



Website: contoureducation.com.au | Phone: 1800 888 300
Email: hello@contoureducation.com.au

VCE Biology $\frac{3}{4}$
Welcome to Contour [0.1]
Workbook Solutions

Outline:



<u>Introduction to Contour!</u>	Pg 2-9	
<u>Contour Ecosystem</u>	Pg 10-13	<u>Your Class</u> Pg 15
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➤ Countour Learning Portal		<u>Goals and Oath</u> Pg 16-17
➤ Student Support		
<u>VCE Biology $\frac{3}{4}$ at Contour</u>	Pg 14	<u>Post-Class Review</u> Pg 18

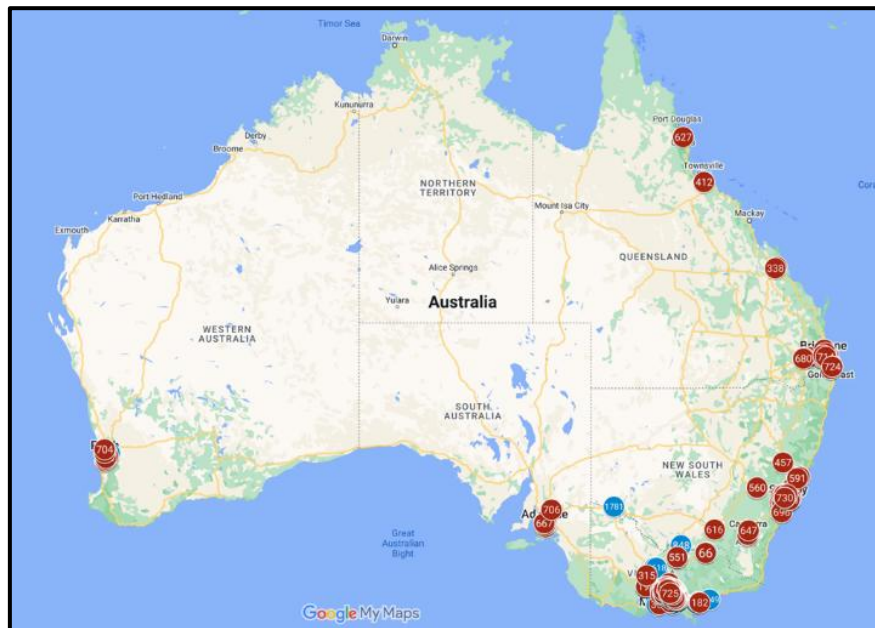
Section A: Introduction to Contour!

Welcome to Contour!

