## SCIENCE SECONDARY AGENDA PARAMETERS ACTION PLAN- 2017-18

Focus	Modification of Curriculum/Action	Success/Impact Indicators:	When?	Where?
YEAR 7:	Modification of Curriculum	Most of the students will be able to:	6 weekly	Outcome
TIMSS/PISA:	Modified SOWs to accommodate:			based
Addressing gaps in knowledge	Scientific enquiry skills	Explain phenomena scientifically:		Formative
	Introduction to Earth Sciences	- Students recognize and apply their		assessments
Scientific Literacy (PISA)	In lessons:	knowledge in various contexts	Termly	
- Explain phenomena scientifically	Provision in lesson plan through starter/mid-	- Students apply knowledge and		
<ul> <li>Evaluate and design scientific enquiry</li> </ul>	plenaries/plenaries to enhance students to :	communicate an understanding and		
- Interpret data and evidence scientifically	Explain phenomena scientifically	analyze information provided		Home
-living Sciences	Evaluate and design scientific enquiry	- They apply knowledge to practical	Ongoing	learnings
- Earth Sciences	<ul> <li>Interpret data and evidence scientifically</li> </ul>	situations and communicate their		
	Enhancing students' mental ability to solve	understanding through brief		
CAT4:	problems	descriptive responses.		Summative
<ul> <li>Enhance reasoning skills</li> </ul>	Effective questioning to enhance:	- They can plan and conduct		assessments
	Critical thinking	experiments involving one or more		
Progress Test Science	<ul> <li>Reasoning skills of the students</li> </ul>	independent variables in a		
As a Group:	Problem solving skills	constrained context.		
- To improve the SAS score for students of the cohort	Scientific Enquiry:	- They can explain an experimental		
from 59% in 2016-17 to higher in 2017-18.	<ul> <li>Students practiced enquiry-based</li> </ul>	design, drawing on elements of		
Gender wise Target: The girls (52%) of Veer 7 2016 17 did not perform well	questions in lessons.	procedural and epistemic knowledge.		
- The girls (52%) of fear 7 2016-17 did not perform well	Weekly one lesson dedicated to scientific	Interpret data and evidence scientifically	-	
They are currently in Year 8: different strategies need	investigations.	tables graphs and nictorial diagrams		
he used in classes to improve their learning skills		and draw conclusions.		
Curriculum Content:	NAP focused Home Learning to further embed			
Chemistry and Physics are two identified areas to wor	critical thinking, critical and problem solving	Few students will be able to:		
on for the cohort of students' in Year 8 in 2017-18. Al	reasoning skills.	- Draw appropriate conclusions that go		
to strengthen its consolidation in Year 7 as well in 201	PTS/ PISA/TIMSS styled questions	beyond the data and provide		
18	Comprehension based question	justifications for their choices.		
	Planning			
SCIENTIFIC INVESTIGATIONS	Enquiry based questions			
Electricity	Data based questions			
Rocks	Further deepening critical thinking and			
LIFE STAGES IN HUMAN CYCLE	reasoning skills.			
Properties of states of matter	<ul> <li>Mental ability based questions</li> </ul>			
	Embed Using CAT4 data to personalize the lesson			
Work Scientifically:	plan improving learning skills of boys/			
- To further, embed our effective strategies to raise	Emirati/SEND students			
areas- Working scientifically and Application of K&U ir	Home learning focused more on Chemistry and physics			
same and different contexts.	physics.			
SCIENTIFIC INVESTIGATIONS	Personalized Homework for SEND and low stanine students			
FORMULATING QUESTIONS FROM INVESTIGATIONS	Extra support loscops for Emirati students			
MAKING RECORDINGS	Extra support lessons for Emirati students			
CONCLUSIONS FROM RESULTS	Evaluate rearning and Assessment outcomes			
Student Wise analysis:	Reading: Encourage and embed the babit of			
- Work on identified low stanine students, SEND and	reading in students.			
