikaLum piranikaLum vaLarum thanmaiyaikoNduLLathu.* Living things can grow. When they grow, they become bigger or taller.
- UJ76 M : Teacher, *apadina sedikalukkum piraNikalukkum vayathu irukkaa?*
- UJ77 G : / () *wissayamaaka irukkum. Naa muthale sonnathu poola,* baby grows to become a boy or adult. *Athe maathiri,* tadpole grows into....class... are you with me?
- UJ78 MM : Yes teacher.
- UJ79 G : So, answer my questions... tadpole grows into..?
- UJ80 M : () tadpole grows into a frog.
- UJ81 G : and a seedling grows...? Who can answer? Come on faster..
- UJ82 M : Teacher I know, seedling grows into plant.
- UJ83 G : Very good. *avanuku kaitaatal kodunga.*
- <<<<(Murid-murid bertepuk tangan)
- UJ84 G : *Nalla vegama.* Ok, thank you. All the living things can move.
- UJ85 M : Teacher, *aapadina?*
- UJ86 G : *uyirulla porutkalum oru idaththiliruethu maRRoru idaththiRku Pogum Manitharkalai pole,* animals can move from one place to another place.
- UJ87 M : Teacher, plants *eppadi nagarum?*
- UJ88 G : Class, plants *nagara mudiyuma?*
- UJ89 MM : *Mudiyathu.*
- UJ90 G : Yes, plants cannot move like animals or humans but most of them move towards the sun. How the living things move? *Uyurulla porutkal eppadi nagarum? Yaaraal solle mudiyum?* Gugen you know the answer?
- UJ91 M : ()

UJ92 G : Ok, class human being like boy move by walks and runs, then animals like tortoise crawls and a sunflower plant moves towards the sun. Another important thing is, living things produce young. IAITU SEMUA BENDA HIDUP BOLEH MELAHIRKAN ANAK.. *Manitharkalil, amma give birth panrangga. Class, puriyutha? Give birthna ennathu?...putu thambi papa pirakirathu. Then, cila animals muttai ettu kunju porikum. utharaNamaaka kooli, muttai ettu kunji porikum. Kooli muttai yaaru paaturuka?*

(<<)

UJ93 M : Teacher, *antha mutta kite pona kooli kotha varum.*

UJ94 G : There are some animals *kutti podum*. For example,*kutti podum* animals *ennathu?* Class *sollunga?*

UJ95 MM : cow,.. *aadu,.. yaanai,.. cat,.. dog....*

UJ96 G : Ok, very good. Then plants can grow new plants. *Thaavara vakaikaL puthu sedikaLai uruvaakkum. maaNavarkakalee,* there are non-living things aso. *Apadi enral enna?*

UJ97 M : ((...aah..))...Teacher, non-living things*na uyiratra porutkal.*

UJ98 G : Very good. Kabilanuku *ellorum oru kaitattal kodungka.* Ok, *nandri.* Kabilan *sonnathu pole,* Non-living things are things that are not alive.*Utaranamaaka...class sollunga?* You can said the thing around you.

UJ99 MM : *naarkali,.. mesai,.. karumpalakai,.. pensil,.. panthu...maram*

UJ100 G : Ok, good. *Ellorum unggaluku oru paaratu terivithu kollunggal. Sari,* non-living things cannot move on their own like us so, *uyeratra porulkaL* do not need food and water. Non-living things also do not breathe, grow and produce young. Class, *velanggutha?*

UJ101 MM : *Velangguthu* teacher?

UJ102 G : ? (...) *Enna velanggiyathu? Yaaral solle mudiyum?*

UJ103 M : Teacher, non-living things *uyeratra porul,* so *athu saapidathu....move pannathu... apram muuchu vidathu...*

UJ104 M : Teacher, *kuuttiyum podathu.*

UJ105 G : Ok, very good. Now take out your science BUKU LATIHAN.

- UJ106 M : Teacher book 1 or book 2?
- UJ107 G : Book 1...turn a new page. Then, I write some things on white board Here you all grouping this things into living things and non-living things. *Seiyamudiyuma?*
- UJ108 MM : *Mudiyum.*
- UJ109 G : Ok, good. For example,. “Horse”.. are living things or non-living things?
- UJ110 MM : () living things.
- UJ111 G : Horse..*na.. ennathu? Entha vagaiyai sernthathu?*
- UJ112 MM : *kuthirai*, teacher.
- UJ113 G : Ok, *entha vagaiyai sernthathu?*
- UJ114 MM : Animals.
- UJ115 G : Ok, good. What about “broom”. Living things or non-living things?
- UJ116 MM : No-living things.
- UJ117 G : Ok very good class, *unggaluke oru murai paaraatu terivithu kollunggal.* Now, the time to do activities. *Thayaraa?*
- UJ118 MM : *Thayar.*
- UJ119 G : Ok class, do this activity and pass up on tomorrow. Everyone must do. I will check on tomorrow. Those who never do... *nalaiiku adi vaangguvanga.* Ok, class, I got another class..so, I meet you all on tomorrow. Thank you class.
- UJ120 MM : Thank you teacher.

