



Qabiyyee Barnoota

Herregaa kutaa 1-7ffaaf

Fulbaaba 2020

1. Seensa

Barumsi humna namaa gahuumsa qabu horachuu keessatti gahee guddaa qaba.kana malees nama gahuumsaafi ilaalcha gaarii qabu horachuuf barumsaaf bakka guddaa kennuun barbaachisaadha. Barattootni sadarkaa hunda irratti beekumsaafi gahuumsa horataniifi naamusa gaarii kan qaban, sabdanneessummaa biyyattii kan kabajan tokkummaa biyyatiif kan dhaabatan ta’anii argamuu qabu. Kanaaf sirni barnootaa kun gahee guddaa qaba. Barattootni sadarkaa tokkoffaa guutummaa haala waliigalaa isaanii irratti kan hundaa’ee sirni barnootaa kun kan boocamedha sirni barnootaa qulqullina qabu galmaan gahuuf sirna mijataa ta’ee diriirsuun barbaachisaadha. Barumsi herregaa barattootni naannoo isaanii kan iattiin hubatan. Walitti dhufeenya hawaasummaa isaanii akka cimsatan kan taasisudha. Sirnni barnootaa rakkoolee adda addaa kan akka rakkoolee uumamaafi namtolcheedhaan addaan cicita. Haaluma kanaan biyya keenyatti weerarri dhukkuba Covid -19 sababa nu quunameef barnootni ji’oota muraasaaf adda cituunsaa ni beekama rakkoo kana giddu galeefachuudhaan qabiyyeewwan muraasa keessa deebii gochuudhaan akka barattootatti hin hafnetti akkasumas kutaa itti aanuuf bu’ura waan ta’eef guyyoota barnootaa mara qisaasame bakka buusuun murteessaa ta’ee argameera. Barattootni kana hubatanii bakka hanqina isaanii guutachuudhaan cimanii beekumsa gahaa argatanii gara kutaa itti aanutti dabarsuun gaariidha.

2. Barbaachisummaa

Sababa dhibee dhukkuba Covid-19 bara 2012 tti sadarkaalee barnoota hundatti barnootni utuu hin xumuramiin gara kutaa itti aanuutti darban gochuun kutaalee barnootaa hunda gidduutti kan jiru kan walsimefi kan milkaa'e akka ta'uuf qofa utuu hin ta'iin, qulqullina barnootaarratti dhiibbaa guddaa akka fiduu akka danda'u ni beekama. Hata'uyyu malee muudannoo addaa qulqullinni barnootaa irratti dhiibbaa inni fiduu danda'uu, akkasumas, waan barbaachisaa ta'ee adeemsa tooftaalee adda addaa sadarkaa biyyaatti haala wal fakaataa ta'een akka raawwatuuf karoora kana raawwachuun baayyee barbaachisaadha.

3. Kaayyoo

Barattootni sababa dhukkuba COVID-19 barnoota utuu hin baratiin hafeef qabiyyeewwan barnootaa xumuranii sadarkaa kutaalee beekumsaa argatanii fi gahumsa jirutti fayyadamanii sadarkaa itti aanuttii akka darban gochuudha.

4. Xiyyeeffannoo

- ❖ Baayyinni barataa dabaluu yookaan hir'achuu
- ❖ Barattootni gara mana barumsaa dhufuu dhiisuu
- ❖ Hanqina yeroo
- ❖ Leecalloon barnootaa dhibamuu
- ❖ Qabiyyeen baayyachuu
- ❖ Qophii yaad sammuu isaanii gad-aanaa ta'uu
- ❖ Dhimmamtootni barnootaa marti itti gaafatamummaa isaanii sirnaan bahuu dhabuu

5. Barsiisaaf qajeelfamni jiru (Qajeelcha Barsiisaa)

- Qophii gahaa qabiyyee irratti gochuu. Akkasumas adeemsa baruuf barsiisuu muraasatti fayyadamuu.

