

Secondary 3 Parent Webinar: Academic Sharing and CCAs & LEAPS 2.0 System

Saturday, 29 May 2021



Academic Sharing on English

Mdm Azrina
HOD English





Content of Sharing

- I. English Language at Upper Sec - key questions
- II. Strategies to cope with the demand of the subject
- III. Strategies for parents to better support the child





1. Which EL exam is my child sitting for?

Syllabus
1128

3E

4E

GCE O

Syllabus
1190

3NA

4NA

GCE NA

Syllabus
1195

3NT

4NT

GCE NT



2. What is my child learning for Upper Sec EL?

3E/3NA

Communicate effectively in English in the following areas:

1. **Listen, read and view** critically and with accuracy, understanding and appreciation
2. **Speak, write and represent** in Standard English that is grammatical and fluent
3. **Understand and use Standard English grammar and vocabulary** accurately and appropriately

3NT

Achieve functional fluency in English in the following areas:

1. **Listen, read and view** critically and with accuracy and understanding
2. **Speak, write and represent** in Standard English that is grammatical and fluent
3. **Understand and use Standard English grammar and vocabulary** accurately and appropriately



3. What is my child tested on for Upper Sec EL?

3E/3NA	3NT
Students will be assessed on their ability to:	
<ul style="list-style-type: none">• speak and write in internationally acceptable English	<ul style="list-style-type: none">• speak and write in internationally acceptable English
<ul style="list-style-type: none">• speak and write clearly, <u>effectively,</u> relevantly and coherently	<ul style="list-style-type: none">• speak and write clearly, relevantly and coherently
<ul style="list-style-type: none">• use a wide and appropriate vocabulary <u>with clarity and precision</u>	<ul style="list-style-type: none">• speak and write using appropriate and varied vocabulary
<ul style="list-style-type: none">• use correct grammar, punctuation and spelling	<ul style="list-style-type: none">• use correct grammar, punctuation and spelling



3. What is my child tested on for Upper Sec EL?

3E/3NA	3NT
Students will be assessed on their ability to:	
<ul style="list-style-type: none">• show understanding of a variety of written, spoken and visual texts at the literal, inferential and <u>evaluative levels</u>	<ul style="list-style-type: none">• show understanding of a variety of written, spoken and visual texts at different levels of comprehension
<ul style="list-style-type: none">• read aloud a given text <u>fluently</u> with appropriate <u>variations in voice qualities</u>	<ul style="list-style-type: none">• read aloud a given text with accurate pronunciation, clear articulation and appropriate voice qualities
<ul style="list-style-type: none">• <u>show understanding of how use of language achieves purpose and impact</u>	
<ul style="list-style-type: none">• <u>synthesise, summarise and organise information</u>	



4. What EL exam papers will my child sit for end of this year?

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Paper	3E/3NA EL	%	3NT EL	%
1	Writing [70m] Section A: Editing Section B: Situational Writing Section C: Continuous Writing	35%	Writing [60m] Section A: Functional Tasks Section B: Guided Writing	30%
2	Comprehension [50m] Section A: Visual Text Section B: Narrative/Recount Text Section C: Non-Narrative Text, Summary Writing	35%	Language Use & Comprehension [80m] Section A: Language Use Section B: Reading Comprehension	<u>40%</u>
3	Listening [30m] Candidates complete a variety of listening tasks including note-taking.	10%	Listening [20m] Candidates complete a variety of listening tasks.	10%
4	Oral Communication [30m] Part 1: Reading Aloud Part 2: Spoken Interaction	20%	Oral Communication [40m] Part 1: Reading Aloud Part 2: Spoken Interaction	20%



5. What are the key differences between Lower Sec and Upper Sec EL?

Lower Sec to Upper Sec EL

Same **skills and strategies** at increasingly higher levels of complexity

Increasingly sophisticated **vocabulary**

Increase in **word range** for writing

Increasingly complex **texts** for comprehension

Longer texts for comprehension

Increasingly complex **ideas or topics**



Example from 2020 Sec 2 EYE Comprehension

Out of nowhere, something huge hit me with tremendous force on my left side and heaved me through the water. The 'thing' pushed me through the water with wild speed. I felt a massive sensation of nausea.

