

Appendix 1: Facilitator SMS log

Number	Go Mobile with Energy: SMS Sent and Received from Researcher Phone	Time	Date	Initiator
1	Hi, well I hope you are all on and getting this. 4 2morrow remember R80 and indemnity form. Website review 4 Monday. Flashdisk 4 e portfolio program :-)	14:00	5 May Friday	Facilitator
2	Thanx, 4 the reminder! :-)	13:58	4 May Thursday	CC
3	Are you online	11:30	4 May Thursday	Facilitator
4	Yeah...Wats up?	22:34	4 May Thursday	VM
5	Taking me 4ever 2 download programme. Pls wont u?	22:36	4 May Thursday	Facilitator
6	Il try	22:38	4 May Thursday	VM
7	e address pls.	22:39	4 May Thursday	Facilitator
8	I thought u wer goin 2 send it and wat do u want me 2 download?	22:41	4 May Thursday	VM
9	0#####@vodamail.co.za	22.45	4 May Thursday	VM
10	We consider the energy of an object as its capacity to do work as the process of transferring energy from one object to another	22:50	4 May Thursday	Facilitator
11	Tx, mam! :-)	11:42	5 May Friday	CC
12	Hi its beata.. Can u pls help me with the following headings for the web site reviews for science. I dont undertand: keywords, all the headings under review, and identifier URL. please help. I tried to get hold of vanessa but the message didnt go through.	10:52	7 May Sunday	B
13	Mam the first web site on the list of reviews doesnt want to open. Keeps giving me a error. . Can i pls get vanessas no. to ask if theses another one to do.	15:02	7 May Sunday	B
14	Hi mam, sorry to bother u but i've tried looking everywhere on the websites i was assigned to review and the majority info cant be found... Marc and Margaux :-)	17:45	7 May Sunday	M M
15	Ma'am i don't understand what i am purpose to do in the other section of the review where you are meant to fill in the currency, innovative use of the medium and the authority.	18:44	7 May Sunday	RTK
16	To do work one must move the object by applying a force with at least a component in the direction of motion. $W = F \times s$. F=force W = work s= displacement	10:56	8 May Monday	Facilitator
17	thanx. :-)	11:45	8 May Monday	CC
18	For work to be done there must be a component of the applied force in the direction of motion. Forces perpendicular to the direction do no work. Cn u c a x-	11:51	8 May Monday	Facilitator

Number	Go Mobile with Energy: SMS Sent and Received from Researcher Phone	Time	Date	Initiator
	mpl?			
19	DEFINITION: 1 Joule is the work done when an object is moved 1 meter under the application of a force of magnitude 1 Newton in the direction of motion.	11:58	8 May Monday	Facilitator
20	To Do: Indemnity form & money. RESEARCH: Website reviews. PUBLISH Wiki DEVELOP: Rubric. Plan for your observation, interview. REMEMBER to log all your research!	12:01	8 May Monday	Facilitator
21	To Do: Indemnity form & money. RESEARCH: Website reviews. PUBLISH Wiki DEVELOP: Rubric. Plan for your observation, interview. REMEMBER to log all your research!	12:01	8 May Monday	Facilitator
22	Try	12:02	8 May Monday	Facilitator
23	For work to be done there must be a component of the applied force in the direction of motion. Forces perpendicular to the direction do no work. Cn u c a x- mpl?	15:02	8 May Monday	Facilitator
24	Did u get that sms?	15:02	8 May Monday	Facilitator
25	Yes thanx	15:06	8 May Monday	Charlton
26	Ok! That was via the pc. :-)	15:07	8 May Monday	Facilitator
27	U ok? :-)	15:09	8 May Monday	Facilitator
28	Yup	15:11	8 May Monday	Facilitator
29	I dont understand the review authority content organization currency search engine graphic design innovative use of the medium	16:03	8 May Monday	AT
30	Its a generic form. Change it to suit u	16:05	8 May Monday	Facilitator
31	But what should i put in give an example please	16:06	8 May Monday	AT
32	Driving.. Urgent?	16:06	8 May Monday	Facilitator
33	Later	16:07	8 May Monday	AT
34	Organisation: site from university/school or other institution. Content: What is primarily about. Authority: is site verified (financial sites mostly) Currency: What currency does the site trade in. Search engine: Does it use google, yahoo ect Grqaphic design: look and feel. Innovative use of medium: Graphics, sound, similations ect. Enjoy	17:22	8 May Monday	Facilitator
35	Thanks allot	19:19	8 May Monday	AT
36	DEFINITION: 1 Joule is the work done when an object is moved 1 meter under the application of a force of magnitude 1 Newton in the direction of motion.	19:20	8 May Monday	Facilitator
37	To Do: Indemnity form & money. RESEARCH: Website reviews. PUBLISH Wiki DEVELOP: Rubric. Plan for your observation, interview. REMEMBER to log all	19:22	8 May Monday	Facilitator