- Guyyaa hojii dabalataa fayyadamuu (sambat-xiqqaa)
- Guyyaa barnoota gubateef bakka buusuuf kaayyoo isaa beekuu
- Guyyaa barnoota gubate bakka buusuuf baratoota kaayyoo isaa hubachiisuu
- Nageenyaafi fayyummaa baratootaaf of eegannoo gochuu
- Raawwii isaa hubatanii fooyyessanii dhiyeessuu

Barsiisootni weerara dhukkuba COVID-19 baratootni barnoota isaanii utuu hin baratiin hafanqabiyyeewwan guerguddaa hafan ilaaluudhaan kutaa barnootaa itti aanu eegaluu dura kutaa duraan barachaa turan barachuu qabu jedhame kan taa'e qabiyyeewwan gurguddaa ta'an ilaalamuudhaan sagantaa kenname irratti hundaa'uudhaan adeemsa baruuf barsiisuu mijataa taasisuufi xiyyeeffanaa itti kennuun baayyee barbaachisaadha. Haaluma kanaan sanada qophaa'ee kana haala mana barumsaa wajjin wal simsiisuun kaayyoo kana galmaan gahuuf gaheen barsiisaa olaanaadha

Barnoota Herrega Kutaa 7^{ffaa} semisteera 1^{ffaa} fi 2^{ffaa}

Bara 2012 tti sababa dhibee COVID-19 barnootni seemisteera 2^{ffaa} waan hin xumuramneef bara 2013 tti wayitii 24 (16/02/2013 -12/03/2013) Guyyoota Wix ataa -sanbata xiqqaatti/guyyoota wayitii 6f fi wayitii tokkotti daqiiqaa 50' keessatti barattoota barsiisuuf qabiyyee filataman, Baayyina wayitii kenname ibsaafi raawwii adeemsa baruuf barsiisuu gabatee armaan gadiirratti ibsameera.

Lak.	Qabiyyee /kutaa1ffaa	Baayyina wayitii	Sababa qabiyyeen filatameef /Rational/	Ibsa (beekumsa, gahumsa, ilaalcha, raawwii adeemsa baruuf barsiisuu)
Qabiyyee Kutaa 1ffaa Semisteera 2ffaa				
	Boqqonnaa 7: Lakkoofsota Hundaa Hamma 20tti Lamaan Baay'isuufi Lamaaf Hiruu	Wayiti 4		
1	7.1 Lakkoofsota Hundaa Hamma 20tti Lamaan Baay'isuufi	Daqiiqaa 200'	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	7.2 Lakkoofsota Hundaa Hamma 20tti Lamaaf Hiruu			
2	Boqqonnaa8 8.1 Sararoota Qajeeloo fi Sararoota	Wayiti 4		

	jajalloo . 8.2 Danaalee Sasalphoo.	daqiiqaa 200		
3	Boqonnaa9. 9.1 Baay’attoota 10 hamma 100tti .	Wayiti 5		Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	9.2 Lakkoofsota hundaa 21 hamma100ttijiran 9.3 Tartiiba Lakkoofsota hundaa jiran hamma100tti jiran 9.4 Mana Lakkoofsotaa hamma 100tti	daqiiqaa 250	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa’an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa10 10.1 Dinaarotaafi Noottiiwwan . 10.2 Danalee Sasalphoo	Wayiti 4 daqiiqaa 200	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa’an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa11	Wayiti 4	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa’an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	11.1 Qoqqoodama Guyyaa 11.2 Guyyoota Torbanii	daqiiqaa 200		
	Boqonnaa12	Wayiti 5	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa’an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	12.1 Giraafota Fakkii Sasalphoo . 12.2 Paatarnii	daqiiqaa 250		

Qabiyyee Kutaa 2ffaa Semisteera 2ffaa

4	Boqonnaa3.Safaroota Dheerinaa Dhangala'oo fi Hanga	Wayiti 4	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	3.1 Dheerina 'cm'fi'm'nsafaruu 3.2 cm'fi'm ida'uu fi hir'isuu 3.3Dhangala'oo Liitiriin Safaruu. 3.4Hanga kiilogiraamiin safaruu.	Daqiiqaa 200	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
5	Boqonnaa4.Seensa Firaakshinotaa	Wayiti 4		
	4.1 Keesa Deebii Walakkaawwanii,kurmaanotaafiSiis oowwanii 4.2 Guutuwwaniifi Firaakshiinota MallattooleenTiyooramoota Rog-sadeewwanii	Daqiiqaa 200	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa5.Lakkoofsota Hundaa Hamma 1000tti	Wayiti 3		
	5.1 Baay'attoota 100 5.2 Lakkoofsota Hundaa 101hamma1000fi Gatii Bakka isaanii 5.3 Tartiiba Lakkoofsota Hundaa hamma 1000tti	Daqiiqaa 150	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa6.Tuqaalee ,Sararoota a fi Bobbocootaa	Wayiti 4		
	6.1Sarartuutti fayadamuun Sarara fakkeessuu. 6.2Reektaangiloota,Geengoowwanii	Daqiiqaa 200	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota

	fiBocaalee		godhuu	kennuudhaan.
	Boqonnaa 7 .Maallaqa Itoophiyaa	Wayiti 4		
	7.1 Maallaqa ida'uu fi Hir'isuu. 7.2 Bittaa fi Gurgurtaa	Daqiiqaa 200	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa 8 .Yeroo	Wayiti 4		
	8.1Yeroo sa'aatiin,Walakkaa sa'atiifi kurmaana sa'aatiinhimuu.	Daqiiqaa 200	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa 9 .Qabannaa Daataa fi Paatarnii	Wayiti 4		
	9.1 Daataa Sasalphoo 9.2Sa'atii fi daqiiqaa	Daqiiqaa 200	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Qabiyyee Kutaa 3ffaa Semisteera 2ffaa			
	Boqonnaa 5:-Baay'isuu fi Hiruu Lakkoofsa Hundaa Hamma10,000tti	Wayiti 6		
	5.1 Lakkoofsota Hundaa Baay'attoota 100 ta'an Lakkoofsota hundaa kan dijitii tokkootiin baay'isuu. 5.2 Lakkoofsota Hundaa Baay'attoota 1000 ta'an Lakkoofsota hundaa kan	Daqiiqaa 300	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.

	dijitii tokkootiin baay'isuu. 5.3 Lakkoofsota Hundaa Hamma 10,000tti jiran lakkoofsota 1-9ttiin 5.4 Baay'attoota 10 fi 100hamma 10,000tti jiran lakkoofsa Dijitii 1 fi 10f hiruu 5.5 Lakkoofsota Hundaa Hamma 10,000tti jiran, Lakkoofsota dijitii tokkooqabaniifi hiruu.			
	Boqonnaa 6 ; Sararootaa fi Danalee	Wayiti 5		
	6.1 SARAROOTAA WALQAXXAAMURAN, WALTARREE FI PARPANDIIKULARII TA'AN	Daqiiqaa 250	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	6.2 SARAROOTAA WALQAXXAAMURAN, WALTARREE FI PARPANDIIKULARII FAKKEESSUU 6.3 REKTAANGILOOTA, ISKUWEEROTA, PARAALELOOGIRAMOTAA FI TIRAAPPIIZIYAMOTAA 6.4 GEENGOO			
	Boqonnaa 7 MAALLAQA	Wayiti 5		
	7.1 YUUNITOOTAA MAALLAQAA WALITTI JIJJIIRUU 7.2 PIROBILEEMOTAA JECHAA	Daqiiqaa 250	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa 8 YEROO	Wayiti 5		
	8.1 SA'AATII DUBBISUU 8.2 SA'AATII FI DAQIIQAA 8.3 GUY'YAA, TORBAN, JI'AA FI WAGGAA 8.4 KAALANDARII SALPHAA	Daqiiqaa 250	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.

	Boqonnaa 9 QABANNAA DAATAA .	Wayiti 5		
	9.1 GIRAAFOTA FAKKIILEE SASSALPHOO 9.2 GIRAAFOTA FAKKII SASSALPHOO IBSUU	Daqiiqaa 250	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Qabiyyee Kutaa 4ffaa Semisteera 2ffaa			
	Boqonnaa 4 SAFAROOTAA	Wayiti 6		
	4.1 SAFAROOTAA DHEERINAA 4.2 SAFARA HANGAA 4.3 SAFARA QABEE DHANGALA'OO	Daqiiqaa 300	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa 5 BOCOOTA FI JABOOWWAN	Wayiti 8		
	5.1 KOFA SIRRII 5.2 TUQAALAA, SARAROOTAA QAJEELAA FI DIRIIROOWWAN 5.3 BAL'INAA FI NAANNAA REKTAANGILII FI ISKUWEERII . 5.4 JABOOWWAN SASSALPHOO	Daqiiqaa 400	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa 6 YEROO	Wayiti 6		
	6.1 SA'AATII, DAQIIQAA FI SAKONDII 6.2 YUUNIITOTA YEROOTIIN SHALLAGUU 6.3 SAFAROOTAA YEROO WALIIN MADAALUU.	Daqiiqaa 300	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqonnaa 7 QABANNAA DAATAA	Wayiti 7		
	7.1 DAATAA KENNAMEEF BAARGIRAAFI IJAARUU 7.2 BAARGIRAAFI IBSUU 7.3 GIDDU-GALEESSA (AVEREEJII) LAKKOOFSA HUNDAA	Daqiiqaa 350	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.