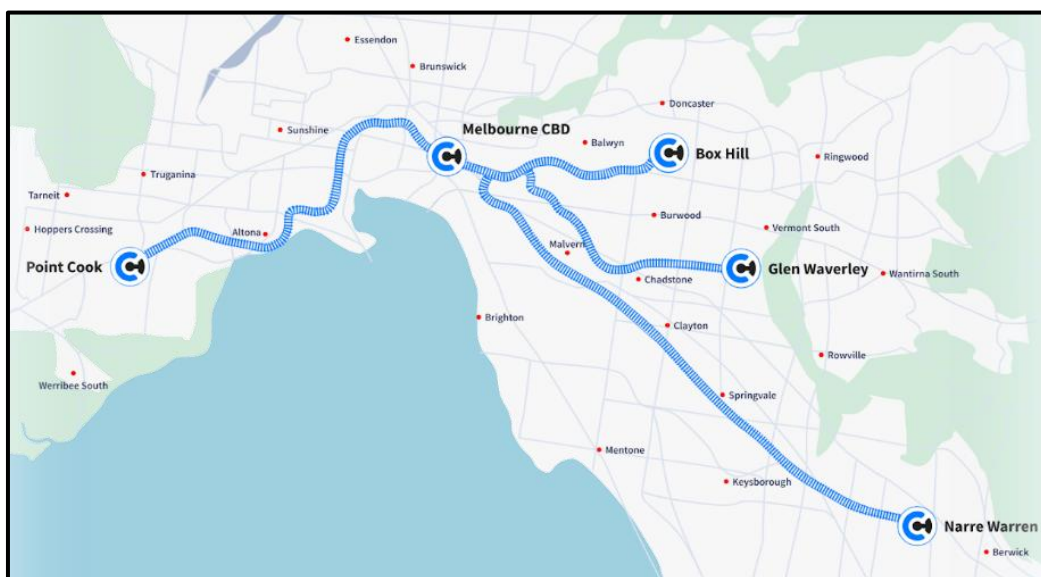


Our Background and Past Results

- ▶ We're one of the largest and (still) fastest-growing tuition centres in Victoria and Australia.



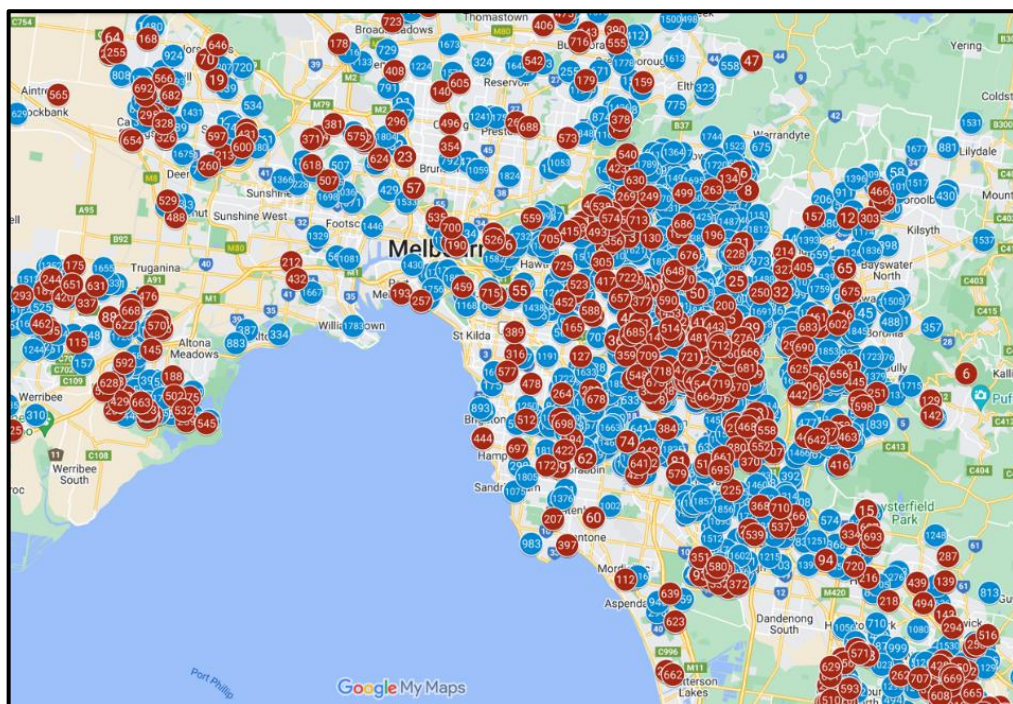
*We've tutored 5,000+ happy students so far, from all over Victoria.
(and even Australia and beyond with our MedPrep programs)!*



*We Have Three New Contour Campuses Coming in 2025.
(Our Flagship Melbourne CBD Campus, Narre Warren, and Point Cook!)*



*We're **stoked** to have you join us, and we're looking forward to help you succeed and achieve your goals!*



Every single one of those circles is a Contour student who we've directly impacted!



Just some of our 150+ VCE classes from 2024 😊

➤ How does Contour tutoring work?