Lower Sec

In Paragraph 1, pick out a phrase that shows the writer was caught by surprise. [1m]

Ans: 'Out of nowhere'

Upper Sec

In Paragraph 1, the writer describes how the shark launched its attack. Explain how the language used suggests that the shark had attacked without warning. [2m]

Ans: 'Out of nowhere' suggests that the writer was not even aware of the presence of the shark in the waters prior to the attack. [1m] 'The 'thing' pushed me' suggests that the writer was not even able to identify the creature that was attacking him. [1m]



II. Strategies for Upper Sec EL

1. Be prepared to unlearn and relearn at Upper Sec

- Language learning skills and strategies will be more complex at higher levels
- Assessment demand will be greater at Upper Sec

2. Focus on improving language learning skills and strategies

- Teacher strategies must eventually translate into learner strategies – apply what you are taught
- For writing, students will need to plan (i.e., idea generation, selection, development and organisation), review and revise. For comprehension, students will need to read a text closely and critically.

3. Learn EL across subjects

- Learning EL can occur and deepen as students learn content

4. Develop your communicative competence

- Make speaking and writing Standard English front and centre in your daily life



III. Strategies for parents to better support the child

- 1. Encourage the use of Standard English grammar and vocabulary at home**
 - Help your child to gain in confidence and feel more motivated by giving them praise and opportunities to practise English at home with you and/or their siblings.
- 2. Create opportunities for your teenager to be exposed to English at home**
 - Help your child to understand how English is used in different contexts, and exposure to English for a teenager can take the form of watching shows, reading magazines or listening to songs in English.
- 3. Find opportunities to talk to your teenager about current affairs**
 - Continue to nurture your child's natural sense of wonder and curiosity about the world and help them understand the different perspectives of a news story. This understanding comes in handy when they write essays and engage in conversations on different topics.
- 4. Continue to develop good reading habits in your teenager**
 - Help your child make time to read, whether through digital books or audiobooks.



Resources for EL

- EL magazine subscriptions for Sec 3 students
- EL learning materials and resources for Semester 1
- EL holiday homework
- Online resources for grammar: <https://www.bbc.co.uk/learningenglish/>

Academic Sharing on Mathematics

Mdm Koh Poh Ling
HOD Mathematics





Outline:

- Overview of topics in upper sec Math/Additional Math
- Mathematics Curriculum
- Support for students
- Strategies for students to cope with the demand of Math/Additional Math
- Strategies for parents to better support your child



Overview of Topics for Upper Sec Math/Additional Math

- Similar strands of topics covered in lower sec:
 - Algebra
 - Geometry
 - Statistics
- Different strand in upper sec Additional Math
 - Calculus (Sec 4/5)



Mathematics Curriculum

- Concepts
- Skills
- Attitudes
 - e.g. Confidence, motivation
- Processes
 - e.g. Reasoning
- Metacognition
 - e.g. Monitoring of thought process



Greater emphasis in the
new Math /
Additional Math syllabus



Changes in Math

Greater emphasis on:

- Real-world contexts
- Reasoning
- Analysis of data
- Application of concepts & skills from more than 1 topic (e.g. Rate, Speed, Area)

Example

The construction of drains is guided by a set of safety regulations where the R -value of a drain is an important indicator. V is the velocity of water flow in m/s. k is the constant value depending on materials used.

Table 1

$R\text{-value} = \frac{\text{Cross - sectional Area}}{\text{Perimeter}}$
$R^2 = k^2V^3; R = R\text{-value}$

Table 2

Description	Requirements
Maximum velocity of water in a mud drain	No more than 1.5 m/s
Maximum velocity of water in any drain other than the mud drain	No more than 3 m/s

Table 3

Material used	Value of k
Concrete	0.164
Mud	0.397

Suggest a suitable material to be used for the construction of the drain. Justify any decisions you make and show your calculations clearly.



Changes in Additional Math

Greater emphasis on:

- Real-world contexts
- Reasoning
- Application of concepts & skills from Math and Science

Example

Some bacteria are grown in a gel medium in a petri dish. The number, N , of bacteria in the culture after t hours may be modelled by $N = 100(1.05^t)$.