Hub.haala qabatamaa huwwisa qabiyyichaa irra dhaabbachuun barsiisaan baay'inaawayitii fi daqiiqaa mijeeffachuu danda'u yeroo kennameef keesatti.

Barnoota Herrega Kutaa 5-6^{ffaa} semisteera 2^{ffaa}

Bara 2012 tti sababa dhibee COVID-19 barnootni seemisteera 2^{ffaa} waan hin xumuranneef bara 2013 tti wayitii 24 (16/02/2013 -12/03/2013) Guyyoota Wix ataa -sanbata xiqqaatti/guyyoota wayitii 6f fi wayitii tokkotti daqiiqaa 50' keessatti barattoota barsiisuuf qabiyyee filataman, Baayyina wayitii kenname ibsaafi raawwii adeemsa baruuf barsiisuu gabatee armaan gadiirratti ibsameera.

Lak .	Qabiyyee kutaa 5ffaa	Baayyina wayitii	Sababa qabiyyeen filatameef /Rational/	Ibsa (beekumsa, gahumsa, ilaalcha, raawwii adeemsa baruuf barsiisuu)
Qabiyyee Kutaa 5ffaa Semisteera 2ffaa				
	BOQONNAA3	Wayiti 9		

	FIRAAKSHINOTA, DEESIMAALOTAA FI QOYYABOOTA AFRAN			
	3.1 GOSOOTA FIRAAKSHINOTAA 3.2 DHIBBANTAA AKKA FIRAAKSHINIITTI 3.3 FIRAAKSHINOTA TARTIIBESSUU FI WALIIN MADAALUU 3.4 FIRAAKSHINOTA QOYYABUU 3.5 DESSIMAALOTA QOYYABUU	Daqiiqaa 450	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa’an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
	Boqqonnaa4. QABANNAA DAATAA	Wayiti 9		
1	4.1 IJAARSAA FI IBSA GIRAAFOTA DHAABBATOO 4.2 GIDDUGALEESSA DAATAA	Daqiiqaa 450	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa’an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
2	BOQONNAA5 :- DANAALEE JI’OOMEETIRII FI SAFAROOTAA ISAANII	Wayiti 9		
	5.1 SARAROOTAA 5.2 KOFOOTAA FI SAFARA KOFOOTAA 5.3 GOSOOTA ROG- SADEEWWANII 5.4 SIIQQEEWWAN SIMEETIRII . 5.5 SAFAROOTAA	Daqiiqaa 450		
	Qabiyyee Kutaa 6ffaa Semisteera 2ffaa			
	Boqonnaa 4. INTIJJAROOTAA	Wayiti 9		

4.1 Seensa Intiijarootaa 4.2 Intiijaroota Waliin Madaaluu Fi Tartiibessuu 4.3 Intiijaroota Ida'uu Fi Hir'isuu.	daqiiqaa 450	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
Boqonnaa 5.	Wayiti 9		
5.1 Furmaata Himoota Wal- Qixaa Sararaawaa Fi Himoota Wal-Caalmaa Sararaawaa Sasalphoo 5.2 Ko'oordineetota 5.3 Piroporshinaalummaa	daqiiqaa 450	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
Boqonnaa 6 Ji'oo meetirii fi safara	Wayiti 9		
6.1 Kofoota 6.2 Rog-Sadoota Ijaaru 6.3 Rog-Sadoota Walittigaloo 6.4 Safara	daqiiqaa 450	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
Qabiyyee Kutaa 7ffaa Semisteera 2ffaa			
Boqonnaa 4. QABANNAA DAATAA	Wayiti 14		
4.1 Mallattoo Taaliitti Fayyadamuun Daataa Funaanuu 4.2 Giraafota Sararaa fi Chaartii Paayii Ijaaru fi Hiika Kennuufii 4.3 Giddu-galeessa, Moodii, Midiyaanii fi Reenjii Daataa	daqiiqaa 700	Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.
Boqonnaa 5.	Wayiti 13		
DANAALÉE JI'OOMEETIRII FI SAFARA	daqiiqaa 650		
5.1 Rog-afreewwan, Rog- baay'otaa fi Geengoowwan 5.2 Tiyooramoota Rog- sadeewwanii		Barattoota kutaa itti aanuutti ceesisuuf akka qophaa'an godhuu	Barsiisaan haala isaaf tolutti dandeettii barattootaa waliin wal simsiisuun barnoota kennuudhaan.