- 🔗 We specialise in **small group classes**, run by **experienced VCE tutors**.
- 🔗 We also offer **heaps of practice material**, our **learning portal**, and **1-on-1 consultations** for help and support.
- 🔗 Finally, we emphasise **practice and preparation** for **SACs and exams**.



ANGAD SINGH
CO-FOUNDER



AMITAV MADAN
CO-FOUNDER



Recent ATARs at Contour

From Students Across All Our Programs

Jerry (MGS Dux '23)	99.95	Krishav (MHS Dux '23)	99.95	Pranav (HT Dux '23)	99.95	Ramodh (MHS Dux '21)	99.95	Aidin (MHS '23)	99.90	Jineth (MHS '23)	99.90
Rosemary (MGGS Dux '...)	99.90	Chelsea (MGGS Dux '...)	99.90	Anonymous (EDSC Dux '2...)	99.90	Violet (MLC Dux '22)	99.90	Anonymous (School Dux '...)	99.90	Jeffrey (MHS '21)	99.90
Makram (Ilm Dux '21)	99.90	Belle (EDSC Dux '23)	99.85	Cindy (Ruyton '23)	99.85	Deshitha (Haileybury '2...)	99.85	Pranav (MHS '23)	99.85	Anonymous (JMSS '22)	99.85
Abinesh (Nossal '23)	99.80	Chelsea (Hornsby GirL...)	99.80	Sophie W (HT '23)	99.80	Dhruv (Girton Dux '2...)	99.80	Manjot (Wellington D...)	99.80	Hardu (Salesian Dux...)	99.75
Isaac (MHS '23)	99.75	Qiana (JMSS Dux '23)	99.75	Nicholas (HT '22)	99.75	Anonymous (JMSS '22)	99.75	Anupama (Nossal '23)	99.70	Gaia (Mac.Rob '23)	99.70
Will (MHS '23)	99.70	Viran (Girton '23)	99.65	Leroy (MHS '22)	99.65	Tommy (JMSS '22)	99.65	Anonymous (JMSS '22)	99.65	Madelyn (Genazzano ...)	99.60
Melani (Mac.Rob '23)	99.60	Rasith (MHS '23)	99.60	Rohan (HT '23)	99.60	Adya (Mac.Rob '23)	99.55	Moksh (Haileybury '...)	99.50	Aadi (MHS '23)	99.45
Joseph (Caulfield GS...)	99.45	Sydney (Mac.Rob '23)	99.45	Avriel (Ivanhoe '23)	99.40	Danketh (MHS '23)	99.40	Ethan (Haileybury '...)	99.40	Wooshin (MHS '23)	99.40
Will (JMSS '22)	99.40	Sophie J (HT '23)	99.35	Gursimar (MHS '23)	99.30	Justin (Camberwell ...)	99.30	Furqan (Clarendon '2...)	99.30	Tasha (JMSS '21)	99.30
Haoqing (Mac.Rob '23)	99.25	Jacob (King David '2...)	99.25	Kunal (MHS '23)	99.25	Sithuli (Mac.Rob '23)	99.25	Aksharan (Girton '23)	99.15	Ajaay (Emmanuel Du...)	99.15
Angelina (PLC '22)	99.15	Russhil (GWSC '22)	99.15	Evangeline (Mac.Rob '21)	99.15	Angela (Mac.Rob '23)	99.05	Alex (MHS '21)	99.05	Ami (GWSC '23)	99.00
Dhasarathi (MHS '23)	99.00	Nash (MHS '23)	99.00	Kartikay (JMSS '21)	99.00						

1000+
95+ ATARs

250+
98+ ATARs

100%
Student Satisfaction

- Our recent VCE results include dozens of 99.50 + ATAR students and 45 + Study scores, including Raw 50s and Premier's Awards in subjects like Methods, Specialist Maths, Chemistry, Physics, etc.