TRANSKRIP 4

Tajuk : Animals
Tahun : 2 V
Peserta : : G – Guru M – Murid Individu MM – Murid-murid
Petunjuk : Bahasa Inggeris (Times New Roman)
Bahasa tamil (*Italic*)
Bahasa Melayu (HURUF BESAR)

UJ1 G : Good afternoon, class.
UJ2 MM : Good afternoon, teacher.
UJ3 G : How you all today ?
UJ4 MM : Fine, teacher.
UJ5 G : Ok, *enniku namma mirukanggal pathi padika porom.*
UJ6 MM : Hehehehe
UJ7 G : Ok, how many of u like animals?
UJ8 MM : <<<<(Murid-murid mengangkat tangan)
UJ9 G : / (...) Class, there are many types of animals around us. Who can tell me?
UJ10 MM : ()
UJ11 G : Class, *yaarala mirukanggal pathi solle mudiyum?*
UJ12 M : Teacher, *naa sollren. Engge vitule poonai, naai ellam eruku.*
UJ13 G : *Vera yarum try pannringgala?*
UJ14 MM : ()
UJ15 G : There are so many animals. For example cat, hen, bird, cow, monkey, duck, bee, dog, rooster, tiger, elephant and so on. *Seetha unaku entha animal pidikum?*
UJ16 M : Teacher, *enaku kili rombe pidukum.*

- UJ17 G : *Yen, unaku kilina rombe pidikum?*
- UJ18 M : *((..aah..)) Kili rombe alaga erukum.*
- UJ19 G : Ok, class, animals move from one place to another place to look for food and shelter.
- UJ20 M : Teacher, *shelterna ennathu?*
- UJ21 G : */Shelterna mirunggal tanggi erukira edam.*
- UJ22 M : Teacher, *apadina veeda?*
- UJ23 G : No, not all the animals are living in house. Which animals are living in house?
- UJ24 MM : ()
- UJ25 G : *Ellam, miruganggalum vitule vala mudiyathu. Poonai. Naai ponre mirugaganggal matumthan vitule erukum. Puli, karadi, kurangu, yaanai ellam kaatule than erukum.*
- UJ26 M : Teacher..... *Zoo, la paartiruken.*
- UJ27 G : Yes, Zoo, *le kuda erukum.* Ok, class how animals move?
- UJ28 M : Teacher *apadina?*
- UJ29 G : *Miruganggal epadi oru sedatilerunthu matra edatirku pogum?*
- UJ30 M : Teacher, *odum.*
- UJ31 M : Teacher, *naa solren ((..aah..)) Parakkum apparam nadantahupogum.*
- UJ32 G : Ok, *rendu perukum vaaltugal. Avanggaluku kaitattal kodungal.* Ok Cat,dogs, cows and goats walk. They have legs. But, birds, butterflies, bees, and bats fly. These animals have wings.
- UJ33 M : Teacher.... *paampu epadi pogum?*
- UJ34 G : */ paambu....snake are slithers..*
- UJ35 M : Teacher *apadina paambu padutukituthane pogum?*
- UJ36 G : *Illai, paambu uurnthu sellum.* Ok class, *miruganggal engku vasikum?*

- UJ37 M : *Vitule...kaatule apparam..(..aah...))... zoole...*
- UJ38 G : *Veeru enggaellam vasikum? Megala nee sollu.*
- UJ39 M : () *Terile teacher.*
- UJ40 G : *Animals live in their own homes. Some animals live on land and some animals live in the water. purinjatha maanavargale?*
- UJ41 MM : *aam*
- UJ42 G : *Gopal, teacher enna sonnanu sollu paakalam.*
- UJ43 M : ()
- UJ44 G : *meendum solren nalla kavanama kelu. Sila piranigal nilatalaiyum ennum cila piranigal neerilum vaalum.*
- UJ45 M : *Teacher, kooli koondule valumthane?*
- UJ46 G : *Yes, chicken live in cage. Cage na koondu. Animals eppadi uyir vaalum?*
- UJ47 M : *Teacher, muucu vidum...(..aah...))..namla matiri saapidum.*
- UJ48 G : *Naanru. Athavathu animals need to eat food, drink water and breathe in air to stay alive. Miruganggaluku unavu, tannir, kaatru kattayam thevai, appadi ellana enna aagum?*
- UJ49 MM : *ellam sethu poirum.*
- UJ50 G : *Ok, animals enna saapidum?*
- UJ51 M : *Teacher, engga vitule, naaiku sooru poduvangga. Apparam elumbu tundu poduvangga.*
- UJ52 G : *Sari, kooliku enna saapadu koodupangga?*
- UJ53 M : *Teacher..... engga vitule kooliku gandum poduvangga.*
- UJ54 G : *Different animals eat different types of food. cila mirugaganggal thaavara vakaikalai matum thinnum. Ennum sila mirugaganggal matra mirugaganggalai vettaiyadi tinnum, cila mirugaga elaitalaikalaiyum matra piranikalaiyum tinnum*
- UJ55 M : *Teacher, eppa puli maanai veetaiyadi tinnum apana athu thavaravaigale saapadatha?*
- UJ56 G : *Yes, never eat.elaitalaikalai mattum saapidum piranikalai solungga?*