5.3 Safara			
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Hub.haala qabatamaa huwwisa qabiyyichaa irra dhaabbachuun barsiisaan baay'inaawayitii fi daqiiqaa mijeeffachuu danda'u yeroo kennameef keesatti.



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August, 2020

1. Introduction

The Ethiopia general education was fully interrupted because of Covid-19 pandemic since 15 February 2020. The Ministry of Education has decided students to pass freely to the next grade except for Grade 8 and 12 students who have to take regional and national examination respectively.

The Ministry of Education will continue the teaching and learning process in 2020/21 if the Ministry of Health with the coordination of World Health Organization announces the issue of Covid-19 pandemic is resolved and the Ministry of Education can continue the teaching and learning process in schools.

Hence, the Ministry of Education is preparing to cover the uncover portions from Grade 1 to 12 through make up classes before starting the 2020/21 teaching and learning. For this end Ministry of education has prepared this Mathematics Make up Lesson Guide line from Grade 1 to 12. This guide line comprises rational and objectives of the guide line and issues considered, content selection criteria, selected contents, methodology and the role of teachers and students for make up class.

2. Rational

The rational for providing make up classes before starting the next academic year teaching and learning process are to

- minimize the effect on the students behavior caused by uncover second semester portions
- cover the uncovered portion of the teaching and learning
- provide similar contents throughout the country and
- provide prerequisite contents which are helpful to continue the next grades teaching and learning process smoothly.

3. Objectives

The objectives of the guide line are to:

- show the rational of covering the uncovered portion before starting the new grade
- show issues considered in selecting lessons and
- identify selected contents for each grade level

4. Issues Considered

Ministry of Education has decided to cover the uncovered second semester lessons in 45 days before starting the 2020/21 teaching and learning process. In the 45 days, there are 6 weeks/30 teaching and learning days. For Grade 1 to 4 each, there are 6 periods per week. Hence, we will have 36 make up periods for each of Grade 1 to 4 in 45 days. By the same assumption, for grade 5 to 12 each, there are 5 periods per week. Hence, we will have 30 make up periods for each of Grade 5 to 12 in 45 days.

Based on the above considerations, the number of periods for selected units on each grade level is presented as follows:

For Grade 9 the total number of period is 167. From this, it is assumed that second semester will start from unit 5. Therefore, the total number of period for these selected units will be 75. Out of the 30 periods unit 5 will have 14 periods, unit 6 will have 11 periods and unit 7 will have 5 periods share.

For Grade 10 the total number of period is 162. From this, it is assumed that second semester will start from unit 5. Therefore, the total number of period for these selected unites will be 77. Out of the 30 periods unit 5 will have 12 periods, unit 6 will have 8 periods and unit 7 will have 10 periods share.

For Grade 11 the total number of period is natural science is 148 and for social science is 141. From this, it is assumed that second semester will start from unit 6 for both natural and social science students. Therefore, for natural science students the total number of period for selected units will be 84. For this stream, out of the 30 periods unit 6 will have 12 periods, unit 7 will have 5 periods, unit 8 will have 6 periods and Unit 9 will have 7 periods share. For social science students the total for number of period for selected units will be 77. For this

stream, out of the 30 periods unit 6 will have 12 periods, unit 7 will have 5 periods, unit 10 will have 6 periods and Unit 11 will have 7 periods share.

5. Content Selection Criteria

Selected contents are identified if it is newly introduced concept, highly applicable for real life situations, Basic for other subjects and basic for further learning.