➤ In our **2024 UCAT program**, we had:

- 🇬🇧 A Median UCAT Score of 3060 (90th Percentile),
- 🇬🇧 5 in 10 Contour Students Score Above the 90th Percentile (3060 +), and
- 🇬🇧 1 in 10 Contour Students Score Above the 99th Percentile (3350 +).
- 🇬🇧 Also, a Contour UCAT student scored the world record UCAT score of 3590 in 2023 – The highest in UCAT history [900, 890, 900, 900].

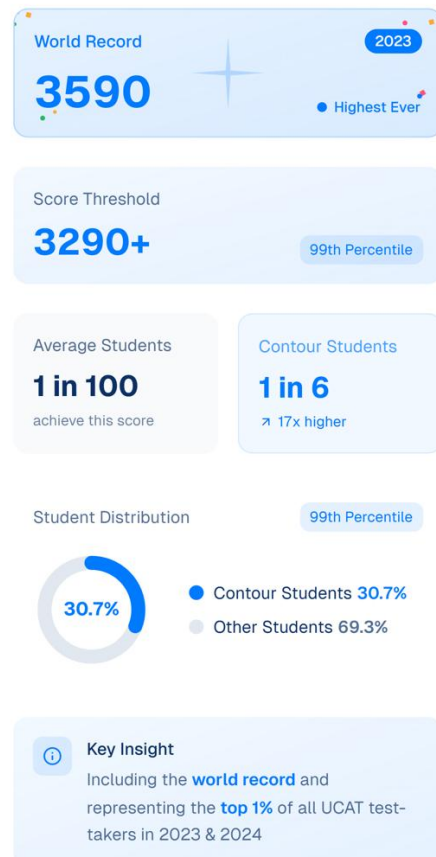


99th Percentile UCAT Results

2023 & 2024 UCAT ANZ Top Scores

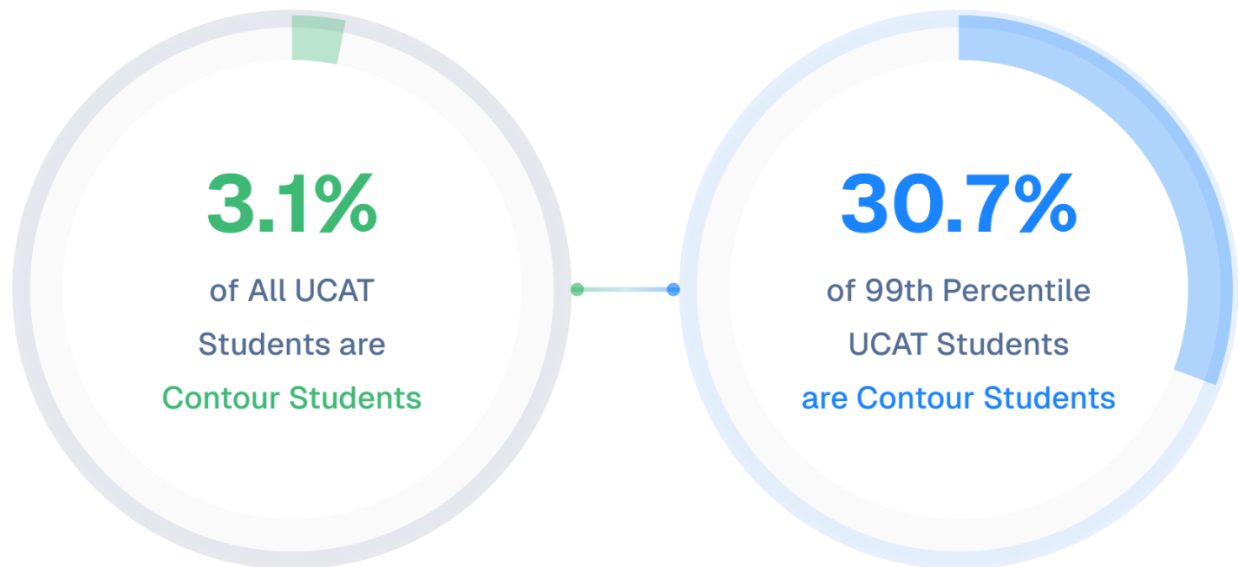


99th Percentile Analysis



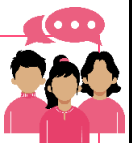
➤ A Cool Stat:

- 🇬🇧 14,000 Students sit the UCAT ANZ Every Year.
- 🇬🇧 That means 140 (1%) score in the 99th Percentile (3350 +).
- 🇬🇧 43 of them (almost one-third) were Contour MedPrep Students!