- UJ56 M : *aadu, kuthirai apparam nathai...*
- UJ57 G : Yes, hundred person correct. Avaruku oru balatha kaitattal kodunggal. Class, Clemond *sonnathupole*, horse, goats and snail eat plants only.
- UJ58 M : Teacher, *matra miruganggalai vetaiyadi tinnum miruganggal rombe pollathathu thane?*
- UJ59 G : Yes, that type of animals we called 'wild animals'. *atahvathu migavum abathana mirugam*. Whicah animals are eat plants and other animals? Who can answer?
- UJ60 M : Teacher, *enna keetingga?*
- UJ61 G : *Entha mirugaganggal tavaramum matra piranikalaiyum tinnum?*
- UJ62 M : //Teacher.... *yaanai...yaanaai*
- UJ63 G : *tavaraana vidai. yaanai, taavaranggal mattum than tinnum.*
- UJ64 M : Teacher, *na solren..palli.*
- UJ65 G : *palli, poochi saapidum anal taavaranggalai tinnathu.*
- UJ66 M : Teacher....() *terille.*
- UJ67 G : Ok, birds eat fruits and worms.
- UJ68 M : Birds....*kuruvithane?*
- UJ69 G : Yes. Another one is chickens. *Athavathu, kooli gandum, sooru apparam puluvum saapudum.*
- UJ70 M : Teacher... *engga vitule, kooli paattu kunji poriciruku.*
- UJ71 G : / () Yes, animals grow in size and weight like us. *Unmaiya ellaiya?*
- UJ72 MM : mmm
- UJ73 G : *Namba maatiriye miruganggalum perusa valarum.*
- UJ74 M : Teacher, *engga naai kuuti potuci, eppa kuuti perusa aachi.*
- UJ75 G : *Nenggalum ennum anju varushatula periya pillinggala valarvingga.*
- UJ76 M : Teacher, *piranikalai adikirathu paavamthane?*

- UJ77 G : Yes, we must love them. *piranilakai paasama patukanum*. Ok, class that's all for today. I will give homework now. *Vituku poitu unggaluku piditha mirugangalin padangkalai veti konduvangga* I will check on tomorrow. *Naalaiku kandipa kondutu varanum*. Ok, va?
- UJ78 M : Teacher, *ettanai padam?*
- UJ79 G : Your wish. *Unggal viruppam*.
- UJ80 M : //Teacher, *bookle ootunuma?*
- UJ81 G : Class, don't paste in ur book. *Padangkalai veti konduvanthalmattum pothum*. *Purinjatha?*
- UJ82 MM : mmm
- UJ83 G : Ok, thank you class.
- UJ84 MM : Thank you, teacher.

TRANSKRIP 5

- Tajuk : Electricity
- Tahun : 3 P
- Peserta: : G – Guru M – Murid Individu MM – Murid-murid
- Petunjuk : Bahasa Inggeris (Times New Roman)
- Bahasa tamil (*Italic*)
- Bahasa Melayu (HURUF BESAR)
-
- UJ1 G : Good morning, class
- UJ2 MM : Good morning teacher.
- UJ3 G : Take your sit.
- UJ4 MM : Thank you, teacher
- UJ5 G : Class, what is the day today ?
- UJ6 MM : Today is Wednesday.
- UJ7 G : Ok class how about the date today ?
- UJ8 MM : 15 April 2009
- UJ9 G : Class, keep away all the things. Teacher *ente thingsaiyum tablemele parke kudathu.*
- UJ10 G : () Class, are you ready?
- UJ11 MM : Yes, teacher.
- UJ12 G : Class, see here. On the right hand teacher have a torch light (torch A) and then teacher also have another torch light (torch B) on the left hand side,teacher switch on torch.
- UJ13 G : Ok, which torch light is very bright ?
- UJ14 MM : () Teacher, torch light A is brighter.
- UJ15 G : *Een appadi solringaL ? Why ? yaarale answer panne mudiyum ?*
- UJ16 M : ()...Because torch A got many batteries.

UJ17 G : Yes, that's right. So, today we are going to learn how to make a bulb in a circuit brighter.

UJ18 M : Teacher... brightna enna teacher ?

UJ19 G : Brightna vantuu... rombe velichama irukartu.

UJ20 G : Let's make a bulb lights up brighter. *Ippe vantuu nambe bulbe velichama athaavathu brighta yeriye vaike porom.* So, everybody see in front

<<<< (Teacher make a circuit with a battery and a bulb. Teacher ask the class to observe the demonstration while she draw a table on the black board)

UJ21 G : What do you observe?

UJ22 M : () Teacher, bulb *eriyithu.*

UJ23 G : Bulb *yeriyitha ? yellaralaiyum parke mudiyitha ? sari, kavaningaL. Yethanai* battery teacher use *panniruken ante* bulb *yeriye ?*

UJ24 MM : ((..aah..)) One battery

<<<< (Teacher adds another battery to the circuit)

UJ25 G : Does the bulb light up brighter than bulb with a battery?

UJ26 MM : Yes, teacher.

UJ27 G : *Ithule, yethanai* battery teacher use *panniruken ?*

UJ28 MM : Two batteries teacher.

<<<< (Teacher adds a third battery to the circuit.)

UJ29 G : What happens to the bulb?

UJ30 M : The bulb lights up.

UJ31 G : Does the bulb light up brighter than bulb with two batteries?

UJ32 M : Yes, teacher. *Ante moonu* battery *uLLathu innum TERANGa eriyitu* teacher.

UJ33 G : Teacher record on the drawn table whether the bulb is bright, brighter than bulb with a battery and brighter than bulb with two batteries.