Number	Go Mobile with Energy: SMS Sent and Received from Researcher Phone	Time	Date	Initiator
	your research!			
38	Goblin, what time do we get back from gold reef on thur? Some of the guys have a rugby match on thur @ 15:30. Johan	20:47	8 May Monday	JL
39	Planning so that we will be back at 2 at the latest	20:48	8 May Monday	Facilitator
40	That would work out then, thank you. Johan	20:49	8 May Monday	JL
41	mam you wont believe where i am, i have the mobile thing, my fone is connected with the computer. and im writing this message off of my fone. so so cool.:-)	12:17	9 May Tuesday	BPM
42	U am so proud of u! What a star	13:02	9 May Tuesday	Facilitator
43	Testing Hi	13:22	9 May Tuesday	Facilitator
44	Try again	13:26	9 May Tuesday	Facilitator
45	What should a rubric include	13:47	9 May Tuesday	C
46	Google rubric and thrill factor	13:53	9 May Tuesday	Facilitator
47	Hey mam r we gonna b able 2 use phones in da test??	17:05	9 May Tuesday	AB
48	Law of Conservation of Energy: Energy is never created or destroyed but merely transformed from one form to another.	17:41	9 May Tuesday	Facilitator
49	Kinetic Energy: Energy of an object due to its motion. The faster an object is moving the greater its kinetic energy. $E_k = 1/2 mv^2$	17:44	9 May Tuesday	Facilitator
50	So can we use our phones in the test tomorrow	17:46	9 May Tuesday	F
51	Cn we use our cell phone 2morro in the test period to use for information? Thnx	19:29	9 May Tuesday	J
52	Do we only have to study the things you smsed us or the rest aswell	19:45	9 May Tuesday	FS
53	What do we need in our research plan	19:47	9 May Tuesday	EG
54	U will NOT be able to use your phones as I cannot control the sms. You have to have your rubric PRINTED, 2x web reviews and the research plan 2 use in test.	19:48	9 May Tuesday	Facilitator
55	Hey starc! Plz print 2 reasearch pages, 1 4 ea. Of us. Wil print u a rubric :-) nyt nyt xox o and its ur lunch day 2mro! Mwa	19:50	9 May Tuesday	MM
56	Thank you! c",)	19:53	9 May Tuesday	EG
57	Why would we smp eachother if all the info is on ur phone? Hehe	19:54	9 May Tuesday	JK
58	A good website to review about rollercoasters is Amusement Park Physics: Roller Coaster http://www.learner.org/exhibits/parkphysics/coaster.html	19:55	9 May Tuesday	Facilitator
59	Describe what you are going to look for and do. How are you going to choose a ride, how are you going to decide if it was a "good" ride? I want your "event planner" for the trip to gold reef city. Whsat? Why? How?	19:58	9 May Tuesday	Facilitator
60	What all exactly do u want us to upload on the wiki tonight?	19:59	9 May Tuesday	LH
61	Frits I give you the formulas you have to have a working knowledge of the other	20:02	9 May Tuesday	Facilitator