We've had a fantastic 2024, and now we can't wait to continue supporting you and helping you achieve your potential in 2025 and beyond!

Discussion: Why is it important to know we have high achievers?



We are not bragging, and it's never our personality to. However, it is important that the very high scores were achieved from the same seat and table you are sitting at so that you have confidence in both us and your potential to achieve great things this year!

Tutor's Comment: Emphasis that 1. we are not bragging, 2. High scores can be their(new student's) score!

What do we stand for?



Discussion: What do you think the word "Contour" stands for?



To reshape education.

Tutor's Comment: Get some students to try and speak up - use it as an ice breaker

Contouring Education



➤ Bad education, which some of us have been victims of, is:

Boring education.

Education that does not teach intuitively.

Education that does not work for everybody.

➤ Contour's mission is and will always be to:

Reshape Education, One Student at a Time.

Space for Personal Notes

What does that actually look like, practically?

Core Values



Core Values



Student Focused

Making sure the student comes first.



Success Driven

Focusing on high performance & achieving success.



Empowering Teaching

Helping students achieve their potential through positive reinforcement and encouragement.



Intuitive Teaching

Building strong foundations through understanding & intuitive learning, not rote memorisation.



Quality Before Quantity

Having one tutor for every dozen students.



Welcoming Community

Having collaboration & camaraderie among peers.



Friendly Tutors & Staff

Being genuine & outgoing personalities.



Continuous Support

Providing complimentary support, accessible anytime & anywhere.



A Study Ecosystem

Providing an arsenal of curated resources to learn & master content.



Premium Service

Upholding a standard of excellent teaching, excellent resources & an excellent experience



Anecdotal Mentorship

Inspiring students through passion, real-life stories and insightful teachings.

But fancy words don't mean anything by themselves!

We are excited to demonstrate our values through our actions in 2025!

Space for Personal Notes

Section B: Contour Ecosystem

Sub-Section: Learning Resources

Contour Resources Structure

Core Resources	Mastery Resources
<p>Head Tutor's Comment: "show an example of a workshop booklet, and also explain/mention that you'll get heaps of practice material compared to your own experience too. We give kids 100 + marks of Contour questions per week, per topic, plus the extra SACS/Exams."</p>	
<ul style="list-style-type: none"> ➤ Tests: Completed at the end of every class, <u>Consolidate</u> content in class! ➤ Homework (New Structure for 2025): Divided into compulsory and supplementary sections. <u>Consolidate</u> content at home! ➤ Contour Check (New for 2025): Before SACs, clearly show the learning objectives needed and related questions. <u>Prepare</u> for <u>SACs</u>! 	<ul style="list-style-type: none"> ➤ SAC Packs (New Structure for 2025): Provided before SAC for practice. <u>Prepare</u> for <u>SACs</u>! ➤ Mock Exams: Run under invigilated conditions to prepare for the final exam! <u>Prepare</u> for the <u>Final Exam</u>! ➤ Exam Packs (New Structure for 2025): Provided before the exams for practice. <u>Prepare</u> for the <u>Final Exam</u>!