()

- UJ34 G : *Inte tablele ulle resulte vachu yenne conclude pannalam?*
- UJ35 M : () *Battery potha light yeriyithu teacher*
- UJ36 G : *Yes. I know. Nambe batteryye ovvoru samayamum add panrappe ante bulble ulle velicham yeppadi maruthu ?*
- UJ37 M : *Teacher, rombe battery potha rombe brighta yeriyithu.*
- UJ38 G : *Yes, that's right. A bulb lights up brighter when more batteries are added into a circuit.*
- UJ39 MM : *((..ooo..)) Aama teacher.*
- UJ40 G : *Sari, ellarukum purinthatha ? vere yethum kelvi iruka ?*
- UJ41 MM : *Illai teacher. Purinchirici.*
- UJ42 G : *Appana, ippe teacher oru work sheet kodukiren, pattu nimisatule complete panni teacherte koduturnum. Okva ?*
- UJ43 MM : ()
- UJ44 G : *Ok, yellarum science activity bookke yedungaL. Page thirty torantu, atule ulle work sheette seiyingaL. Satham vare kudathu. Yaararu senji mudicitingal , teacherre vantu parungaL. Teacher mark panren.*
- (After fifteen minutes)
- UJ45 M : *Teacher, nangaL mudicitom.*
- UJ46 G : *Ok, bookke pass up pannungaL. Keep away all your things. Which bulb lights up brighter? The bulb with four batteries or the bulb with two batteries?*
- UJ47 M : *Four batteries one.*
- UJ48 G : *What will happen if teacher puts more bulbs with a battery?*
- UJ49 M : *Teacher more brightta eriyum teacher.*
- UJ50 G : *No. you are wrong. Ithuku bathil vanthu veetuku poi yosicitu coming Friday bathil sollungaL. Sariya ?*
- UJ51 MM : *Ok, teacher.*
- UJ52 G : *Ok, we continue our lesson. Ravi please stand up. There are many*

things that use batteries to work. Please give me a example?

UJ53 M : ()

UJ54 G : Ravi can you understandart my quantions or not?

UJ55 M : (). Enaku kelvi purila teacher.

UJ56 G : / Ok, *batteri kondu payanpaduthum porutkalai kurippidu.*

UJ57 M : Oh, kadikaram, radio, kaadi, handphone,

UJ58 G : Ok, class Raviku oru balatha kaitatal kodunga.

<<<<(Murid-murid bertepuk tangan)

UJ59 G : Ok, Class the things are using battery like alarm clock, torchlight, car battery, radio, and watch. What else?

UJ60 MM : ()

UJ61 G : Battery has two metal ends called, who can answer me? *Jeeva nee sollu?*

UJ62 M : ((..Heee..))

UJ63 G : *Batteryle mele rendu symbol erukume athu ennathu? Tamille answer pannu.*

UJ64 M : Teacher I know.

UJ65 G : Please give a change to your friend. *Ravi nee solluya.*

UJ66 M : Teacher, *kuutal apparan((.....)) kaalithal.*

UJ67 G : Ok, *kettikaran, avanuku kaitattal kodungga.* Ok, class, the two metal ends on battery called positive terminal and negative terminal. Class, said positive terminal.

UJ68 MM : Positive terminal

UJ69 G : Negative terminal

UJ70 MM : Negative terminal.

UJ71 G : Ok, very good. This is a positive terminal and this is negative terminal.

UJ72 M : Teacher why...battery....insize...(<<)

- UJ73 G : What? I can't listen you. *Paravala Tamille kelungga*
- UJ74 M : Teacher *yen battery perusavum sinnatavum eruku.*
- UJ75 G : *Nalla kelvi kettaru, avaruku paratu terivingga.* Very good Agilan.
- <<<(Semua murid bertepuk tangan)
- UJ76 G : Ok, its because of *ella porulukume namba oru size le ulla battery poda mudiyathu. Porul sizeku ettra maathiri than batteryode saiz erukum.* So, battery are in different size according to the object that we using. Understand or not?
- UJ77 MM : *Puriyathu* teacher.
- (Loceng berbunyi)
- UJ78 G : Ok, class *yelunthu nillungaL.*
- UJ79 M : Thank you, teacher.
- UJ80 MM : Thank you teacher.
- UJ81 G : Ok, thank you class, we meet in next class. Make sure finish your homework and pass up to me by tomorrow before recess. Bye class.
- UJ82 MM : Ok, teacher. Bye.

TRANSKRIP 6

Tajuk : Living things
Tahun : 4 P
Peserta : G – Guru M – Murid Individu MM – Murid-murid
Petunjuk : Bahasa Inggeris (Times New Roman)
Bahasa tamil (*Italic*)
Bahasa Melayu (HURUF BESAR)

UJ1 G : Good morning, class
UJ2 MM : Good morning teacher.
UJ3 G : Sit down.() *Kizhe parungaL. Rubbishlam edungaL.*
UJ4 M : ()
UJ5 G : Now, you are going to sit into five groups. *Sari*, now, you have to draw a small colour paper from this box. After you take you have to pass the box to your friend. *Eduthe piragu ore colour vaccirukiravangal ore grouple poi okkarungaL.*
UJ6 MM : ()
UJ7 G : / *ippe* please select a group leader for your group. *Inikki nambe oru mini experiment seiye porom. Tayara?*
UJ8 MM : *aam.*
UJ9 G : *athuku mun* you have to follow the prosedur. *Muthalle*, teacher will give each group a snail in the mini aquarium, stick and glove. Ok, before that snail *na enna ?*
UJ10 M : ()
UJ11 G : *aam, nathai.* Ok, now teacher will explain the prosedur of the mini experiment. *Muthalle* snail which in the aquarium *eduthu* middle of your table *le vaingge*. Next, take the stick, *kucchiye eduthu* touch the snail. *Athu oruyir mirugam.* So, you must be very careful when handle with it. *Migavum gavanama nathaiye touch pannungaL.* Experiment *seyathe mun*, glove *podungaL.* Everybody must take turn. *Ellarom seiyanum. Sari, ninge stickkule snaille touch pannum*

pothu athu enne reaction kodukuthunu observe pannungaL. Later we will discuss it. Now, seiyingal parpom.