Number	Go Mobile with Energy: SMS Sent and Received from Researcher Phone	Time	Date	Initiator
	content. Dont be lazy... engage a bit. This should be right down your ally.			
62	Good evening..You misdirected your sms to print things and the lunch episode... Please make sure your arrangements for the content you need is watertight.	20:05	9 May Tuesday	Facilitator
63	Ok thanks mam was just unsure about what to study (next time the school must get a jammer that jams everything including bluetooth)	20:09	9 May Tuesday	F
64	Hi. Make sure the content you would like to be able to access remotely (from Gold Reef City) is on the wiki. That is all. Enjoy.	20:09	9 May Tuesday	Facilitator
65	Good Evening gogga. How are you coping did you manage to get all the things done. Please dont stress about things. We will cut you some slack till you get up to speed!. Go and have a nice bath and get in bed early. Adele Botha	20:11	9 May Tuesday	Facilitator
66	Thank u mam, sorry :-) goodnyt	20:17	9 May Tuesday	M
67	Mam i hav a prob , i only hav 1 review complete an the ada i cudnt gt the rite info an i dnt hav internet at home. I use the skul comp wen i hav C.A.T only. So wat do i do?	20:20	9 May Tuesday	MF
68	Gud evenin maam. I did was not able to get the 2 web reviews since i dont have a computer yet and i tried to do it today in lesson but did not have enough time. Danielle	20:23	9 May Tuesday	DN
69	Mam im really confused with this experiment thing!can it be on anything,like:how long will the ride be if ur coaster travels at a certain speed?or does it	20:29	9 May Tuesday	LC
70	On something specific?	20:29	9 May Tuesday	Facilitator
71	This is a big problem which we can do nothing about now!!. Hand in your one web review and in future organise time after school to complete your work.	20:31	9 May Tuesday	KM
72	Ok. Tanx	20:32	9 May Tuesday	M
73	Hi, there is no right or wrong. It is what you want to do. I dont want you going there and not knowing what you want to photograph or record. Its like an event planner or a programme for an event. What? How? When? Why? and by Who?. I think you are overcomplicating it. Ontspan...	20:34	9 May Tuesday	Facilitator
74	Oh!Okidoki! Thanks!	20:35	9 May Tuesday	Facilitator
75	Mam do we need to no all those sms u sent us for the test? and wat should b in our experiment planning? i forgot?	20:42	9 May Tuesday	B
76	Hi. U need a working knowledge of the content. In doc what why and how	20:46	9 May Tuesday	Facilitator
77	I dnt knw i asked her wat 2 do in the research thing and she send me that	22:31	9 May Tuesday	EG
78	Can you please explain the research plan to me?	22:35	9 May Tuesday	EG
79	Mam were do we write science..?	07:13	10 May Wednesday	V M

Number	Go Mobile with Energy: SMS Sent and Received from Researcher Phone	Time	Date	Initiator
80	Mam i didnt have my rubric. My group member had it so i drew one and the question on the weight was confusing	08:55	10 May Wednesday	F
81	Was very unsure if i did my calculations were rite and drawin i had no idea, last pages were weird	08:56	10 May Wednesday	NB
82	I didnt enjoy it thought it wasnt that easy	09:00	10 May Wednesday	G
83	Q 1 ok. Q 2 very confusing. Not sure what 2 do.	12:22	10 May Wednesday	NM
84	Thanks	12:08	10 May Wednesday	FR
85	I need your form and money . You are the only one whos form is still outstanding .	12:11	10 May Wednesday	Facilitator
86	I put it on your desk during science,but i didn't want to leave the money on your desk il bring it for you at the end of the lesson =)	12:22	10 May Wednesday	SG
87	0128412225 Mobiled wiki number. You can give it a try before tomorrow.	12:15	10 May Wednesday	Facilitator
88	IN THE ABSENCE OF FRICTION : Work Done = Energy Transferred IN THE PRESENCE OF FRICTION: Total Work Done = Useful Work Done + Work Done Against Friction	12:17	10 May Wednesday	Facilitator
89	Can we sms to that number or do we phone and how do we post ?	12:59	10 May Wednesday	FC
90	Cannot post. You posted on wiki	13:02	10 May Wednesday	Facilitator
91	Hi, mam! i just want to know what time we leaving 4 goldreef city tomorrow? thanx :-)	13:15	10 May Wednesday	CC
92	So what do we use it for? Can we get information from it?	13:18	10 May Wednesday	F
93	Helo mam! Um i'v been lukn 4 ya afta skul so i cn ur printa 2 print out my review. I tried bt it neva wntd 2 print. So wat must i do?	16:06	10 May Wednesday	Mocheko
94	The no to call is 0860##### and ask to speak to P#####=	16:16	10 May Wed	Facilitator
95	I tried the mobiled number, but it didn't work. Johan.	16:23	10 May Wednesday	JL
96	Hi mam sorry to bother so late but wat time are we leaving 2morrow and wat time wil we be back? R we stil allwd 2 wear jeans and our tracsuit tops? :-)	18:41	10 May Wednesday	MM
97	I was jst tld knw abt the times the hocky bus leavs.	21:45	10 May Wednesday	MF
98	Mrs Botha i'v gt a prob abt the time we cumin bac 2mo, bcaus the hocky bus leavs at 1 to were we playn.i dnt knw hw 2gt there if im cumn bac at 2?	21:45	10 May Wednesday	MF
99	Hi!jus thought i'd let u know that the hockey girls' bus leaves from school at 1 tmrw.... C u tmrw morning!:-)	21:46	10 May Wednesday	LH
100	Will not make it for seven maybe 10 minutes late please wait	06:24	11 May Thursday	AT
101	Please be on time	06:25	11 May Thursday	Facilitator
102	Gonna be late please wait for me the trafic is reall bad sorry	06:54	11 May Thursday	AT
103	Gonna be late please wait for me the trafic is reall bad sorry	06:54	11 May Thursday	AT