Emiratis in year 8 with personalized support during brea				
time				
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Who?	Useful Links
All teachers/ HODS/ HOKS	http://timssandpirls.bc.edu/timss2019/f rameworks/framework- chapters/science-framework/science- practices-in-timss-2019/ http://www.iea.nl/fileadmin/user_uplo ad/General_Assembly/56th_GA/Study presentations/eTIMSS_2019_Developm ent_GA.pdf Practice questions:
	https://www.nfer.ac.uk/TIMSS/sample- questions.cfm http://www.edinformatics.com/timss/ti mss_intro.htm
	https://nces.ed.gov/timss/pdf/timss201 1_g8_science.pdf http://www.oecd.org/pisa/pisaproducts /pisa-test-questions.htm
	<u>http://www.oecd.org/pisa/test/</u> <u>http://www.oecd.org/pisa/38709385.pd</u> <u>f</u>
	<u>https://www.oecd.org/pisa/pisaproduct</u> <u>s/Take%20the%20test%20e%20book.pd</u> <u>f</u>
	https://www.gl- assessment.co.uk/media/1382/ptseries assessment_overview.pdf

## SCIENCE-NATIONAL AGENDA PARAMETERS ACTION PLAN

Focus	Modification of Curriculum/Action	Success/Impact Indicators:	When?	Where?	Who?	Useful Links	
YEAR 8:	Modification of Curriculum_	Most of the students will be able to	6 weekly	Ongoing – 6	All	http://timssandpirls.bc.edu/timss2019	
TIMSS/PISA:	Modified SOWs to accommodate:	explain:		weekly review	teachers/	/frameworks/framework-	
Addressing gaps in knowledge	Scientific enquiry skills				HODS/	chapters/science-framework/science-	
	Reproduction in animals	Explain phenomena scientifically:		Outcomes based	нокѕ	practices-in-timss-2019/	
Scientific Literacy (PISA)		- Students can use more complex or	Termly	Formative			
- Explain phenomena scientifically	<ul> <li>Provision in lesson plan through starter/mid-</li> </ul>	more abstract content knowledge,		assessment		http://www.iea.nl/fileadmin/user_upl	
<ul> <li>Evaluate and design scientific enquiry</li> </ul>	nlenaries/nlenaries s to enhance students to:	To construct explanations of more				oad/General Assembly/56th GA/Stud	
<ul> <li>Interpret data and evidence scientifically</li> </ul>	Evolution phenomena scientifically	complex or less familiar events and				y presentations/eTIMSS 2019 Devel	
Knowledge and system:	Explain phenomena scientific enquiry	nrocesses	Ongoing			opment GA.pdf	
-Living Sciences	<ul> <li>Interpret data and evidence scientifically</li> </ul>	Evaluate and design scientific enquiry					
- Earth Sciences	<ul> <li>Enhancing students' mental ability to solve</li> </ul>	- They can conduct experiments				Practice questions:	
	problems	involving two or more independent				https://www.nfer.ac.uk/TIMSS/sampl	
CAT4.	Effective questioning to enhance:	variables in a constrained context.				e-questions.cfm	
- Enhance reasoning skills	Critical thinking	- They can justify an experimental					
	Bessening skills of the students	design, drawing on elements of					
Progress Test Science	Reasoning skins of the students	procedural and epistemic knowledge.				http://www.odinformatics.com/times/	
As a Group:	Problem solving skills	Interpret data and evidence scientifically				times_intro_htm	
- To improve the SAS score for students of the cohort	Scientific Enquiry:	- students can interpret data drawn				timss_intro.ntm	
from 56% in 2016-17 to higher in 2017-18	Students practiced enquiry-based questions in	from a moderately complex data set					
Gender wise Target:	lessons.	or less familiar context,				nttps://nces.ed.gov/timss/pdf/timss2	
To have specific and personalized strategies in place	<ul> <li>Weekly one lesson dedicated to scientific</li> </ul>	- Draw appropriate conclusions that go				<u>011 g8 science.pdf</u>	
to further increase performance of hove in 2017-18	investigations.	iustifications for their choices					
They are currently in Year 9: different strategies need		justifications for their enoices.				http://www.oecd.org/pisa/pisaproduc	
to be used in classes to improve their learning skills	> NAP focused Home Learning to further embed critical					<u>ts/pisa-test-questions.htm</u>	
Curriculum Content:	thinking and reasoning skills.						
Chemistry and Biology are two identified areas to	<ul> <li>PISA/TIMSS/PTS styled questions</li> </ul>					http://www.oecd.org/pisa/test/	
further work on for the cohort of students' in Year 9	Comprehension based question						
in 2017-18. Also to strengthen its consolidation in	Planning					http://www.oecd.org/pisa/38709385.	
Vear 8 as well in 2017-18	Enguiry based guestions					<u>pdf</u>	
To further embed our effective strategies to raise	Data based questions						
areas- Working scientifically and Application of K&U	Mental ability based questions					https://www.oecd.org/pisa/pisaprodu	
in same and different contexts	Eurther deepening critical thinking and					cts/Take%20the%20test%20e%20boo	
- Bocks Inheritance Chemical changes Energy an	Further deepening childar thinking and     reasoning skills					<u>k.pdf</u>	
interactions in Ecosystem Focus in physics- speed	Embed Using CATA data to percepalize the lossen plan						
light Universe	improving loarning ckills of boys / Emirati /SEND					https://www.gl-	
Scientific Investigations:	students					assessment.co.uk/media/1382/ptserie	
- Variables and recording data	Hands on activities (investigations) for hours					s_assessment_overview.pdf	
Student Wise analysis:	Hands on activities (investigations) for boys						
Work on identified low stanine students SEND and	P Home learning locused more on chemistry and						
Emiratis in year 9 with personalized support during	pilysics.						
break time	Personalized Homework for SEND and low stanine						
break ante	students.						