- UJ12 MM : ()
- UJ13 G : (...)
- UJ14 G : *Sari, ippe leader matum eluntirunggaL. Ok, teacher koduthe ella materiallaiyum eduthu teacher tablele vantu vachirunggaL.*
- UJ15 MM : ()
- UJ16 G : / Students, let us discuss what you have observed. When, you touch the snail with the stick, how the snail react? *Atavate, nenga anta nattahiyai kuttchiyaal todumbote, athu yenna reaction tantatu?*
- UJ17 M : () *Surundukittchi* teacher. *Setta matiri iruntici. Nagarave illa.*
- UJ18 G : mmm, fine. *nengga sonnatu ellam seritan. Athu surundukittchi and seta matiri iruntirukum. Na unga answers etukuran* because that is your observation. Students, what we call snail *surundukittchi* in English? *Terilena unga* text book refer *pannunnga*. There is answer in it. *Yaru seriya batil solluringgalo, avangaluke* I will give a pencil.
- UJ19 M : ((.ooo.)), *enake teriyum*. Snail will curl up its body.
- UJ20 G : *Seriyana bathil. Come and take your pencil. Well, others if you want get pencil like this, You have to try to give answer like him. Muyarchi pannunga. Tappa irunta paravale. Try. The second question is I want ask you why the snail reacted in such a way? Means, yen anta natthai atoda bodyyai curl up pannikichi?*
- UJ21 MM : ()... *payantirukum*.
- UJ22 G : *yeppa bayantichi?*
- UJ23 M : *Nangga atai todumbotetan bayantu curl up athe pannikichi.*
- UJ24 G : *aama, nengga atai todumbote, athu bayantu poi curl up pannikichi. Itilirunte enna terite? Atoda uyirke abatu varumbore ate tannai dangerle irunte kapatika muyarchi seitu. Atekatan athu curl up pannikute.*
- UJ25 M : Teacher.... teacher *yennge vidulaiyum na naraiya snail patiruken. Silappa touch pannumbote, athu ippaditan tan udambai suttikum.*

- UJ26 G : So, you all have the experience of observing how the snail will protect itself from danger. Today, we will discuss about other animals how they will protect themselves from danger. *Ippe ore CONTOH taren. Inte padatai parunggae*. Name the insect in the picture?
- UJ27 MM : () *Pulu*.
- UJ28 G : What we call *pulu* in English?
- UJ29 M : Worm.
- UJ30 G : *aam... seri. atoda udalin varnam yenna?*
- UJ31 M : *patchai niram*.
- UJ32 G : *atoda ilaiyin niram yenna?*
- UJ33 M : *atuvum patchai niramtan* teacher.
- UJ34 G : *tulaivil irunte parkum bothe*, can you identify it easily?
- UJ35 MM : Noooo...
- UJ36 G : Teacher, will give a task sheet in each group. Group leader, come and take the task sheet for your group. *Ellarum unggga* task sheet *parunnga. Yenna terite?*
- UJ37 M : ((..aah...)) *naraiya sedi kodikalum maranggalum terie*.
- UJ38 G : *sedi kodikalum maranggalum tavarite anta picrutele vera yenna* find *panna mudite?*
- UJ39 M : Teacher, *en kannuke ore putci maratule ottikidde irukira matiri teritu. Ana, seriya* confirm *panna mudiyale*.
- UJ40 G : mmm *atetan unggga* task. Find other animals in the picture. Note, that not very easy to find the insects in the picture. Anyway, try your best to find it and circle it.
- UJ41 M : Teacher, *anta* insect...((..aah...)) *ellam parka oree matiri iruke. Etu maram etu putchinu* identify *panna mudiyale*. Very difficult teacher.
- UJ42 G : Try. Ok. *Enta* group ten insects in the picture circle *panningga?* Less than ten? Less than eight ? Less than six?
- UJ43 M : Teacher, *yenggaluke verum fivethen kadaichiruke*.