Number	Go Mobile with Energy: SMS Sent and Received from Researcher Phone	Time	Date	Initiator
104	sms g-force	09:27	11 May Thursday	DE
105	Sms energy	09:27	11 May Thursday	TZ
107	Kinetic energy: Energy of an object due to its motion.The faster an object is moving the greater its kinetic energy.	9:31	12 May Friday	Facilitator
108	Make sure you bck up ur pix!	11:27	12 May Friday	Facilitator
109	D we hve 2 hnd them in?	13:00	12 May Friday	EdB
110	Have a good weekend. CU on Monday	14:01	12 May Friday	Facilitator
111	U 2 mam	14:04	12 May Friday	DE
112	What do we have to hand in Monday?	13:31	13 May Saturday	RJ
113	Nthing	13:42	13 May Saturday	Facilitator
114	Mam, I lst my pix...☹ What do I do	17:10	13 May Saturday	SB
115	Will sort Mday? OK?	17:15	13 May Saturday	Facilitator
116	S#### had some .. I am sorted. Tx	18:00	13 May Saturday	SB
117	Mam, can u help me. I don't understand what I must do now. I was absent on Friday and hear we have work to hand in on Monday	20:42	13 May Saturday	MA
118	Nthing 4 Mnday. RELAX	21:02	13 May Saturday	Facilitator
119	Sorry 2 bother u mam, how many photos must we have?	14:09	14 May Sunday	KS
120	Cn we print 2morrow at school	16:42	14 May Sunday	SI
121	Hi mam, do u have P#### nr 4 me	17:07	14 May Sunday	JL
122	Hi. I am still not allowed onto our wiki mam, I don't know what is wrong but I cannot log on.	20:13	14 May Sunday	TM
123	T### cn ths stay 4 mnday? Urgent?	20:15	14 May Sunday	Facilitator
124	Pls mam.	20:16	14 May Sunday	TM
125	Give me half hour.	20:18	14 May Sunday	Facilitator
126	TX	20:19	14 May Sunday	TM
127	Hi mam I managed to log on.	21:23	14 May Sunday	TM
128	Remember your data 4 tomorrow.	21:20	14 May Sunday	Facilitator
129	How many slides for the powerpoint presentation. What exactly must we put in.	15:39	15 May Monday	MV
130	Mam, can we bring the work on a flashdrive, My cd is broken	15:40	15 May Monday	GvR
131	Can you pls e-mail me the ppt template.	16:18	15 May Monday	PH
132	P#### nt hme. Pls phone V#### and ask her 2 forward hers.	16:27	15 May Monday	Facilitator
133	Do u hve her number please mam?	16:31	15 May Monday	PH
134	Hi Mam, must we incude the sms in the presentation :-)	17:05	15 May Monday	VM

Number	Go Mobile with Energy: SMS Sent and Received from Researcher Phone	Time	Date	Initiator
135	U must present your Powerpoint NOT READ IT. Make sure U all contribute.	17:40	15 May Monday	Facilitator
136	Hi mam, jst checking. Is it still ok if we print at school tomorrow.	19:18	16 May Tuesday	JK
137	jip	19:19	16 May Tuesday	Facilitator
138	4got 2 tke my flshdisk. Srry. L#####	20:10	16 May Tuesday	LH
139	Hi mam, cn u chge my number it is now 084#####. Tx M#####	20:30	16 May Tuesday	MY
140	Hey mrs. B. What time would be convenient for me to come see you today? During/after school? I've gotta go by 3 though. Thanks, S###	06:03	17 May Wednesday	SvV
141	Potential energy: energy an object has due to its position or state. As an object falls, its <i>potential energy</i> is released & transformed into kinetic energy.	10:29	17 May Wednesday	Facilitator
142	4 Monday: PPT presentation, Report (typed! no handwritten reports) Research Indemnity form, TEST 29th May.	10:31	17 May Wednesday	Facilitator
143	What exactly is the scientific report about?is it work, energy, gold reef city, our ride we chose..?me and Ciska are lost..	16:13	18 May Thursday	LC
144	Whats in the test?	20:00	18 May Thursday	JL
145	Scientific rprt: Aim Hypothesis, Metode, rslts, Discussion. rprt bac on observations n Xperiences on chosen ride. Narrative rprt. w@ I did, w@ wrkD, w@ didn't wrk, w@ I learnt n w@ Id do diFrent .cncntrate on D ride u xperienced n ur rubric. mak sure D scienfific principals r clr n explained.	20:06	18 May Thursday	Facilitator
146	tst 29 May: Basic concepts n wrk n NRG. Mechanical NRG Kinetic NRG n Potential NRG + simpl Calculations.	20:08	18 May Thursday	Facilitator
147	<u>AT SCHOOL WE WORK WITHOUT FRICTION!!</u> How can you minimize friction near you?	20:10	18 May Thursday	Facilitator
148	Mam i still get two messages of everything u send. Oops!!	20:15	18 May Thursday	BP
149	Want 2 make very sure u get it :-)) will post out 2morrow . Sorry	20:17	18 May Thursday	Facilitator
150	Ok! thanx! :-))	20:18	18 May Thursday	CC
151	Pls dont forget 2 bring my memory disk. Mandisa.	12:53	20 May Saturday	MY
152	Hi mrs botha the mobiled phone wont go into da galery wat can i try and do?	14:24	20 May Saturday	JR
153	Dont think it is on! Why u want access?	14:25	20 May Saturday	Facilitator
154	No the galery on my phone da mobiled phone u gave to me it wont go in to da gallery	14:28	20 May Saturday	JR
155	To give evidence of the characteristics or qualities of someone or something. To think seriously. To express carefully considered thoughts	14:30	20 May Saturday	Facilitator
156	Try putting of and restarting	14:32	20 May Saturday	Facilitator
157	If you have been using life blog there wont be pix on phone all on pc	14:35	20 May Saturday	Facilitator
158	I could nt get al of them off	14:36	20 May Saturday	JR