- (i) After 1 day, the growth of bacteria starts to slow according to this new model

$$N = N_0 + (t - 12) \ln \left(\frac{1}{2}t - 11 \right), \text{ where } N_0 \text{ is the number of bacteria after 1 day.}$$

Show that $N_0 \approx 323$.

- (ii) **Explain why the original model is not able to model the growth of bacteria over a long period of time.**



Sec 3 Assessment in Math

- Exams are similar to lower sec with 2 exam papers except for
 - longer duration and more marks
 - higher percentage of real-world context and reasoning questions
- Students can refer to their Topical Ten Year Series books and textbooks for the exam format and types of questions
- Weighted assessment (class tests) and chapter assignments will be provided by teachers to guide students on the demand of assessment



Sec 3 Assessment in Additional Math

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- 1 exam paper in Sec 3 and 2 exam papers in Sec 4/5
 - Higher percentage of real-world context and reasoning questions
 - Applications of Math and Science
- Students can refer to their textbooks, Mentor Additional Math books and past year exam papers for the exam format and types of questions
- Weighted assessment (class tests) and chapter assignments will be provided by teachers to guide students on the demand of assessment



Support for students

- Resources prepared by teachers (e.g. Lesson videos, notes, worksheets, past year test/exam papers, SLS etc)
- Mastery Learning Programme (MLP) on Mon/Thu and June/Sep break
- Term break lessons for Sec 3 [Oct/Nov]
- Consultations
- Lesson schedules/Revision plans
- Regular check-ins by teachers
- Greater exposure to real-world context and reasoning questions during class lessons/tasks



Strategies for students to cope with the demand of Math/Additional Math

- Revisit lower sec topics, consult teachers and learn from peers
- Read up on local/global issues to be familiar with real-world context problems (from textbooks, news etc)
- Overcome challenges and go beyond the easy tasks/questions
- Read before and after the lesson to clarify doubts, consolidate learning
- Learn and practise the different question types for each topic
- See mistakes as learning opportunities
- Work with teachers to come up with a revision plan



Strategies for parents to better support your child

- Parents could focus on the learning process
 - Recognise the effort put in by your child, affirm and celebrate small successes
 - Encourage your child to be inquisitive to love the subject
 - Make the learning process fun (e.g. Incorporate Math concepts in real life contexts)
- Work with the teachers to
 - monitor your child's progress
 - encourage your child when they face setbacks and help them make a comeback

Academic Sharing on Science

Mr Yeo Keng Yong
HOD Science



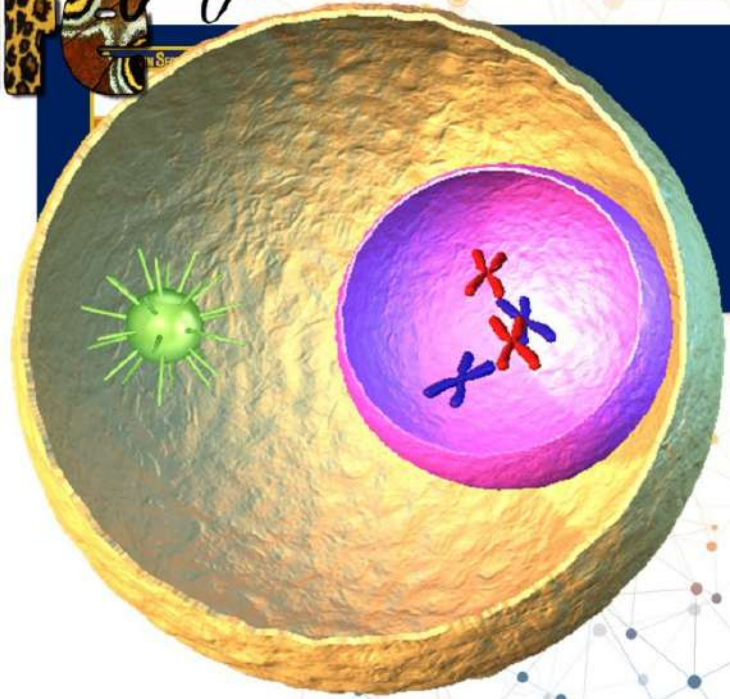
Physics

$w = 2\pi r f$
 $t = s/v$
 $v^2 = u^2 + 2as$
 $PE = mgh$
 $P = W/t$
 $PE = m \times g \times h$
 $I = V/R$
 $E = mc^2$
 $s = ut + \frac{1}{2}at^2$
 $F = ma$
 $W = F \times S$
 $I = \frac{E}{R \times t}$
 $v = u + at$
 $E = mc^2$