In this guide line contents such as unnecessary repeated contents, those easy contents that students can understand easily and application problems that can be used as an elaboration example under the main contents are omitted. There are units in which all contents are crucial. In this case, the numbers of periods are reduced proportionally.

6. Selected Contents

Grade 9

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
1	Unit 5: Geometry and Measurement	5.1.1 Measures of Angles of a Regular Polygon	4	- Newly introduced concept - It will not be repeated on the next grades	Competencies: - Define regular polygon - Calculate the measure of each interior angle, each exterior angle and central angle of a regular polygon
		5.1.2 Properties of Regular Polygons		- Newly introduced concept - It will not be repeated on the next grades	Competencies: - Define apothem - Determine the length of side, perimeter, area and apothem of a given regular polygon.
		5.3.3 Trigonometrical Values of Angles from Tables		- Newly introduced concept - Basic for further learning	Competencies: - find the trigonometrical values of angles from trigonometrical table. - find the angle whose trigonometrical value is given (using trigonometrical table.) - determine the trigonometrical values for obtuse angles using trigonometrical table.
		5.4.1 Symmetrical Properties of Circles		- Newly introduced concept - Basic for further learning	Competencies: - discover the symmetrical properties of circles - use the symmetrical properties of circles to solve related problems
		5.4.3 Arc Lengths, Perimeters and Areas of Segments and Sectors		- Newly introduced concept - Basic for further learning	Competencies: Find arc length, perimeters and areas of segments and sectors
		5.5.1 Areas of Triangles and		Newly introduced concept	Competencies: calculate areas of triangles

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
		Parallelograms		• Basic for further learning	• calculate areas of parallelograms.
2	Unit 6: Three Dimensional Geometry and vectors in Space	6.1.2 Distribution and Histogram	4	• Basic for further learning • Applicable for real life situation	Competencies: • Construct a frequency distribution table for ungrouped data • construct a histogram for a given data • interpret a given histogram
		6.1.3 Measures of Location (Mean, Median and Mode(s))		• Basic for further learning • Applicable for real life situation	Competencies: • determine the Mean, Median and Mode of a given data • describe the purposes and uses of Mean, Median and Mode • identify the properties of the Mean of a given data (population function)
		6.1.4 Measures of Dispersion for Ungrouped Data		• Basic for further learning • Applicable for real life situation	Competencies: • compute the measures of dispersion for ungrouped data (manually and using scientific calculator) • describe the purpose and use of measures of dispersion for ungrouped data
		6.2 Probability		• Basic for further learning • Applicable for real life situation	Competencies: • determine the probability of an event from a repeated experiment • determine the Theoretical probability of an event
3	Unit 7: Vectors in Two Dimensions	7.1 Introduction to vectors and Scalars	4	• Newly introduced concept • Basic for further learning • Basic for other subjects	Competencies: • differentiate Vectors from scalars quantities
		7.2 Representation of		• Newly introduced concept	Competencies: • represent vectors pictorially

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
		a vector		• Basic for further learning • Basic for other subjects	• explain what is meant by magnitude and direction of a vector.
		7.3 Addition and subtraction of vectors Multiplication of Vector by scalar		• Newly introduced concept • Basic for further learning • Basic for other subjects	Competencies: • determine the sum of given vectors • determine the difference of two vectors • multiply a given vector by a given scales
		7.4 Position vector of a point		• Newly introduced concept • Basic for further learning • Basic for other subjects	Competencies: • express any given vector as position vector

7. Methodology

To minimize the spread of Covid-19, teachers could use suggested methodologies in the teacher guide especially questioning and answering, think-do-share strategy, individual assignment, individual project work, home work etc. The sitting arrangement should also be fixed.

8. The role of teacher and student

Teachers are highly expected to use the 30 periods effectively to cover the uncovered second semester portions based on this guide line. The main points under this sub unit should be discussed and some examples should be used to elaborate the major points in the class room. Teachers should provide selected exercise and reading assignment for those omitted contents.

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Grade 10

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
1	Unit 5: Trigonometric Functions	5.1.2 Values of Trigonometric Functions for Related Angles		- Newly introduced concept - Prerequisite knowledge for other grades - Basic for other subjects	Competencies: - determine the algebraic signs of the sine, cosine and tangent functions of angles in different quadrants. - describe the relationship between trigonometrical values of complementary angles. - describe the relationship between trigonometrical values of supplementary angles.