Number	Go Mobile with Energy: SMS Sent and Received from Researcher Phone	Time	Date	Initiator
159	Exit all put all off and try again	14:42	20 May Saturday	Facilitator
160	Mam do u hav phil van Heerden's Cell no. I need to contact him about our science thanx.	15:57	20 May Saturday	RF
161	Hi gogga. Did u manage. If pix very missing i have very many u can use.	17:23	20 May Saturday	Facilitator
162	Thanx im tryin to get a card reader to c if it work!	17:26	20 May Saturday	JR
163	I have one if crises. Dear boy u are technologically jinxed :-)	17:28	20 May Saturday	Facilitator
164	Im nt it is da card!Thanx	17:29	20 May Saturday	JR
165	Ok. Let me know if u need help. Have most things to get u going. Enjoy.	17:31	20 May Saturday	Facilitator
166	Who is this	18:08	20 May Saturday	SB
167	I just got a new fone so its stil a bit hard,keyboard is a bit easier	18:09	20 May Saturday	LC
168	Sms on phone and keypad on computer !! thanx !!	18:12	20 May Saturday	CC
169	Are we alowed to call this number 2 ask questions? Johan	18:12	20 May Saturday	JL
170	Both!	18:13	20 May Saturday	DW
171	Good Evening. Just to let u know i am thinking of you while u do your project. Keep up the good work. PS do you find it easier to sms or type on your keyboard	18:16	20 May Saturday	Facilitator
172	Good evenin to u too. But i must ask... Project? What project? Still type with the number keys tho	18:18	20 May Saturday	SvV
173	Type on keyboard, bigger keys	18:18	20 May Saturday	NB
174	Type on a keyboard.	19:39	20 May Saturday	RF
175	Hi still in jo burg will give u extension	19:42	20 May Saturday	Facilitator
176	Sms is most definity better. As u hav predictive text which make typing so much quicker.	19:55	20 May Saturday	TZ
177	Thanks :-)	19:56	20 May Saturday	TZ
178	Type on the keyboard	20:16	20 May Saturday	RdP
179	Are u sure you are communicating with the right person?	20:48	20 May Saturday	Unknown
180	Sorry. :-)	20:49	20 May Saturday	TR
181	I find it easier to sms.	21:44	20 May Saturday	AB
182	Hi mam sorry to bother but are the narrative and the scientific report both ment 2 be in a power point presentation form?	16:40	21 May Sunday	NB
183	Hi mam, cn u plez send me da no, 4 wiki audio?	17:18	21 May Sunday	VR
184	Not on sorry. Still prototype	17:19	21 May Sunday	Facilitator
185	No u type and present your report with ppt . So u need both	17:20	21 May Sunday	Facilitator
186	Is the narative report bout the thrill factor testin or our whole experience- usin phones, wiki Etc.?	17:19	21 May Sunday	NB