Subject Specific Resources

- **ContourUDFs:** Custom calculator functions for Mathematica and TI-Nspire to help you shortcut multiple calculator steps for Tech-Active questions, provided for free for both school SACs and exams for VCE Maths subjects.
- **Bound Reference:** A comprehensive guide of all the content in the study design, sorted by topic. Plus, step-by-step walkthroughs, example problems, and guides for using each calculator (TI-Nspire, Mathematica & ClassPad) for VCE Maths subjects.
- **Cheat Sheet:** For Physics, a comprehensive double-sided A3 Physics cheat sheet to take into your SACs and exams.

Space for Personal Notes

Discussion: What is the difference between Core and Mastery resources?

Core resources focus on deep intuition and understanding the topic well, so you can do quality practice.

Whereas, Mastery resources focus on exam skills and improving assessment marks.



Misconception

"I can do well without the workshops."

Truth: Workshops are crucial in defining your study score! Be sure to never skip them. Attend online or complete in your own time if you can't make a Workshop session.



NOTE: Workshop will begin from Week 2 onwards (next weekend) covering content from Week 1 (this week).

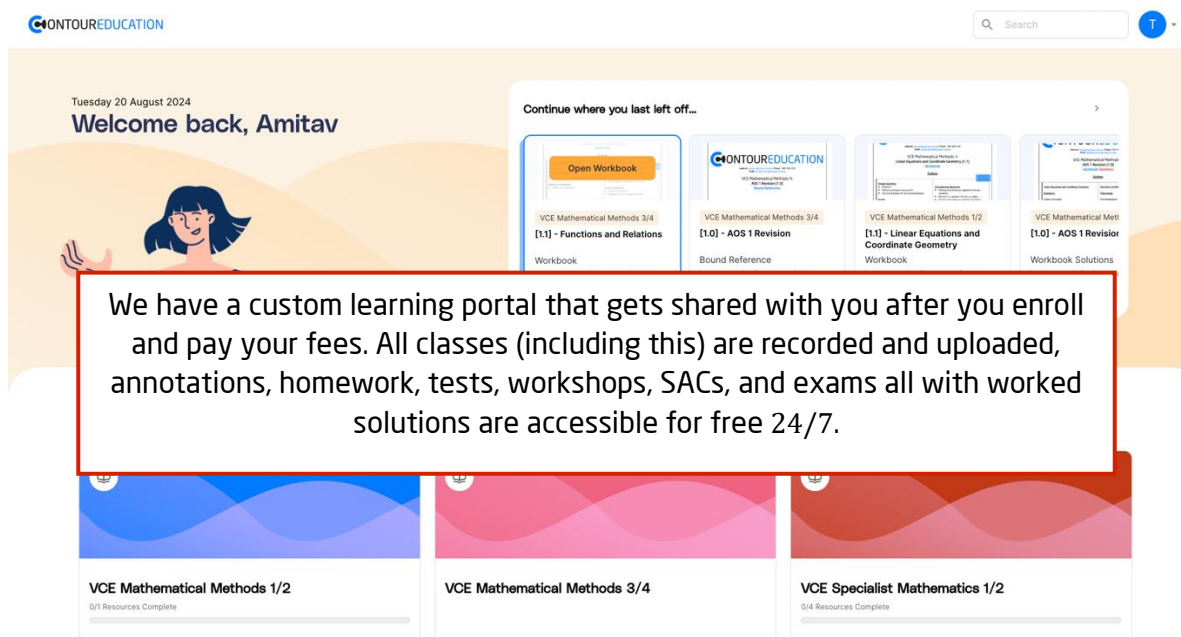
Head Tutor's Comment: "explain what workshop is all about."



Sub-Section: Contour Learning Portal



Discussion: How do I access the resources outside of class?

We have a custom learning portal that gets shared with you after you enroll and pay your fees. All classes (including this) are recorded and uploaded, annotations, homework, tests, workshops, SACs, and exams all with worked solutions are accessible for free 24/7.

Sub-Section: Student Support

Discussion: How do I contact my tutor outside of class?

You can add your tutors on social media e.g. such as Instagram or Discord or reach out to them via email.