CHEMISTRY

NaCO2
 Methane
Ca
Si
Ag
He
H2O
H2SO4
Mn
CO2
CH4
Na
Ba
Mg
Si
He
Na2B4O7
CH4
H2O
H2SO4
Mn
CO2
CH4
Na
Ba
Mg
Si
He
Na2B4O7
CH4

Biology
is **Life**



Scope of sharing

- Topics in Upper Sec Science syllabus
- Comparing Lower Sec Science syllabus and Upper Sec Science syllabus
- How parents can help their child?
- How the Science department can help the child?

Physics Topics

- **Measurement**

1. Measurements

- **Newtonian Mechanics**

2. Motion (Kinematics)

3. Forces

4. Mass, Weight & Density

5. Moments

6. Work, Energy & Power

7. Pressure

- **Thermal Physics**

8. Temperature (*Pure Physics topic*)

9. Kinetic Model of Matter

10. Thermal properties of Matter (*Pure Physics topic*)

11. Transfer of Thermal Energy

- **Waves**

12. General Wave Properties

13. Light (Reflection, Refraction & total internal reflection)

14. Electromagnetic waves

15. Sound

- **Electricity and Magnetism**

16. Static Electricity

17. Current Electricity

18. DC Circuits

19. Practical Electricity

20. Magnetism

21. Electromagnetism

22. Electromagnetic induction (*Pure Physics topic*)



Chemistry Topics

- **EXPERIMENTAL CHEMISTRY**

1. Experimental Chemistry

- **ATOMIC STRUCTURE AND STOICHIOMETRY**

2. The Particulate Nature of Matter

3. Formulae, Stoichiometry and the Mole Concept

- **CHEMISTRY OF REACTIONS**

4. Electrolysis (**Pure Chemistry**)

5. Energy from Chemicals

6. Chemical Reactions

7. Acids, Bases and Salts

- **PERIODICITY**

8. The Periodic Table

9. Metals

- **ATMOSPHERE**

10. Air

- **ORGANIC CHEMISTRY**

11. Organic Chemistry



Biology Topics

- **Principles of Biology**

1. Cell Structure and Organisation
2. Movement of substances
3. Biological molecules

- **Maintenance and Regulation of Life processes**

4. Nutrition in humans
5. Nutrition in plants
6. Transport in flowering plants
7. Transport in humans
8. Respiration in humans
9. Excretion in humans (**Pure Biology**)
10. Homeostasis (**Pure Biology**)
11. Co-ordination and Response in Humans

- **Continuity of Life**

12. Reproduction
 13. Cell division (**Pure Biology**)
 14. Molecular genetics
 15. Inheritance
- **Man and His Environment**
 - 16. Organism and their environment



Comparing Lower Science syllabus and Upper Sec Science Syllabus

- More and new topics to be taught
- Topics which were taught in lower sec will be covered at a deeper level in Upper Sec
- Practical assessment
- Solve more complex problems
- Analyse data-based questions in real world context

How parents can help their child ?

1. Understanding of Science concepts –
 - View applets (pHET, Java Lab) together and get child to explain to you (for e.g. how a d.c. motor works)
 - View Khan's Academy videos (step-by-step explanation using simple illustration) and ask child to explain concepts simply.
2. Explaining of scientific phenomena based on scientific concepts
 - Scan newspaper for articles related to Science for e.g the appearance of 'blood moon' and discuss with your child

3. Using scientific vocabulary, terminology, conventions
 - Check with your child what are the new scientific vocabulary they have learnt for the day and what these terms mean
4. Solving problems in real life context.
 - Going through their assignments and highlight real life context questions

How the Science department helps your child?

Resources

1. SLS lessons for US Science topics.
 - Self-paced lessons to review what they have learnt
2. Compiled notes/condensed notes
 - Notes compiled with key words blanked
3. Ten year series – topical (Sec 3) and yearly (Sec 4) for practice

How the Science department helps your child?