Number	Go Mobile with Energy: SMS Sent and Received from Researcher Phone	Time	Date	Initiator
187	Explained all on wiki. In have a look if u cant remember. Why r u only starting now. U had a week in class?	17:44	21 May Sunday	Facilitator
188	We didnt realise we had to do both, so we only did the scientific 1, and havnt had time to do the other 1 till now.	18:02	21 May Sunday	NB
189	Dodo. U must do either scientific or narrative! Not both!	18:08	21 May Sunday	Facilitator
190	K thanx mam!	18:11	21 May Sunday	NB
191	this is the number of the MTN phone for CHC sms's	11:17	22 May Monday	TG
192	Mam, what is ur laptops cd drive called? C-drive etc johan	21:34	22 May Monday	JL
193	C-drive	21:41	22 May Monday	Facilitator
194	Hey mrs b. Wanted to drop off those tests today, but wasn't feelin too healthy. Can i swing by your house some time tonite to give them to you? Stefan	17:41	23 May Tuesday	SvV
195	Quiktime is not on the CD. Cannot load pictures. Mandisa	21:19	23 May Tuesday	MY

Appendix 2: MobilED Platform SMS request log

MobilEd

Cornwall Hill College Pilot 1.2 – Gold Reef City
 Log of platform SMS requests
 Prepared by: Francois Aucamp

Time	Number	Article	Number of SMS's sent	Comments
08:50	0828323445	Energy	1	
08:52	0824008166	Energy	1	Invalid request (adjusted): Sms-energy
09:04	0832887669	Energy	1	
09:08	0723081849	Energy	1	
09:08	0842062543	Energy	1	
09:11	0738654849	Energy	1	
09:15	0724612537	Energy	1	
09:18	0820627257	Energy	1	
09:31	0825573474	Energy	1	Invalid request (adjusted): Sms energy T T
10:29	0832610659	Energy	1	
12:15	0825714971	Energy	1	
12:19	0829095055	Energy	1	
12:21	0723922047	Energy	1	
12:23	0832645338	Energy	1	
12:25	0833323799	Energy	1	
12:34	0828877213	Energy	1	
08:56	0826607995	Force	2	
11:15	0828645506	Force	2	
11:56	0824934255	Force	2	
12:20	0829228758	Force	1	
12:33	0828877213	Force	2	
12:35	0827893601	Force	2	

12:49	0737187507	Force	2	Invalid request (adjusted): Sms forces
09:03	0766852024	Friction	1	Invalid request (topic added): Sms friction
09:30	0835606709	G-Force	1	Invalid request (topic added): sms g-force
10:55	0828877213	G-Force	1	Invalid request (topic added): Sms g-force
08:08	0828323445	Joule	2	Invalid request (topic mapped to Unit): Sms joule
12:13	0728547569	Kinetic energy	1	Spelling: Sms Kenetic energy
12:26	0833323799	Kinetic energy	1	
12:27	0732556638	Kinetic energy	1	Spelling: Sms kinetic energy.
12:22	0723460824	Mechanical energy	1	Invalid request (adjusted): Sms- Mechanical Energy?
12:18	0723922047	N/A	0	Invalid request: Energy sms
12:23	0723081849	N/A	0	Invalid request: Force+work
12:24	0723460824	N/A	0	Invalid request: What r the 2 types of mechanical energy.
12:33	0737187507	N/A	0	Invalid request: Formula for potential energy
12:12	0828254962	Potential energy	1	
12:28	0833323799	Potential energy	1	
09:06	0833462359	Work	1	
09:10	0820627257	Work	1	
09:13	0737187507	Work	1	
09:17	0833323799	Work	1	
12:16	0825714971	Work	1	
12:18	0826267739	Work	1	

Appendix 3: SMS log summary

Summary SMS interactions: GoMobile: Mobiled

TIME TOTAL INCOMING INTERACTIONS LOGGED.

	0-6	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
in			1	2	3	1	3	6	6	5	5	10	11	12	12	22	7	6	0	0
out		1	0	0	1	3	4	6	6	7	5	4	11	2	7	15	3	3	0	0
total		5	1	2	4	4	7	12	12	12	10	14	22	14	19	37	10	9	0	0

DAY TOTAL INCOMING INTERACTIONS LOGGED.

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
in	15	26	17	14	3	25	13
out	20	18	7	9	4	13	7
total	35	44	24	23	7	38	20

Day	4 May Thursday	May Friday	6 May Saturday	7 May Sunday	8 May Monday	9 May Tuesday	10 May Wednesday	11 May Thursday	12 May Friday	13 May Saturday	14 May Sunday
in	5	1	0	4	8	21	16	5	2	4	7
out	4	1	0	0	17	17	5	1	3	3	3
total	9	2	0	4	25	38	21	6	5	7	10

Day	15 May Monday	16 May Tuesday	17 May Wednesday	18 May Thursday	19 May Friday	20 May Saturday	21 May Sunday	22 May Monday	23 May Tuesday
in	5	3	1	4	0	21	2	2	2
out	2	1	2	4	0	10	4	1	0
total	7	4	3	8	0	31	6	3	2

