

AMERICAN DAT

DATBooster | Booster Prep Inc.



* AGENDA FOR TODAY

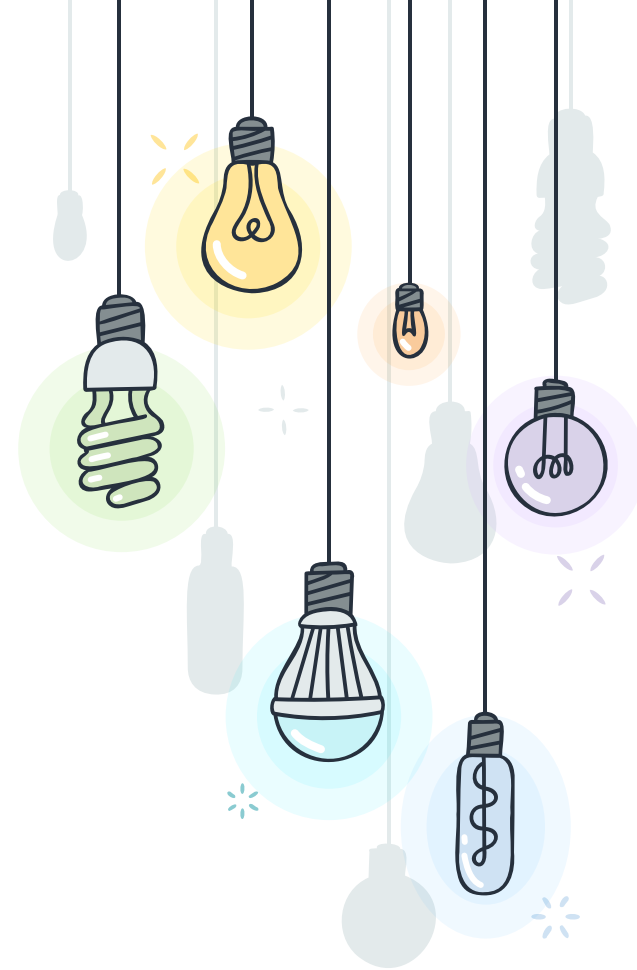
1 Introduction

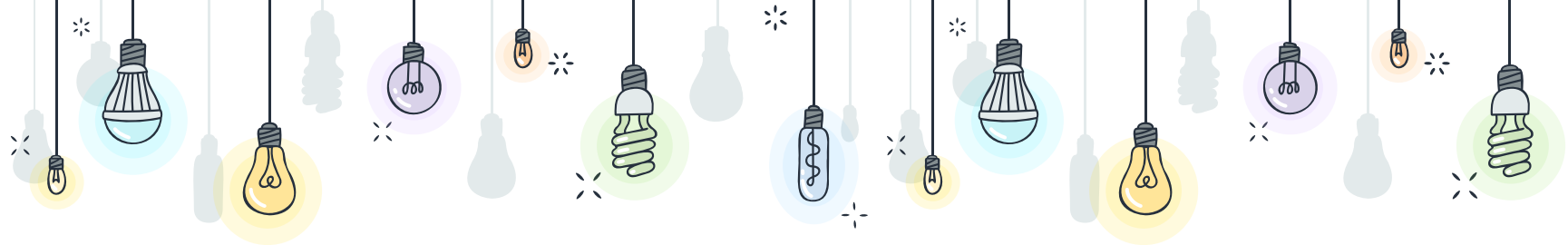
2 About the DAT

3 Tips & Tricks

4 DATBooster & Updates

5 Questions





THE BOOSTER PREP TEAM



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ABOUT THE AMERICAN DAT

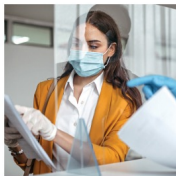
Learn about the American DAT and how to conquer it.



WHAT IS THE DAT?