	Extra support lessons for Emirati students						
	Evaluate learning and Assessment outcomes against						
	international benchmark TIMSS/PISA.						
	Reading: Encourage and embed the habit of reading in						
	students.						

Focus	Modification of Curriculum/Action	Success/Impact Indicators:	When?	Where?	Who?	Useful Links
YEAR 9/10:	Modification of Curriculum	Most of the students will be able to:	6 weekly	Ongoing – 6	All	http://timssandpirls.bc.edu/timss2
TIMSS/PISA:	Modified SOWs to accommodate:			weekly review	teachers/	019/frameworks/framework-
Addressing gaps in knowledge	Scientific enquiry skills	Explain phenomena scientifically:			HODS/	chapters/science-
Scientific Literacy (PISA)	<ul> <li>understanding of concepts from the Earth and</li> </ul>	- Students can use abstract scientific		Outcomes based	HOKS	framework/science-practices-in-
- Explain phenomena scientifically	space systems	ideas or concepts to explain	Termly	Formative		<u>timss-2019/</u>
- Evaluate and design scientific enquiry	In lessons:	unfamiliar and more complex		assessment		
<ul> <li>Interpret data and evidence scientifically</li> </ul>	Provision in lesson plan through starter/mid-	phenomena, events and processes				http://www.iea.nl/fileadmin/user
Knowledge and system <u>:</u>	plenaries/plenaries to enhance students to :	involving multiple causal links.				upload/General Assembly/56th G
-Living Sciences	Explain phenomena scientifically	Evaluate and design scientific enquiry	Ongoing			A/Study presentations/eTIMSS 20
- Earth Sciences	Evaluate and design scientific enquiry	- They can apply more sophisticated	0 0			19 Development GA.pdf
	<ul> <li>Interpret data and evidence scientifically</li> </ul>	epistemic knowledge to evaluate				
CATA	<ul> <li>Enhancing students' mental ability to solve</li> </ul>	alternative experimental designs and				Practice questions:
CA14. - Enhance reasoning skills	problems	justify their choices and use				https://www.nfer.ac.uk/TIMSS/sa
	Effective questioning to enhance:	theoretical knowledge to interpret				mple-questions cfm
	Critical thinking	information or make predictions.				<u></u>
	Reasoning skills of the students					
	Problem solving skills	Interpret data and evidence scientifically				http://www.edinformatics.com/tim
	Scientific Enquiry:	- Students can evaluate ways of				ss/times_intro_htm
	Citudents practiced enquiry based questions in	exploring a given question				<u></u>
	Students practiced enquiry-based questions in	in interpretations of data sets				https://page.od.gov/times/pdf/time
Progress Test Science	Maakky and lasson dedicated to scientific	including sources and the effects of				s2011 g8 science ndf
As a Group:	Weekly one lesson dedicated to scientific     investigations	uncertainty in scientific data.				<u>szori go science.pur</u>
- To improve the SAS score for students of the cohort	investigations.					http://www.oocd.org/pica/picapro
from 77% in 2016-17 to higher in 2017-18.	NAD focused flows I counting to further embed withing					ducts (pisa test questions htm
Gender wise Target:	thinking and reasoning skills					ducts/pisa-test-questions.ntm
- To have specific and personalized strategies in place						http://www.cod.com/cicc/toct/
to further increase performance of girls in 2017-18.	PISA/ TIMISS styled questions					http://www.oecd.org/pisa/test/
- They are currently in Year 10; different strategies	Comprehension based question					
need to be used in classes to improve their learning	Planning					nttp://www.oecd.org/pisa/387093
skills.	Enquiry based questions					<u>85.par</u>
Curriculum Content:	Data based questions					
- Chemistry and Physics are two identified areas to	<ul> <li>Further deepening critical thinking and</li> </ul>					https://www.oecd.org/pisa/pisapro
further work on for the conort of students' in year 10	reasoning skills.					ducts/Take%20the%20test%20e%2
In 2017-18. Also to strengthen its consolidation in	<ul> <li>Mental ability based questions</li> </ul>					<u> Ubook.pat</u>
Year 9 as well in 2017-18.						
- To further, embed our effective strategies to faise	Embed Using CAT4 data to personalize the lesson plan					<u>nttps://www.gl-</u>
in same and different contexts	improving learning skills of boys/ Emirati/SEND					assessment.co.uk/media/1382/pts
Earth Science	students					erres_assessment_overview.put
Effects of smoking	Home learning focused more on Chemistry and					
Lineus of Shioking	physics.					
Light	Personalized Homework for SEND and low stanine					
Sound	students.					
Accuracy and Making Conclusions	Extra support lessons for Emirati students					
Photosynthesis						
Scientific Investigations	Evaluate learning and Assessment outcomes against					
Variables	international benchmark TIMSS/PISA.					
Health and Safety	<b>Reading:</b> Encourage and embed the habit of reading in					
Reliability	students.					