Appendix 4: Lesson notes

Learning Event Work, Energy and Gravitational Force for Grade 10 Adele Botha

Subject:	Physical Science
Time Frame:	3 weeks 3.05.2006 – 19.05.2006
Main Knowledge Area:	MECHANICS
Learners:	Three keys of grade 10 Pupils. N = 54
Technology:	Used as tutor and tool. PC and Mobile phones.
Learning Outcomes:	LO 1. Scientific enquiry and problem solving AS 1: Conducting an investigation AS 2: Interpreting data to draw conclusions AS 3: Solving problems AS 4: Communicating and presenting information and scientific arguments LO 2. Construct and apply scientific knowledge Gravity and mechanical energy: <ul style="list-style-type: none">• weight - force exerted by the earth on an object; (definition, difference between mass and weight, calculation of weight)• acceleration due to gravity – acceleration resulting from the force exerted by the earth; (define gravitational acceleration (g), calculations involving gravitational acceleration)• gravitational potential energy; (simple calculations)• kinetic energy; (simple calculations)• mechanical energy - (sum of gravitational potential energy and kinetic energy); (conservation, mechanical energy in a frictionless system, free fall, air resistance)• conservation of mechanical energy - in the absence of dissipative forces. (simple calculations) LO 3. Nature of Science, society technology and the environment. AS 1: Evaluating Knowledge Claims AS 2: Evaluating the impact of Science on human development AS 3: Evaluating the impact of Science on the environment and sustainable.

Main Phases:

There are six main phases. Each is briefly described. As we are striving for a social constructivist learning environment the learning that is aimed to facilitate will be planned for, the role of the facilitator will be defined and the role of technology as well as the type of technology will be given.

Phase	Learner	Facilitator	Technology
Research	Learners work in groups of two. They will access the internet and review websites on the theme. In their groups they will collect information on the theme and construct knowledge maps to illustrate the patterns and relationships of the content. They complete a worksheet as formative assessment. Record all events on cell phones for e-portfolio.	The facilitator will present the lesson, hand out the notes, worksheet, explain the expected event flow and opportunities to construct individual knowledge. Support learners with sms.	PC with internet connection Tutor Tool Cell phone Access information from audio wiki. Record research. Receive support Communicate with peers and facilitator
Publish	Learners publish their contribution to the collective knowledge on the wiki. This will help identify misconceptions, and evaluate the individual contribution of learners.	Identify misconceptions and give feedback. Encourage learners (SMS, wiki)	PC with internet connection Wiki as a cooperative learning tool. Cell phone Record process Receive support Communicate with peers and facilitator
Develop	Learners plan their research of an amusement park ride and develop a Rubric to assess the Thrill Factor of their chosen ride. Plan a interview. Learners plan to “go mobile”	Identify misconceptions and give feedback. Encourage learners (SMS, wiki)	PC with internet connection Research tool for possible rides and factors influencing the “Thrill Factor “ of a ride.
Go Mobile	Choose a ride at the amusement park. Identify the underlying scientific factors, observe physics in action. Experience the effects of physics. Record observations. Interview to attain other perspectives and log readings.	Interact and guide.	Cell Phone Photograph the ride. Record interviews. Access information from the audio wiki (The wiki that the learners constructed will also be available.) Communicate with peers and facilitator.
Showtime	Write a scientific report on the ride’s thrill factor and energy conversions. Access information from the cell phones. Present the findings in a PowerPoint presentation.	Give guidance, Interact with misconceptions and support learning.	PC Type out scientific report Access information from the cell phones. Video, interview, photos. Create PowerPoint presentation. Mobile Phone Access information on phones.
Reflect	Learners construct a e-portfolio to reflect on their research and knowledge construction		PC Construct e-portfolio Mobile Phones. Access information to aid reflection

Time Frame:

Phase	Research	Publish	Develop	Go mobile	Showtime	Reflect
Time Frame	2 single periods 2 x 45min	2 single periods 2 x 45 min	2 single periods 2 x 45 min	3 hour outing to Gold Reef City	2 single periods 2 x 45 min	Double period 2 x 45min