- The Dental Admission Test (DAT) is a 5-hour computerized, standardized test administered by the American Dental Association, to *a*ll pre-dental students who wish to be considered for dental school admission.
- The DAT is comprised of 6 subjects: Perceptual Ability (PAT), Quantitative Reasoning (QR), Reading Comprehension (RC), Biology, General Chemistry (GC), and Organic Chemistry (OC).

ADA American Dental Association®
America's leading advocate for oral health



Dental Admission Test (DAT) 2021 Candidate Guide



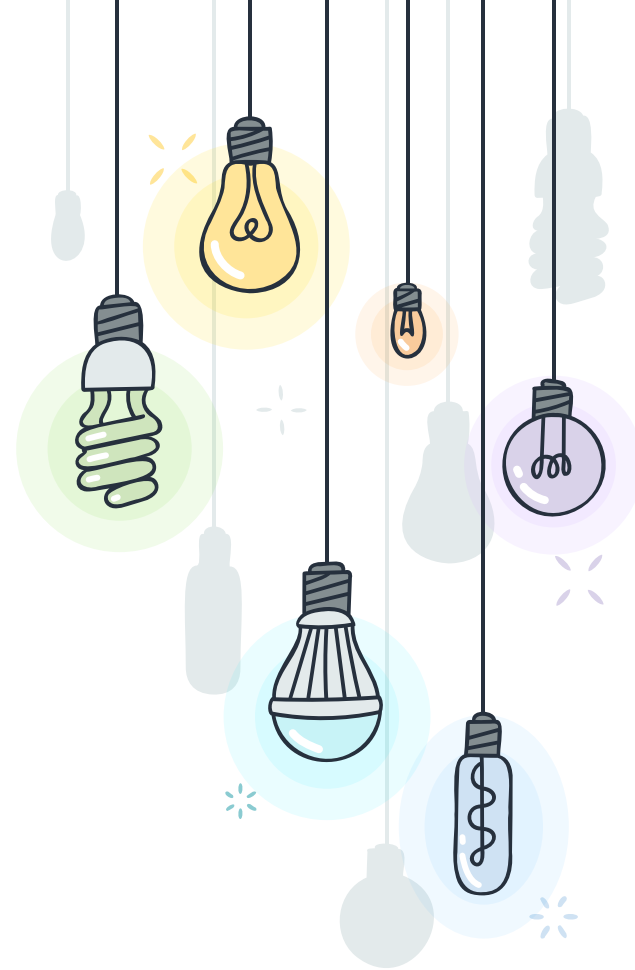
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312.462.2500 | ADA.org



* WHEN SHOULD YOU TAKE THE DAT?

- + Most applicants complete 2+ years of college before taking the test
- + It is helpful to take the exam after taking biology, general chemistry and organic chemistry
- + Never take the DAT to “see what it’s like”



DAT BREAKDOWN

90
min

Survey of Natural Sciences

Biology – 40 questions
General Chemistry – 30 questions
Organic Chemistry – 30 questions

60
min

Perceptual Ability

Keyholes – 15 questions
Top Front End – 15 questions
Angle Ranking – 15 questions
Hole Punching – 15 questions
Cube Counting – 15 questions
Pattern Folding – 15 questions

60
min

Reading Comprehension

3 passages – 50 questions total

45
min

Quantitative Reasoning

40 questions

30 MINUTE BREAK

The screenshot shows a digital test interface. At the top, it displays 'Question 1 of 40', 'Biology Test #1', and 'Time limit: 00:29:54'. The main content area contains a question: 'Adipose tissue would be classified as which of the following tissue types?'. Below the question is a list of five multiple-choice options, each with a radio button: A. Epithelial Tissue, B. Connective Tissue, C. Muscle Tissue, D. Scar Tissue, and E. Nervous Tissue. At the bottom of the interface, there are three buttons: 'NEXT', 'MARK', and 'REVIEW', along with a small icon of a document with a checkmark.



* HOW IS THE EXAM SCORED?