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
			4		- determine the relationship between trigonometrical values of coterminal angles. - determine the trigonometrical values of large angles
		5.1.3 Graphs of the Sine, Cosine and Tangent Functions		- Newly introduced concept - Prerequisite knowledge for other grades - Basic for other subjects	Competencies - construct a table of values for $y = \sin \theta$, $\cos \theta$ and $\tan \theta$ where $-2\pi \leq \theta \leq 2\pi$. - draw the graph of $y = \sin \theta$, $\cos \theta$ and $\tan \theta$ - determine the domain range and period of the sine, cosine and tan function.
		5.2 The Cosecant, Secant and Cotangent Functions		- Newly introduced concept - Prerequisite knowledge for other grades - Basic for other subjects	Competencies - define the cosecant, secant and cotangent function - determine the values of cosecant, secant and cotangent function for some angles. - explain the concept of co-functions.
		5.3 Simple Trigonometric Identities		- Newly introduced concept - Prerequisite knowledge for other grades - Basic for other subjects	Competencies - derive some of the trigonometric identities. - Identify the quotient identities - Solve problems related to trigonometrical identities.
2	Unit 6: Plane Geometry	6.1 Theorems on Triangles	4	Newly introduced concept	Competencies apply theorems on triangles to solve related problems.
		6.3.2 Angles and Arcs Determined by Lines Intersecting Outside a Circle		Newly introduced concept	Competencies Apply the theorems on angles and arcs determined by lines intersecting outside a circle to solve related problems
3	Unit 7: Measurement	7.2 Pyramids, cones and spheres	4	- Newly introduced concept - Applicable in real life	Competencies Calculate surface areas of a given pyramid, cone and sphere

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
				situation	calculate the volumes of a given pyramid, cone and sphere.
		7.3 Frustums of pyramids and cones		- Newly introduced concept - Applicable in real life situation	Competencies - define frustums of a pyramid and of a cone - calculate the surface areas of frustums of pyramids of cones - calculate the volumes of pyramids or of cones

9. Methodology

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10. The role of teacher and student

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Grade 11

For Natural Science Stream

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
1	Unit 6: Matrices and Determinants	6.1 Matrices (Definition, Types of Matrices, equality of Matrices and Multiplication of Matrices)	4	- Newly introduced concept - Basic for further learning	Competencies - define matrix - Determine the product of two matrices. - Describe the properties of the product of two matrices. - Determine the transpose of a matrix Focus on definition and properties of Matrices and Multiplication of Matrices
		6.2 Determinants and their properties	3	- Newly introduced concept - Basic for further learning	Competencies - determine the determinant of a square matrix of order 2. - calculate the determinate of a square matrix of order 3. - describe the properties of determinants.
		6.3 Inverse of a square matrix (2 x 2 Matrices)	1	- Newly introduced concept - Basic for further learning	Competencies Determine inverse of a square matrix Focus on 2 x2 square Matrices and students can proceed to others
		6.4 Systems of equations with three variables	3	- Newly introduced concept - Basic for further learning	Competencies Solve systems of equations using Cramers rule
2	Unit 7:	7.1 The concept of	1	Newly introduced	Competencies

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
	complex numbers	complex numbers		concept	- define complex numbers. - properties of complex number
		7.2.2 Multiplication and Division of Complex Numbers	1	Newly introduced concept	Competencies determine the product and division of two complex numbers.
		7.4 Simplification of Complex Numbers	1	Newly introduced concept	Competencies Write the simplified form of expressions involving complex numbers.
		7.5 Argand Diagram and Polar Representation of Complex Numbers	2	Newly introduced concept	Competencies - describe how to set up the Argand Plane. - Plot the point corresponding to a given complex numbers. - identify the complex number that corresponds to a given point in the Argand Plane. - represent any complex number in the polar form - determine the modulus and argument of a given complex number.
3	Unit 8: Vectors and Transformation of The Plane	8.3 Scalar (inner or dot) product of vectors	2	- Newly introduced concept - Basic for other subjects	Competencies - find the scalar product (inner product, of two vectors - describe some properties of scalar product of vectors.
		8.5 Transformations of the plane	4	- Newly introduced concept - Basic for other subjects	Competencies - explain what is meant by transformation of the plane. - describe the main properties of rigid motion. - Translate points, lines and circles using vectors. - Reflect points, lines, circle and some other