- UJ44 G : *parunga, aaga atikame ungganale* five insects than identify *panna mudite*. Actually, there are ten insects in the picture. Why, you all cannot find the insects easily?
- UJ45 M : ((.haa..)) Because it is very similar with the plant. *Putciyoda colourum maratode colourum ore matiri iruke. Kandupidika kaistama iruke.*
- UJ46 G : In real life, there will be very difficult to differentiate the insects from its surrounding. This is because the insects' body colours are similar with their surrounding.
- UJ47 M : Yes teacher. *Ummaitan.*
- UJ48 G : *yennune karanam teriyuma?* Anyone tell the reason why the insects have similar body colour with surrounding? Further, when you observe the insects, you can notice that the body shapes of the insects are very similar with the plants. In your opinion, what is the reason?
- UJ49 M : Then, only we cannot see it. It want hide itself from our sight.
- UJ50 G : Yes true. But why? Not only human are cannot see it but other animals also cannot see it right? So what is the purpose the insects want hide themselves?
- UJ51 M : it scare, when the animals see it then it will MAKAN it. *Athanaletan athu* body colour *vanta maratoda samema iruke.*
- UJ52 G : *Itulirunte* what you can conclude?
- UJ53 M : I think, ((.mmm..)) this is the way the insects want escape from their enemies.
- UJ54 G : Ok, good. *Konjom* explain *pannunage.*
- UJ55 M : ((.aaaa)) ok, They don't want their enemies see them and eat them.
- UJ56 G : Now, you have learnt that how the insects protect themselves by having similar shape and colour with the surroundings. Ok, students. Now take out your exercise book and complete the page number fifty-six.
- UJ57 G : Stand up, class
- UJ58 M : Thank you, teacher.
- UJ59 G : Ok, thank you. Continue your work. Don't make noise.

TRANSKRIP 7

Tajuk : Energy
Tahun : 5V
Peserta : G- Guru M – Murid Individu MM – Murid- murid
Petunjuk : Bahasa Inggeris (Times New Roman)
Bahasa tamil (*Italic*)
Bahasa Melayu (HURUF BESAR)

UJ1 M : Class, get ready.... Good morning sir.
UJ2 MM : Good morning sir.
UJ3 G : Good morning, class. How you all today?
UJ4 MM : Fine sir.
UJ5 G : Can I get pen?
UJ6 M : () What colour sir?
UJ7 G : Blue colour. Ok thank you.
UJ8 M : You are welcome sir.
UJ9 G : Class, get ready faster / ()..... today we want to learn about energy.
UJ10 M : // Sir, page number?
UJ11 G : Listen first.
UJ12 M : Sorry sir.
UJ13 G : Rama, get up. What u know about energy?
UJ14 M : ((...mmm..))....*sathu*
UJ15 G : Who want to try?
UJ16 M : Sir, I can...*bodyle ulle sathu.*

- UJ17 G : Ok, energy is the ability to do work. *Oru velaiyai seyya nam udaluku tevaiyana oruvitha palam.* Without energy we cant live. DALAM BAHASA MELAYU KITA PANGIL TENAGA.
- UJ18 M : Sir, *athu engge erukum*
- UJ19 G : / Ok, all living things need energy. Not for human but animals and plants also need energy.
- UJ20 M : Sir, if no energy...what happen sir?
- UJ21 G : We cant move at all.
- UJ22 M : Sir,...energy.... *eppadi vela seiyum.*
- UJ23 G : As I told u, energy *nammaluku mukiya tevai.* Because, all living things need energy to carry out life processes. Example for moving, breathing and growing we use energy. *Namathu anrada valkaiel kuda namaku energy thevaipadukiraathu. Utharanamaga,* we need energy to walking,running, carrying things and playing.
- UJ24 M : Sir, *velanyandathane arokiyama erukalame?*
- UJ25 G : *Nee velayadatarkukude unaku energy venum. Aamathane?*
- UJ26 MM : *aam*
- UJ27 G : *saapidama poi velayada mudiuma, tanni kudikama velayada mudiyuma?*
- UJ28 MM : *Mudiyathu*
- UJ29 G : So, we need food and water to make energy. Ok, today we will learn about forms of energy, renewable energy sources and Non-renewable energy sources. Ok, what is the important of energy? / (...) ...Hai, *yaar athu... paadatha kavani..unggalathan...Siva...*
- <<<< (Murid bermain)
- UJ30 M : *Naa ella sir, evanthan pensile kuttikite erukan.*
- UJ31 G : *Peesatha..rendu perumthan vilayandinga. Ennorutadava pesiningga adithan vilum.* Ok, class, *ethule vitom..?*
- UJ32 M : Sir....energy...important... (//)
- UJ33 G : Ah *athan.* What is the important of energy? *Siva nee sollu*
- UJ34 M : Energy....((.mmm..)) *manithanuku thevai*

- UJ35 G : / Next time listen what am I teaching.() *Un kavanam paadatule illai*. Ok class,energy needed to make move and work. Energy can be found in various forms. *Yaar, sole mudiyum? Kavi nee sollu?*
- UJ36 M : I don't know sir.
- UJ37 G : Ok, various forms of energy like Chemical energy, Heat energy, Potential energy, Sound energy, Light energy, Solar energy, Kinetic energy, and Electrical energy. Main source of energy *enggerunthu varuthunu teriuma?* Ok, the Sun is the main source of energy. The sun gives Heat and Light energy. So far any questions?
- UJ38 MM : ((..Oooh..)).
- UJ39 G : *Ethuvaraikum purinjatha? Piraagu naan kelvi ketpen*. Ok, green plants use the light energy from sun to make food. *Ethu rombe mukiyam, examku varum*. Then, heat energy influence the weather and climate on earth. *Ennoru mukiya seithi, neenga terinjika vendiyathu*, batteries can store energy for a long time. / () Pavithiran, BUAT APA ITU?
- UJ40 M : TAK ADA CIKGU, AMBIL PENSIL SAHAJA.
- UJ41 G : TUTUP BUKU DAN BAGI PERHATIAN. Ok, What are the meaning of renewable energy?
- UJ42 M : Sir.....sir.....
- UJ43 G : Yaaruku vidai terium?
- UJ44 MM : ()
- UJ45 G : Ok, renewable energy ADALAH TENAGA YANG BOLEH DIPERBAHARUHI *Aanglilatule* replenished *enru solluvangga*.
- UJ46 M : Sir, apadina?
- UJ47 G : That means, *puthuppikka mudintha* tenaganu *sollalam*. *Athu ennathan teriyuma? Gayaathiri nee solluma?*
- UJ48 M : ()
- UJ49 G : Valarmathi, *teriyuma?*...*Seelan nee sollu?* Ok, *athavathu, suuria oli, neer, kaatru aakiyavai* renewable energy. *Engge sollunga?*
- UJ50 MM : *suuria oli, neer, kaatru*.