- + Standard Score + Percentile
- + Score range (1-30)
- + **Good score:** 19 – 20 and up

- + Scores are given on a scale that is calibrated in advance
 - × 21 AA (81.4%)
 - × 22 AA (88.7%)
 - × 23 AA (93.8%),
 - × Top 1% score 25-26

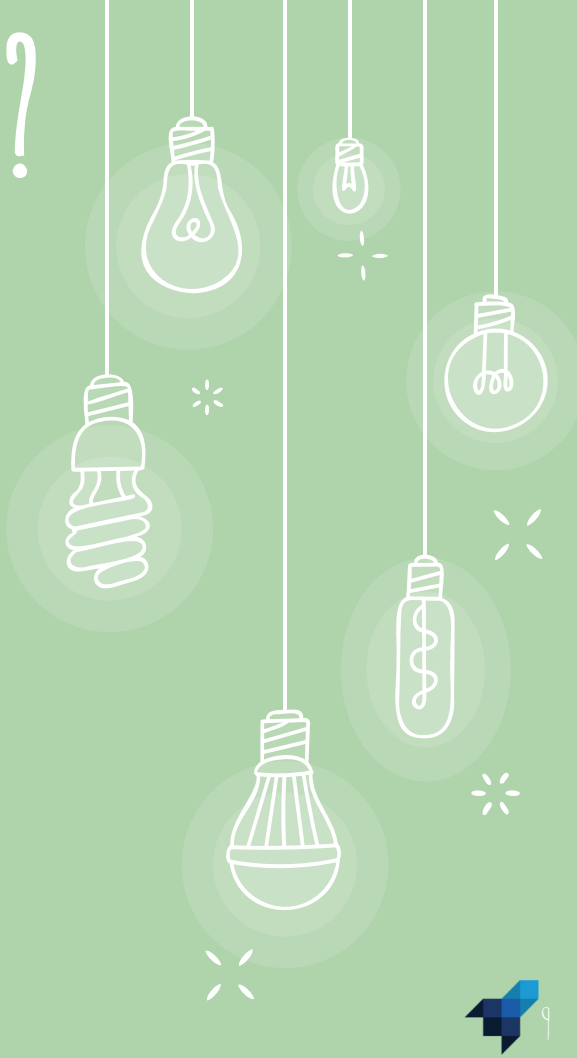
- + No mark should be below 18

These are **competitive** scores that you should aim for



HOW CAN YOU GET A HIGH SCORE?

- ✦ Balance class work (GPA) and the DAT.
- ✦ Study/Review daily: follow a study schedule & don't forget to take breaks
- ✦ Focus on the learning process rather than the practice test scores.
- ✦ Don't neglect subjects or areas of knowledge that you find challenging.
- ✦ Complete and review every practice test.
- ✦ Find a good study resource.



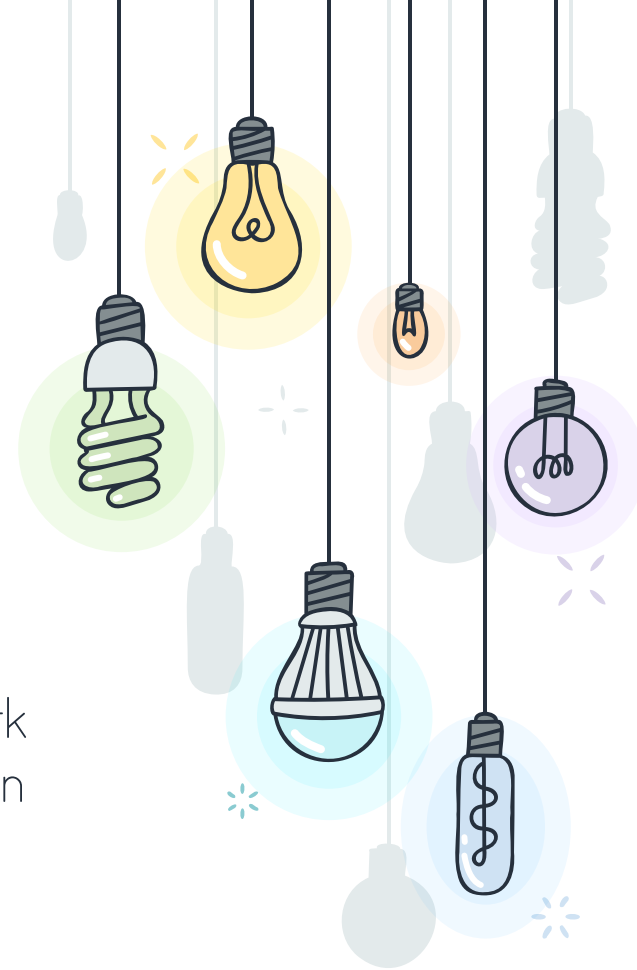
WHAT MAKES A GOOD RESOURCE?