Discussion: How do I get extra help outside of class?

All subjects have a personalised phone number that you can text your questions through to and get responses within 24-hours. You will also be shared an invite to the Contour Discord where there are question boards. And finally, you will also get access to booking-free 1-on-1 consultations where you can get live individual help (like additional private tutoring).

All of these will be provided to you after enrolling and paying your fees.

Contour Education 1-on-1 Physics Consult

🕒 30 min

What is a 1-on-1 Physics Consult?

- A Live 1-on-1 Consultation run by Contour tutors, which is available to you after-schools on weekdays, and all day on weekends.
- Join for a 30-minute 1-on-1 help session, where you can ask any questions, get further support, clarify your doubts, or even just ask for advice or extend yourself.
- Complimentary service for all enrolled Contour students! We genuinely encourage all of you to use this, and sincerely hope you make the most of the opportunity.

What to Expect

- One of the Contour Physics tutors will be there with you, 1-on-1, to answer

[Cookie settings](#)

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Select a Date & Time

<

November 2024

>

Wednesday, November 27

MON	TUE	WED	THU	FRI	SAT	SUN
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

• times you're available

• 2:00pm

2:30pm

Next

• 3:00pm

• 3:30pm

Time zone

🌐 Sydney, Melbourne Time (9:42am) ▼

[Troubleshoot](#)

ohhh makes sense

with probability questions do u recommend writing out the info quickly? i find that if i don't i end up making silly mistakes like this

JO

21:35

yep I would recommend that if it's tripping you up

just like a quick

A B % % type thign



Pranit P 10/28/24, 9:44 PM

MCQ 6

- B is a better option because if it's harder to access unemployment benefits people would be even more inclined to find work to be able to have incomes

- Yes that's good

- Hidden unemployment is still spare capacity , it's just not picked up by the statistics

It's people that *do* still want to work but they've just given up finding it

A better distinction is hidden unemployed people are not counted to be within the labour force but underemployed people are



Pranit P 10/28/24, 9:54 PM

Individuals that are not unemployed as they have given up looking for work even though they wish to work, can decreasing the rates quoted for unemployment.

In essence they are underutilised as well but not counted in underutilisation data

Space for Personal Notes

Section C: VCE Biology $\frac{3}{4}$ at Contour



Biology $\frac{3}{4}$ at Contour

- Biology is a very content-heavy and intense subject at times, so at Contour we have broken it down with a clear course outline to help you succeed and get ahead!

Unit 3: How do cells maintain life?

- AOS 1: What is the role of nucleic acids and proteins in maintaining life?
- AOS 2: How are biochemical pathways regulated?

Unit 4: How does life change and respond to challenges?

- AOS 1: How do organisms respond to pathogens?
- AOS 2: How are species related over time?
- AOS 3: How is scientific inquiry used to investigate cellular processes and/or biological change?

Assessment

- 1 SAC per AOS, weighing a total of 50%
- End of Year External Exam, weighing 50%

Head Tutor's Comment: "Explain the 110-120% rule, schools don't know what is enough, enroll teaches you too much sometimes, at contour we know exactly what you need to know and how much you need to know, guided by exactly what VCAA says."

TIP: It is super important to be CONSISTENT in your preparations for Biology! Try and set an aim to do some revision, whether its 10-20 minutes EVERY DAY!



Head Tutor's Comment: "talk about the importance of this and EMPHASISE HOW IMPORTANT THIS IS it'll help stop you getting asked easy questions later."

Misconception

"Biology is a subject that is all about memorisation, nothing else!"

TRUTH: Although there is a lot of content that you just have to memorise, almost every topic is connected!



Section D: Your Class



Meet Your Tutor(s)

Tutor's Comment: Tell them your name and explain how you are excited to continue the great time you had with your classes this year with them (new students).