Resources

4. Compiled schools exam papers (Sec 3 and Sec 4) for additional practice
5. Provision of Internet Resources through links in notes
 - pHET, Java Lab, Gizmo
6. Quizizz curated by teachers.
 - quiz to check understanding of basic concepts

- **MLP lessons for Science**

- Sec 3 (Mondays fortnightly) - Supplementary
- Sec 4/5 (Thursdays fortnightly)- Additional practicals



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Sharing on Co-Curricular Activities & LEAPS 2.0 System

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Overview of LEAPS 2.0 Domains

- A framework to recognise students' learning and attainment in the Co-Curriculum
- Four domains in LEAPS 2.0:

Participation

Achievement

Leadership

Service

- At the end of 4 years, attainment in the Co-Curriculum will be translated to bonus point(s) which can be used for admission to JC/CI/Poly/ITE
- Up to 2 bonus points can be awarded for Co-Curriculum attainment

More information on LEAPS 2.0 can be found on our school website and in your child's Student Handbook (pg 33 - 38).

Leadership
Enrichment
Achievement
Participation
Service



Recognition of Students' Level of Attainment

Co-Curricular Attainment	Details
Excellent (2 bonus points)	Student who attains a minimum Level 3 in all four domains with at least a Level 4 in one domain.
Good (1 bonus point)	Student who attains a minimum Level 1 in all four domains with any one of the following: i. At least Level 2 in three domains; ii. At least Level 2 in one domain and at least Level 3 in another domain; or iii. At least Level 4 in one domain.
Fair	Student's attainment in co-curricular will not translate into any bonus points.



Recognition of Students' Level of Attainment

Co-Curricular Attainment	Basic Requirement for Level of Attainment in Domains	Bonus Points
Excellent	4,3,3,3	2
Good	4,1,1,1 3,2,1,1 2,2,2,1	1
Fair	did not meet above criteria	0



Participation Domain in LEAPS 2.0

- At least 75% attendance each year
 - Level 1: Participation in a CCA for 2 years
 - Level 2: Participation in a CCA for 3 years
 - Level 3: Participation in a CCA for 4 years
 - Level 4: Continuous involvement in the same CCA for 4 years
 - Level 5:
 - Continuous involvement in the same CCA for 5 years
 - Exemplary conduct and active contribution in CCA with at least 4 years of participation in any CCA
- CCA Attendance is very important. CCA teachers will contact parents should student be absent. Refer to CCA's page on school website for practice schedule and time.



Achievement Domain in LEAPS 2:0

Representation

- Level 1:
 - Represent class / house / CCA (**Intra-school**)

Representation/Accomplishment

- Levels 2 – 4:
 - Represent **school or external organisation** in an event
 - Accomplishment in an event represented
 - Levels increase with no. of years of representation/accomplishment
- Level 5:
 - Represent/accomplish Singapore / MOE / Singapore Schools / National Project of Excellence (NPOE) / UG HQ in international UG competitions
- Achievement Badges for Uniformed Groups



Leadership Domain in LEAPS 2.0

Broadly divided into three tiers:

- Self-Leadership (level 1 to 3)
- Group Leadership (level 2 & above)
- School-level leadership (level 3 & above)
- Level 1:
 - Completed 2 modules on leadership
- Levels 2 – 5:
 - Recognition of **progressive student leadership development** through leadership positions
 - Promotion of ranks in Uniformed Groups
 - National Youth Achievement Award (NYAA)
 - **Level 2: Bronze**
 - **Level 3: Silver and above**





Service Domain in LEAPS 2.0

Recognises student involvement in community service and learning experiences through service activities and Values-In-Action (VIA) projects

- Level 1 – 4:
 - Completed 24 to 36 hours of service
 - Completed VIA project that impact the school or community
- Level 5:
 - **Self-initiated VIA project** that impacts the community beyond the school