- Comprehensive content review (materials that let you re-learn ANY topic from scratch)
- Practice material that allows you to implement what you've learned to check mastery of concepts
- Practice tests that closely resemble the timing, question style, and presentation of the real DAT
- A structured guide to help you navigate the above resources



❁ NO RESOURCE IS A GOLDEN TICKET

- You must put in the work to get a high score – there are no shortcuts to doing well on the DAT
- A quality resource will give you the tools to succeed but it is your responsibility to commit the time needed to use them
- DAT Booster offers a variety of resources to make your work easier, preparing you for success by allowing you to focus on the most important material



* YOUR SCORES CORRELATE TO THE WORK YOU PUT IN

Julie

Studied for 8 weeks.
Scored: 21AA

Andrea

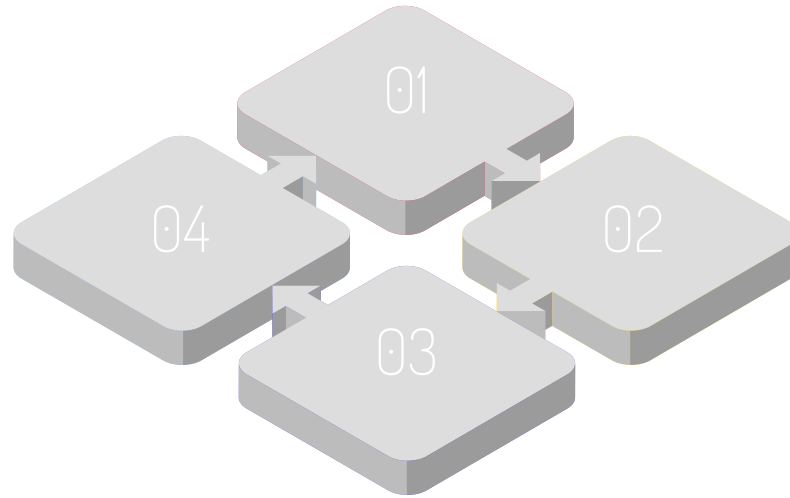
Studied for 10 weeks.
Scored: 24AA

Maria

Studied for 6 weeks.
Scored: 21AA



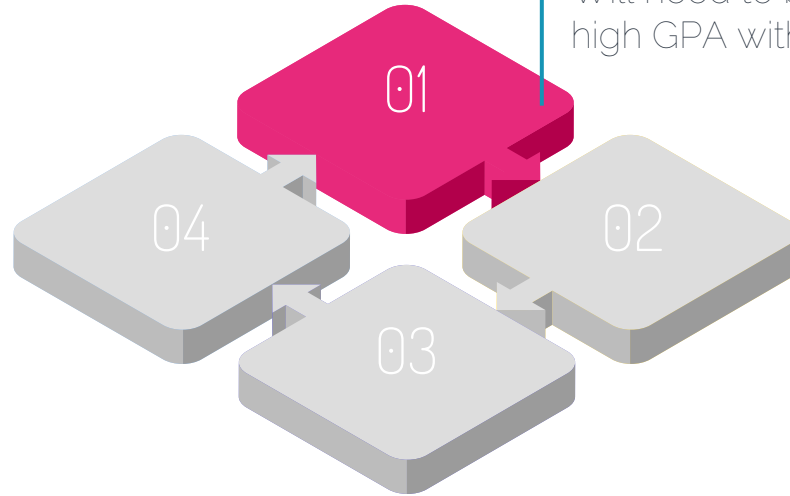
Game Plan



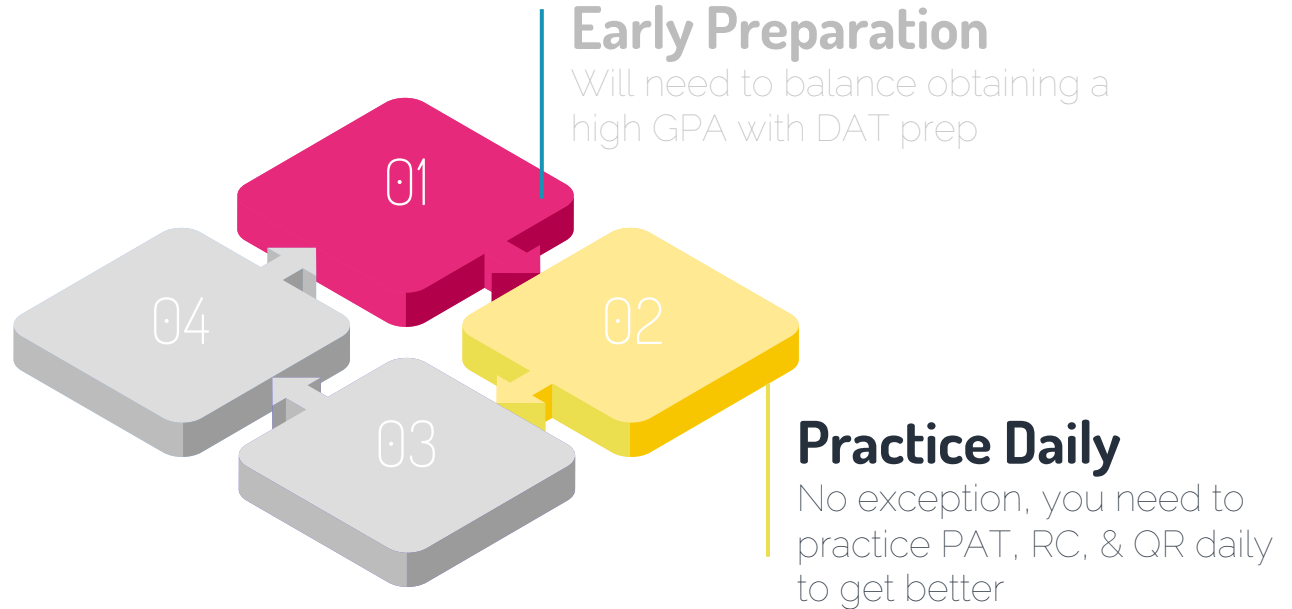
Game Plan

Early Preparation

Will need to balance obtaining a high GPA with DAT prep



Game Plan



Game Plan



Early Preparation

Will need to balance obtaining a high GPA with DAT prep

Practice Daily

No exception, you need to practice PAT & RC daily to get better

Content Review

Your goal should be to review all the content 2-3 times



Game Plan

Early Preparation

Will need to balance obtaining a high GPA with DAT prep

01

02

03

04

Practice Tests

Gauge where you stand and get a feel for the real exam

Content Review

Your goal should be to review all the content 2-3 times

Practice Daily

No exception, you need to practice PAT & RC daily to get better



* PRACTICE TESTS ARE YOUR BEST FRIENDS

- + The DAT is a long test, learning how to pace yourself can save you from mental fatigue
- + Practice tests help you identify areas you need to review
- + Learn how the exam is formatted so there are no surprises on test day



HOW TO MAKE THE MOST OUT OF PRACTICE TESTS

1. Take a timed full-length practice test that best mimics the actual test. Use only the resources that you will have access to during the actual exam
2. The next day, (not a week later) review the test. Every question, even the ones you get right.
3. Ask yourself, did you know the material, or did you have a lucky guess? For the questions you got wrong, was it because you ran out of time? Misread the question? Didn't know the material well enough?
4. Keep track of the questions you missed and **why**.
5. Identify areas of weakness so you can improve on your next test