UJ51 G : Ok, good. Non-renewable energy is energy that cannot be replenished. **TENAGA YANG TIDAK BOLEH DIPERBAHARUHI.** fuels such as petroleum, coal, and natural gas are non-renewable energy. *Mudinjathunaa maarupadiyum puthupikka mudiyathu.* So, renewable energy sources are better than non-renewable energy sources. *Aamathane?*

UJ52 MM : *aamam*

UJ53 M : Sir.... *apadina petrol mudinjita kadiellam epadi odum?*

UJ54 G : Good question. *Avaruku oru kaitattal kudungka?*

UJ55 M : *Athavathu, petroleum, gas, ellam pala million aandugal muyarchi seitha piraguthan uruvakunangga. Aaga, avvalavu sikirathula entha energy mudincirathu. Atherku ennum pala aayiram aandugal aagum. Atha pathi neenga vaarthapadathingga. Ok vaa.*

<<<(Semua murid ketawa)

UJ56 G : Ok, class *mudiyathukkulla na KUIZ vaikka poren. SIAPA JAWAB DAPAT HADIAH.* Ok va. Are you ready class?

UJ57 MM : Ready...

UJ58 G : Just said the statements are true or false. Ok, number 1, renewable energy sources can be replenished. True or false? Yogeswaran can you answer?

UJ59 M : My answer ((...haaa...))..

UJ60 G : Faster boy.

UJ61 M : ...True

UJ62 G : Ok, class is't correct?

UJ63 MM : Yes...

UJ64 G : *Yogeswaranuku oru paaratu terivingga. Avaruku namathu paaratugal, nalaiku parisu eruku.*

<<<(Semua murid bertepuk tangan)

UJ65 G : Ok, number 2...

UJ66 MM : Sir,.....sir....sir *enne kupudunga....sir na solren.....sir.....sir*

UJ67 G : *satham podatingga. Amaithiya eru. Ellana na KUIZ podamatten.*

Yaaru amaithiya erukingalo avunggalethan kupiduvan.

()

- UJ67 G : Questions number 2, fuels like petroleum, coal, and natural gas are renewable energy sources. True or false? Sanggari you JAWAB.
- UJ68 M : No sir, it's false. They are non- renewable energy sources.
- UJ69 G : *sariyana vidai. Vaaltugal, Sanggariku kaitattal kudungga. Nalaiku parisu kodukiren.*
- UJ70 M : Thank you sir.
- UJ71 G : *muunravathu kelvi.* Non- renewable energy sources do not pollute the environment. True or false? Now..... ok, Selve your turn.
- UJ72 M : ()..Sir, *kelviye konjam velakunggal?*
- UJ73 G : / Ok, non- renewable energy sources *sutru suulaluku thumaiyai kettai eerpadhathu? Sariyaa tavaraa?*
- UJ74 M : *tavaruu, Sir. Kandipa thumaiyai kettu eerpadam.*
- UJ75 G : *Sariyana vidai. Selveku oru balatha kaitattal kodungga. Valtugal Selve.*
- UJ76 G : Ok, class *kadaisi kelvi.* Listen carefully, renewable energy sources are always available but non- renewable energy sources are limited. True or false? Ok, Guna u answer.
- UJ77 M : Sir,() *naana?*
- UJ78 G : *neethan. Um peerthane Guna?*
- UJ79 M : Ok.....True
- UJ80 G : Ok, class is't correct?
- UJ81 MM : Yes...
- UJ82 G : *Gayaatiri, nee sollu Guna sonne vidai sariya?*
- UJ83 M : *Sarithan sir.*
- UJ84 G : *Ok lah, sariyana vidai. Gunavuku paaratu terivingga. Avurukum nalaiku parisu eruku.*

<<<(Semua murid bertepuk tangan)

UJ85 G : Ok, class, take out science UPSR modul and turn page 133. Ok, do section A, section B and section C as a homework. The same time, please dorevision. Next week, I will give exam regarding this topic. Make sure, do revision. Ok, thank you class.

UJ86 MM : Thank you sir.