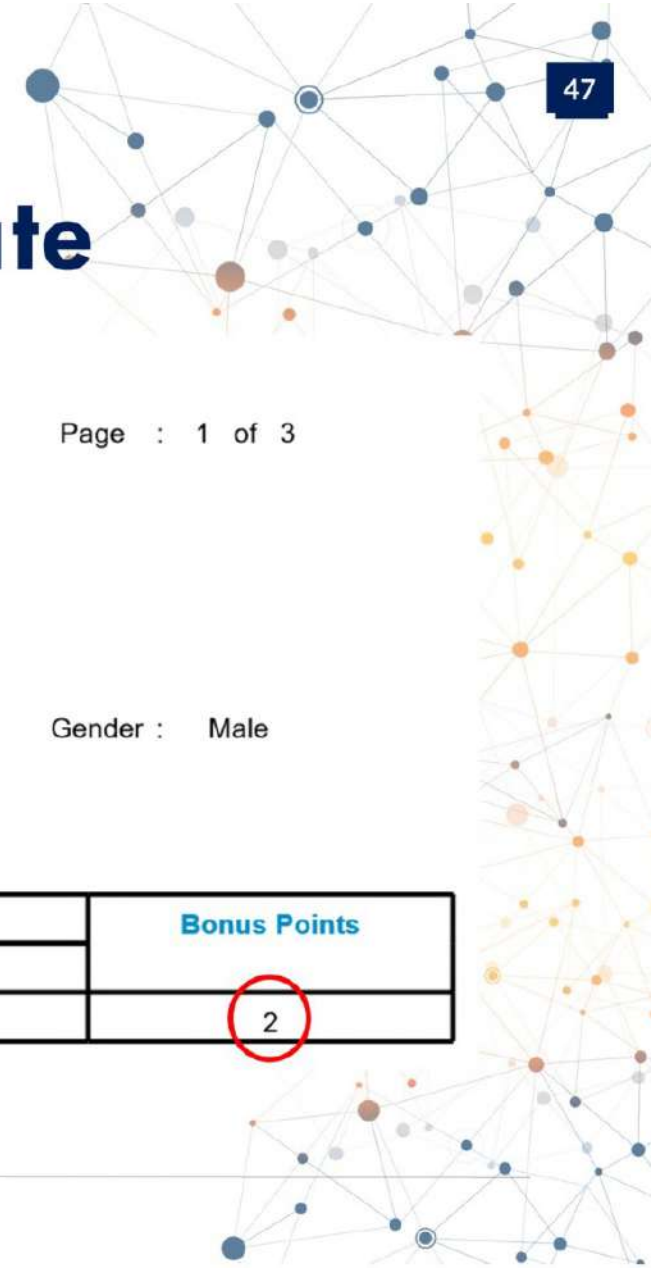


Recognition of Students' Level of Attainment

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Fair	Student's attainment in co-curricular will not translate into any bonus points.



Example of CCA Certificate



Co-Curriculum Certificate for Secondary
For Year 2020

Page : 1 of 3

Name :
Class :
ID :

Stream :
D.O.B :

Gender : Male

Co-Curricular Attainment: EXCELLENT

Level of Attainment				Bonus Points
Leadership	Achievement	Participation	Service	
3	4	4	4	2



Example of CCA Certificate

Co-Curriculum Certificate for Secondary
For Year 2020

Page : 1 of 2

Name :
Class :
ID :

Stream :
D.O.B :

Gender : Female

Co-Curricular Attainment: FAIR

Level of Attainment				Bonus Points
Leadership	Achievement	Participation	Service	
1	3	-	4	-



2020 Co-Curricular Attainment

Year	2020
Graduating students achieving at least 1 bonus point ('Good') in CCA	83.5%
Graduating students achieving 2 bonus points ('Excellent') in CCA	60.6%



Supporting your child in CCA

- What parents can do:
 - Encourage your child to attend all CCA sessions
 - Have conversations on how the day's CCA session went; show interest and support in the activities/events your child is involved in
 - Encourage your child to take charge of his/her own learning and development (eg, NYAA for self-leadership)
 - Ask about your child's VIA involvement; encourage him/her to serve actively to contribute meaningfully to the community and be a socially responsible person
- CCA attainment is important, but more so are the character development through CCA, values inculcation, skills learnt and a sense of belonging to the school.



***It takes a village to raise a child.
Together, we empower our StaRs to SHINE
for the growth of self and the good of others.***

*Thank
you*



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Thank you