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
					plane figures. • Determine the images of a given plane figure when rotated through an angle θ
4	Unit 9: Further on trigonometric Functions	9.1 The functions $y = \sec x$, $y = \operatorname{cosec} x$ and $y = \cot x$	2	• Newly introduced concept	Competencies • define and describe the functions $\sec x$, $\operatorname{cosec} x$ and $\cot x$. • Sketch graphs of $\sec x$, $\operatorname{cosec} x$ and $\cot x$
		9.2 Inverse of trigonometric functions	2	• Newly introduced concept	Competencies • define the inverse trigonometric functions. • Sketch the graph of the inverse trigonometric function.
		9.3 Graphs of some trigonometric functions	3	• Newly introduced concept	Competencies • Sketch the graphs of $y = a \sin x$, $y = a \sin kx$, $y = a \sin (kx + b)$ and $y = a \sin (kx + b) + c$ and List the properties of these graphs. Focus on the graph of sine and students will continue the rest part of it

Grade 11

For Social Science Stream

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
1	Unit 6: Matrices and Determinants	6.1 Matrices (Definition, Types of Matrices, equality of Matrices and Multiplication of Matrices)	4	- Newly introduced concept - Basic for further learning	Competencies - define matrix - Determine the product of two matrices. - Describe the properties of the product of two matrices. - Determine the transpose of a matrix Focus on definition and properties of Matrices and Multiplication of Matrices
		6.2 Determinants and their	3	Newly introduced concept	Competencies determine the determinant of a square

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
		properties		• Basic for further learning	- matrix of order 2. • calculate the determinate of a square matrix of order 3. • describe the properties of determinants.
		6.3 Inverse of a square matrix (2 x 2 Matrices)	1	• Newly introduced concept • Basic for further learning	Competencies • Determine inverse of a square matrix Focus on 2 x2 square Matrices and students can proceed to others
		6.4 Systems of equations with three variables	3	• Newly introduced concept • Basic for further learning	Competencies • Solve systems of equations using Cramers rule
2	Unit 7: complex numbers	7.1 The concept of complex numbers	1	• Newly introduced concept	Competencies • define complex numbers. • properties of complex number
		7.2.2 Multiplication and Division of Complex Numbers	1	• Newly introduced concept	Competencies • determine the product and division of two complex numbers.
		7.4 Simplification of Complex Numbers	1	• Newly introduced concept	Competencies • Write the simplified form of expressions involving complex numbers.
		7.5 Argand Diagram and Polar Representation of Complex Numbers	2	• Newly introduced concept	Competencies • describe how to set up the Argand Plane. • Plot the point corresponding to a given complex numbers. • identify the complex number that corresponds to a given point in the Argand Plane. • represent any complex number in the polar

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
					form • determine the modulus and argument of a given complex number.
3	Unit 10: Introduction to Linear Programming	10.3 Maximum and Minimum value	3	• Newly introduced concept • Basic for further learning	Competencies • find maximum and minimum values of a given objective function under given constraints.
		10.4 Real life linear programming problems	3	• Newly introduced concept • Basic for further learning	Competencies • create inequalities from real life examples for linear programming and solve the problem
4	Unit 11: Mathematical Applications in Business	11.2 Compound Interest and Depreciation	5	• Newly introduced concept • Applicable in real life situation	Competencies • calculate payment by installment for a given simple interest arrangement. • calculate the compound interest of a certain amount invested for a given period of time. • apply the formula for compound interest to solve practical problems in business. • compute annuity for a give arrangement in compound interest. • describe what is depreciation mean and some of its causes • compute depreciation by using either of the two methods appropriately.
		11.4 Taxation	2	• Newly introduced concept • Applicable in real life situation	Competencies • give name three types of activities that government performs and examples of each • explain why governments collect taxes. • describe the basic principles of taxation • describe the various kinds of taxes. • give their opinion about "income taxes"

No	Unit	Sub-Unit	No of periods	Rationale (for selection of the content)	Description (knowledge, skill and attitude) and suggested methodology
					mean for them in relation to their future first job. • calculate different types of taxes based on the "rate of tax" in Ethiopia

11. Methodology

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12. The role of teacher and student

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