TRANSKRIP 8

- Tajuk : Survival of species
Tahun : 5P
Peserta : G- Guru M – Murid Individu MM – Murid - murid
Petunjuk : Bahasa Inggeris (Times New Roman)
Bahasa tamil (*Italic*)
Bahasa Melayu (HURUF BESAR)
- UJ1 G : Good morning everybody.
UJ2 MM : Good morning teacher.
UJ3 G : Ok class, previously we have learn about Survival of ... ()
UJ4 MM : Species
UJ5 G : Species ok. Human and animals...they reproduce by giving birth and laying eggs.
UJ6 MM : // Laying eggs.
UJ7 G : Ok, very good. So, if they not reproduce... if they not lay eggs or give birth...the species is... ()
UJ8 MM : Extint.
UJ9 G : Yes, extint. Senthilan, what meaning of extint?
UJ10 M : (//)
UJ11 G : Now, in order to makesure that their species exist in a birth; they have to reproduce ...same both for plants ...also reproduce .
UJ10 M : Plants...(//)
UJ11 G : But they cannot lay eggs or give birth How to they reproduce?
UJ12 MM : Disperse their fruits and seeds.
UJ13 G : Ok, very good. Sreivan please give meaning of disperse?
UJ14 M : ((.haa.)) Disperse means MEMENCARKAN; or they need to

disperse their seeds and fruits away from the parent plants.

- UJ15 G : Ok very good. Disperse means in Tamil ...*paaravaseitha* ...*paaraparathu*. So, a parent tree must first their seeds or fruits to...
- UJ16 MM : To ensure...()
- UJ17 G : Ensure the survival of the species. That day I told you about the parent tree isn't?
- UJ18 MM : Yes.
- UJ19 G : Let said this is a parent tree, if its disperse the seeds...what will happen to parent tree?
- UJ20 MM : (//)
- UJ21 G : So, the seeds not enough supply air, sunlight, nutrients and space.
(<<)
- UJ22 G : What is the next subject?
- UJ23 MM : Bm
- UJ24 G : Bm...what else?
- UJ25 MM : Bm...Bi...Mths
- UJ26 G : Bm...Bm...Muthu sir ha?
- UJ27 MM : mmm
- UJ28 G : Mths *yaaru?*
- UJ29 MM : Puspavalli teacher.
- UJ30 G : Puspavalli teacher *varala....*/ Ok, so the next I want go to characteristics of seeds. First, I explain about pong-pong and second is coconut. Ok, what is pong-pong?
- UJ31 MM : ()
- UJ32 G : Ok, pong-pong means "*bablimas*"
- UJ33 M : Teacher..... *enaku terium*
- UJ34 G : Ha...you all know right? ...*bablimas*...

- UJ35 M : *"bablimas"*
- UJ36 G : Its not funy things ...funy things. / Be serious. Pong-pong means *"bablimas"*... lotus seeds ...u know right? Lotus seeds? Lotus means *'thaamarai poo'*..
- UJ37 MM : *vithai*
- UJ38 G : *'thaamarai poo vithai'*. Coconut you know. Nipah palm.
- UJ39 M : How is look like?
- UJ40 G : Nipah palm something like oil palm tree.
- UJ41 MM : *sembanai maramaa?*
- UJ42 G : *sembanai maram maathiri erukukum*. Something like oil palm tree. Normaly they grow in small area. You know the flame?..I don't in tamil.
- UJ43 M : Teacher... *paNai maram*.
- UJ44 G : Not *paNai maram*...what to said..()
- UJ45 M : estet..
- UJ46 G : No, estet. *Seerunu eluthierukkum. Angku pooi nanNdu pidikalaam*.
- UJ47 MM : ((..Oooh...))
- UJ48 G : *seeRu nanNdu angkathaan pidipaangka*...oK, enough. So, all these you have to remember.
- UJ49 M : ...Pong-pong
- UJ50 G : All seeds have their own characteristics. If its disperse by the water.....if its disperse by the water.... the main important characteristics are the have waxy skins and spaces. That two enough for you ...ok, easy to remember. I told you that day. Waxy skins means?....It can absorb...
- UJ51 MM : () water.
- UJ52 G : Water...It's cannot absorb water. No water can go inside the float. and its have air space...LIANG UDARA*kaaRRu thuvaarangkaL irukkum*.
- UJ51 M : What LINAG... UDARA?

- UJ52 G : Yes, LIANG UDARA. LIANG means holl. kaaRRu thuvaaram irukkum. Ok, for example I told you that day, was coconut isn't?
- UJ53 MM : Yes
- UJ54 G : Ok, coconut. The outer oart waxy...
- UJ55 MM : ...skin
- UJ56 G : Waxy skin. This is a coconut shell isn't? ..harder one..and here husk...subat..and inside here got water...air space. Next is seeds that disperse by human and...
- UJ57 MM : // Animals
- UJ58 G : Human and animals. Ok, There are lot of fruits disperse by human and animals.
- UJ59 M : Teacher.... watermelon.
- UJ60 G : Ok, for example
- UJ61 M : durian
- UJ62 G : durian
- UJ63 M : mango
- UJ64 G : mango
- UJ65 M : papaya....rambutan
- UJ66 G : Ok, papaya....rambutan.
- ()
- UJ67 G : Ok, now we goin to last agent.... Is....
- UJ68 MM : Explosive mechanism..
- UJ69 G : Yes, explosive mechanism. What we call in tamil...*vediththu paravuthal*....*vediththu sithari paravuthal, sariyaa*. explosive means *vedikkiRathu*. What else ?
- UJ70 MM : Balsom, rubber tree and okra..

- UJ71 G : All this will disperse by explosive mechanism. So, that's all about topic plants survival. We have covered the survival of species and.. the next class we go to new topic.
- UJ72 MM : (//)... Food chain..
- UJ73 G : Yes...take out your practical book (long one) and do this as a homework.....jhot it down quickly....i see you next week. Thank you class.
- UJ74 MM : Thank you teacher.