Share something that you're proud of academically or tutoring-wise. E.g., if you achieved a really high study score or ATAR then share that, or if you helped tutor 100 + students in 2024, share that, this is your chance to flex and build your credibility. DO NOT shy away from this, your students will respect you more and listen to you.

Preferred Medium of Contact E.g.,
Discord/Instagram/Facebook/Messenger/Phone/Email (Circle).

ANS: You put your contact details for what you prefer to be contacted on, students will ask questions on the Contour phone number which will be introduced when they enroll officially in week 3.

➤ **Tutor Name**

➤ **Preferred Medium of Contact:** Discord / Instagram / Facebook / Messenger / Phone / Email

Now your classmates!



Discussion: Say hi to the classmate next to you! What are their names, and what schools do they attend? Exchange a fun fact about them/their favourite activities/something interesting they did last week.



Section E: Goals and Oath



Discussion: How do you feel about Biology and VCE?

➤ Are you interested in pursuing a career in a biology-related field?

➤ Are you anxious? **Explain** that we are already going to be going through the main important tips and approaches to Bio in the workshop, as well as the VCE structure!

➤ Is this your first year? For kids NOT interested in a biology related field, explain and relate with them too, as well as the "passionate" kids.

Tell and reassure kids that are nervous that you have experience with this sort of thing- supporting students, as well as going through VCE yourself.



Discussion: Why is it important to have a high goal?

Why would you want to lose already? You only have to do this once, and you only have one shot at it, so make the most of the opportunity.

Don't be scared of not meeting your goals. Focus on minimising regret, not failure. It's okay to fail because you learn and move on, but regret lasts forever.

Aim for stars and land on the moon. It's better to aim extremely high and fall short, than to aim low and hit.

Question 1

Write down your aimed study score below.

**REMINDER: I Will...**

- Work hard throughout the year.
- Use the resources available to the best of my abilities.
- Be honest and reflect on my progress.
- Approach my tutor whenever I have any questions, and
- Have a positive outlook on my studies.

Student Signature	
-------------------	--

Space for Personal Notes

Section F: Post-Class Review

Reminders for Next Week



- ☒ Next week is also part of the **free headstart**. The time will be the **same** (unless confirmed by us).
- ☒ Look out for emails regarding the Workshop.

*Give us your feedback; your learning is important to us!
Rip this page and leave it on the table 😊*



Student Name

How did you find the **PACE** of today's class?

1. Way too slow for me!
2. Slightly slower than ideal for me.
3. Just right!
4. Slightly faster than ideal for me.
5. Way too fast! Slow down, please!

How did you find the **DIFFICULTY** of today's class?

1. Way too difficult!
2. Slightly more challenging than ideal for me.
3. Just right!
4. I can handle a more challenging environment.
5. Way too easy for me!

How did you find the **EXPLANATIONS** of concepts and questions during the class?

1. Impossible to understand.
2. Confusing to understand.
3. Adequate to understand.
4. Straightforward to understand.
5. Intuitive to understand.

What should we **START** doing, **STOP** doing, and **CONTINUE** doing in the tutoring sessions?
Constructive criticism is appreciated - it'll help us improve the classes from next week!

Any additional comments you would like us to know?



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VCE Biology $\frac{3}{4}$

Free 1-on-1 Support



Be Sure to Make The Most of These (Free) Services!

- Experienced Contour tutors (45+ raw scores, 99+ ATARs).
- For fully enrolled Contour students with up-to-date fees.
- After school weekdays and all-day weekends.

<u>1-on-1 Video Consults</u>	<u>Text-Based Support</u>
<ul style="list-style-type: none">➤ Book via bit.ly/contour-biology-consult-2025 (or QR code below).➤ One active booking at a time (must attend before booking the next).	<ul style="list-style-type: none">➤ Message +61 440 137 387 with questions.➤ Save the contact as "Contour Biology".

Booking Link for Consults

bit.ly/contour-biology-consult-2025



Number for Text-Based Support

[+61 440 137 387](tel:+61440137387)