Nano-Learning Content[#] and Timeline

Phase	Research	Publish	Develop	Go mobile	Showtime	Reflect
Date	3 May-5 May	8 May	9- 10 May	11 May	12 – 15 May	16 – 17 May
Time Frame Does not include weekends	Day 1 - 3	Day 4	Day 5 - 6	Day 7	Day 8 - 9	Day 10 - 11
Nano-learning Content[#]	<p>Day 1 We consider the energy of an object as its capacity to do work and the doing work as the process of transferring energy from one object to another. 147 characters</p> <p>Day 1 To do work one must move the object by applying a force with at least a component in the direction of motion. $W = F \times s$ F = Force W = Work s = distance 148 characters</p> <p>Day 2 For work to be done there must be a component of the applied force in the direction of motion.</p>	<p>Day 4 When positive work is done on an object, the system doing the work loses energy. The energy lost by a system is exactly equal to the work done by the system. 157characters</p>	<p>Day 5 Law of Conservation of Energy: Energy is never created nor destroyed, but merely transformed from one form to another. 116 characters</p> <p>Day 6 IN THE ABSENCE OF FRICTION : Work Done = Energy Transferred IN THE PRESENCE OF FRICTION: Total Work Done = Useful Work Done + Work Done Against Friction 151characters</p>	<p>Day 7 Kinetic energy: Energy of an object due to its motion. The faster an object is moving the greater its kinetic energy. 116characters</p> <p>Day 7 Potential energy: energy an object has due to its position or state. As an object falls, its <i>potential energy</i> is released & transformed into kinetic energy. 156 characters</p>	<p>Day 8 Kinetic energy and potential energy together = mechanical energy. The total mechanical energy (<i>U</i>) of an object is the sum of its kinetic and potential energies 159 characters</p> <p>Day 9 <u>AT SCHOOL WE WORK WITHOUT FRICTION!!</u> How can you minimize friction near you? 76 characters</p>	<p>Day 10 Reflect: To give evidence of the characteristics or qualities of someone or something. To think seriously. To express carefully considered thoughts 138 characters</p> <p>Day 11 Conservation of Mechanical Energy: In the absence of friction, the total mechanical energy of an object is conserved. 117 characters</p>

	<p>Forces perpendicular to the direction do no work. Can you explain? 160 characters.</p> <p>Day 3 Definition: 1 joule is the work done when an object is moved under the application of 1N in the direction of motion. 118 characters</p>					
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Content:

1. Content

- Aims and objectives of the Learning Event
- Worksheets
 - i. Website review.
 - ii. Energy and Work
 - 1. http://en.wikibooks.org/wiki/FHSST_Physics
 - iii. Formative evaluation.
 - iv. Additional research information.
 - v. Mini manual on MobileD tools and Wiki.
 - vi. Mini manual on Nokia life blog.
 - vii. Mini manual on e-portfolios.
- Rubrics
 - i. Website review
 - ii. Scientific report
 - iii. PowerPoint presentation
 - iv. E-Portfolio

2. Tools

- Cell phone (own)
- PC
- Internet Connection
- Word-processing Software
- Power Point
- E-Portfolio creating software.
- *Nokia Lifeblog. (Where possible)
- Digital Photo software

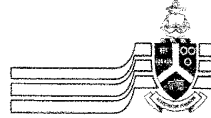
3. Communication

- Facilitator presents the project
- Small group discussions
- SMS Support and nano-learning
- Wiki content
- Scientific report
- PowerPoint presentation
- E-Portfolio

4. Basic Sequence of the learning event

- Introduction of Learning Event and the expected deliverables.
- Group formation
- Research. Evaluate the websites and construct knowledge.
- Go Public. Publish the knowledge on the wiki and evaluate feedback from peers and facilitator.
- Develop a research methodology, rubric and interview strategy for the excursion.
- Go mobile. Choose a ride, research, observe, experiment, experience, record and interview.
- Showtime. Write a scientific report and present the findings in a PowerPoint presentation.
- Reflect. Create an e-portfolio and reflect on the learning and knowledge construction.

Appendix 5: Ethical Clearance



UNIVERSITY OF PRETORIA
FACULTY OF EDUCATION
RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE

DEGREE AND PROJECT

INVESTIGATOR(S)

DEPARTMENT

DATE CONSIDERED

DECISION OF THE COMMITTEE

CLEARANCE NUMBER : CS06/09/12

MEd Computers in Education
Mobile Learning

Adele Botha

Curriculum Studies

02 October 2006

APPROVED

This ethical clearance is valid for 2 years from the date of consideration and may be renewed upon application

**CHAIRPERSON OF ETHICS
COMMITTEE**

Dr Salomé Human-Vogel

A handwritten signature in black ink, appearing to read 'S. Human-Vogel'.

DATE

2 October 2006

CC

Prof J Cronjé
Prof W J Fraser
Mrs Jeannie Beukes

This ethical clearance certificate is issued subject to the following conditions:

1. A signed personal declaration of responsibility
2. If the research question changes significantly so as to alter the nature of the study, a new application for ethical clearance must be submitted
3. It remains the students' responsibility to ensure that all the necessary forms for informed consent are kept for future queries.

Please quote the clearance number in all enquiries.

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