



FUTURE THINK
FOR THE JOBS OF THE FUTURE

bfuwi
THE UNIVERSITY OF THE WEST INDIES

Caribbean STEM Coaching Club

A joint venture between CADSTI-UK, Future Think and BFUWI

cstemcc@gmail.com

cadsti.org.uk/caribbean-stem-coaching-club/

Guidelines for Students, Parents and Coaches



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THE BARRIERS TO KNOWLEDGE FOR THE UNIVERSITY OF THE WEST INDIES

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About us

STEM is critical to opening doors to well paid jobs in our fast changing, technologically advanced, 21st century world. This is why three Caribbean-led organizations – CADSTI-UK, Future Think and BFUWI - joined forces to provide FREE STEM coaching for 11 - 16 year olds of Caribbean heritage in the UK.

We want our students to excel in exams, but our ambitions are far greater. We:

1. Encourage a deep understanding of STEM concepts to provide a strong foundation for advanced studies and careers in STEM;
2. Seek to ignite a passion for STEM;
3. Encourage independent, life long learning;
4. Open eyes to new and emerging career opportunities in STEM;
5. Encourage key skills for the future: self-belief, self-management, problem solving, team work, and communication.

We work with and through parents for safeguarding reasons, and also because the involvement of parents is critical to the success of the programme.

We are not a school or a tutoring service, and we do not follow a set curriculum. We strategically target and strengthen areas of weakness, including STEM concepts, study habits, revision strategies and exam techniques.

We draw on the expertise of STEM specialist teachers and a qualified and experienced parenting educator to inform, shape and deliver our coaching programmes. Our coaches are all high achieving STEM professionals and university students who share their own professional and academic experiences with the students, and help them to master difficult STEM concepts. At the same time, we believe that we are all on a learning journey together. Everyone has valuable insights and expertise, and we encourage all Club members – coaches, parents and students - to connect, share and solve problems together in our meet ups, on our Caribbean STEM Coaching Club Facebook page, and otherwise.



Volunteer's agreement

This section of the guidelines is addressed to our many volunteers. We greatly value your contribution and we hope that you enjoy volunteering with us and feel a full part of our team.

This agreement tells you what you can expect from us and what we can expect from you. We aim to be flexible, so please let us know if you would like to make any changes, and we will do our best to accommodate them.

The Caribbean STEM Coaching Club will do our best to:

- Introduce you to how the organization works and your role in it;
- Respect your skills, dignity and individual wishes;
- Keep you informed of possible changes that will affect you.

We will also provide you with the following:

- Training;
- Guidelines;
- The Caribbean STEM Coaching Club Facebook page (for continuous learning and information sharing).

We ask that you:

- Work to high standards and in line with these guidelines
- Have a genuine interest in and commitment to your student and the programme;
- Be dependable and model high standards of professionalism. If you can't stick with an agreed time for coaching sessions, please let the parent and student know well in advance and reschedule.

For safeguarding reasons, all electronic and other communication must be with or copied to parents. All face to face or online coaching sessions must also take place in the presence of parents.

All volunteers must confirm that they have read and understood these guidelines and that they agree to meet the above expectations to the best of their ability. Also, in order to avoid the appearance of conflicts of interest, they must agree that they will not solicit or provide academic tutoring services on a paid basis to any student in the Caribbean STEM Coaching Club, past or present, without the knowledge and consent of the organisers.

This Volunteers' agreement is not intended to be a legally binding document and should simply be used as guidelines for both parties.



STEM coaches should:

- Use **The Student Profile** as a guide to get to know your student;
- Inspire, motivate and build confidence;
- Complete this Stanford Online Lagunita course “**How To Learn Maths for Students**” – 6 sessions of 20 minutes each - <http://stanford.io/2yv1zeP>
- Provide 12 hours of face to face or online coaching;
- Encourage a deep understanding of STEM concepts;
- Encourage good study habits/revision strategies/time management/exam techniques;
- Open eyes to exciting career opportunities in STEM

Parents should:

- Complete the Stanford Online Lagunita course “**How To Learn Maths for Students**” with your child – 6 weekly sessions of 20 minutes each - <http://stanford.io/2yv1zeP>
- Ensure that your child watches the videos and completes the practice questions suggested by his/her personal plan;
- Encourage your child to explain what he/she is learning to you;
- Be present at all face-to-face or online coaching sessions.
- Attend parenting discussion groups and the Careers Day at Harrow School

Students should:

- Complete the Stanford Online Lagunita course “**How To Learn Maths for Students**” with your parent – 6 weekly sessions of 20 minutes each - <http://stanford.io/2yv1zeP>
- Plan and agree face-to-face or online coaching sessions each week. **(NB for safeguarding reasons, parents should sit in on all sessions);**
- **Feel responsible for and direct your own learning.** Try to understand each week’s topic beforehand through the Corbett Maths videos and practice questions suggested in your personal plan, or otherwise. Email questions or other matters for discussion to your STEM Coach 2-3 days beforehand; **All electronic correspondence must however be with or copied to parents.**
- Know that coaches will not lecture or simply “tell” their students what to do. They will ask questions. Exactly what do you understand? Exactly what don’t you understand? After explaining (using real world examples where possible), STEM Coaches will encourage students to explain concepts back to them – to “teach the teacher” so to speak. The student should be doing most of the talking;
- If you struggle, don’t feel too frustrated. Remember that it is good to face challenges and to struggle – that is how our brain grows (neuroplasticity).
- Know that coaches can and will also help with school homework, and with other subjects, time permitting;

Be sure to ask your coach:

1. What helped you to excel in your GCSE exams?
2. How best can I master difficult concepts?
3. How much practice do I need once I think I have understood a concept?
4. I think I understand the concepts but I still make a lot of mistakes. Where could I be going wrong?
5. How will I know for sure that I have mastered a topic? (NB some teachers suggest that you try getting 10 right in a row)
6. How can I improve my study habits? Do I need a “study buddy”? Should I ask someone to hold me accountable?
7. How can I improve my exam technique?
8. When should I start doing past papers? How many past papers should I do in the run up to exams?
9. How can my parents, siblings or other family members help?

Learning to learn

Different learning strategies work for different students. There is no one size fits all. Look at the concerns flagged in **The Student Profile** and discuss. What changes need to be made? Reflect on the “Learning Triangle” below. What steps can be taken to help the student learn more effectively?



Source: National Training Laboratories, Bethel, Maine



- Where to study?
- When to study?
- How to study?
- Study groups? Study buddy?
- Can parents/relatives help?
- Sacrifices to be made?
- Screen time?
- A revision timetable?

Mastering Maths concepts

Some top tips from specialist Maths teachers/other STEM high achievers:

List the topics in a) algebra, b) shape and space, c) number and d) data handling you still need to understand **IN THAT ORDER**.

- 1) Work on each topic in the stated order using the following approach. Drill down on say 1 – 2 of these topics each week.
 - Learn from world class Maths teachers for free - there are many of their videos online but for these purposes, we like Corbett Maths <http://bit.ly/1PRBaIX> (see also **The Caribbean STEM Coaching Club Facebook page**). Watch the videos and practice some of the questions;
 - Learn the relevant “**brain frame**” provided by heart;
 - Then, practice GCSE questions on the topic using Bland <http://bit.ly/24b8BB9> . Questions are free online but you need to buy the answers.
 - Explain what you understand to your study buddy, parents and/or STEM coach
 - After discussing with your STEM coach, practice some more questions on the topic to consolidate your learning;
 - Still having problems? Post your question on the **Caribbean STEM Coaching Club Facebook page**. Someone will try to help you;
 - At least 6 weeks before exams, do at least one timed past paper each week. Try to understand where you are going wrong and identify the concepts you still don't totally understand. Study each concept again and use **Bland** (see above) to practice questions on a topic-by-topic basis until you fully understand.

Top tip:

Teaching the concept to someone else who does not understand it deepens your own understanding. This is where parents, siblings study buddies come in handy.

AND NEVER STOP ASKING FOR HELP



Mastering science concepts

A Science Study Technique suggested by Daryl Best, one of the founders of the Club:

1. Get hold of a copy of your syllabus and examine the list of concepts;
2. Split the topics into 6 groups and aim to cover at least one group per week over the next six weeks;
3. Use your textbook, school notes and supplementary online material to understand the concept (e.g. YouTube videos – check out the **Caribbean STEM Coaching Club Facebook page**);
4. Try questions on the concept to test yourselves;
5. Ask your STEM Coach for help with any concepts you are still having a hard time with;
6. Practice past papers;
7. Review the questions to make sure you understand why you got them right, and why you got them wrong.

Top tip:

Practice answering questions with a friend. You will be able to explain concepts to each other that will make them easier to remember.

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Recommended resources/videos

1 Online revision timetable:

<https://getrevising.co.uk/planner>

2 Online Maths diagnostic tool:

<http://www.bksb.co.uk/products/gcse-achieve/>

3 Corbett Maths

<https://corbettmaths.com>

4 For lots of questions to help drill down topic by topic – use Blandin Maths

<http://bland.in/edexcel.html>

<http://bland.in> (includes AQA style questions)



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5 Exams solutions

<http://www.examsolutions.net/gcse-maths/>

AND DON'T FORGET...check out other learning resources as well as top tips for revision and good exam techniques, on **The Caribbean STEM Coaching Club Facebook page!**