HOW TO REVIEW A PRACTICE TEST

A	B	C	D	E
Topic	Question	Answer Choices	Answer	Reason
Diversity of Life	Statement 1: Gram positive bacteria have thick peptidoglycan layer instead of a capsule. Statement 2: Gram Negative Bacteria stain purple due to a capsule, two membranes.	A. Both statements are true B. Both statements are false C. Statement 1 is true, 2 is false D. Statement 1 is false, 2 is true	B. Both statements are false	Gram positive stain purple -Gram negative stain pink -Both have capsule -positive has thick peptidoglycan layer and negative has thin

States information about not only the correct answer but the answer choices they were confused about



3

TIPS AND TRICKS



* TIP #1 PAT GENERATORS

Question 1 of 1
Correct: 0, Incorrect: 0 (0.00%)

Anglo Ranking Generator

Timer: 31s | Stop Timer
Avg Time: - | Hide Timer

1 2 3 4

A. $2 < 4 < 1 < 3$
 B. $4 < 1 < 2 < 3$
 C. $4 < 2 < 1 < 3$
 D. $4 < 2 < 3 < 1$

PREVIOUS NEXT RANDOM Time Limit: 40 CHANGE

Score: 0% (0.00%)

Keyhole Generator

Timer: 25s | Stop Timer
Avg Time: 0s | Hide Timer

A B C D E

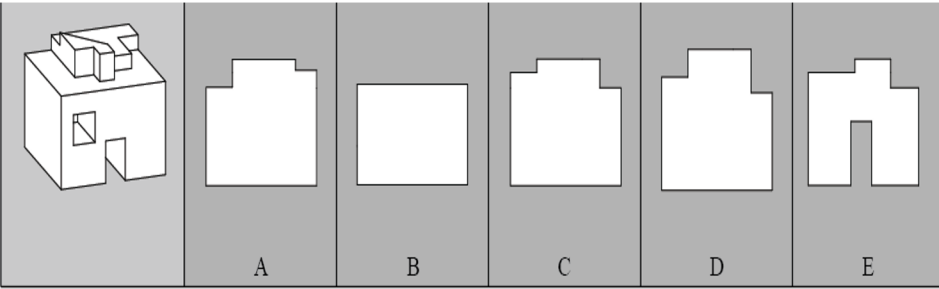
A.
 B.
 C.
 D.
 E.

PREVIOUS NEXT

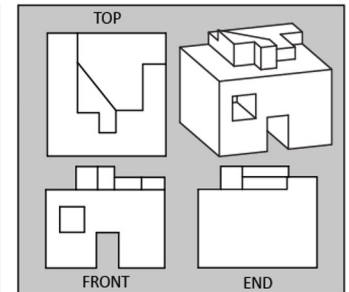
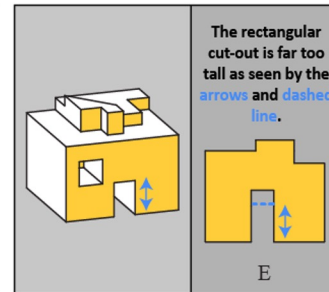
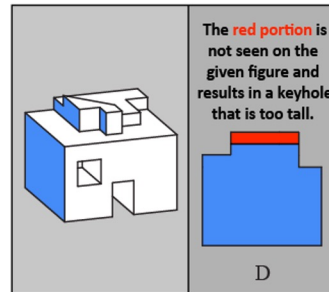
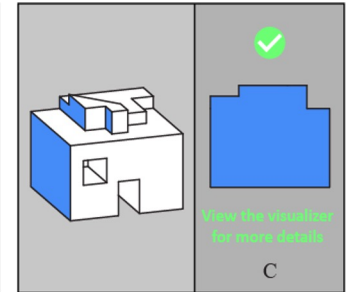
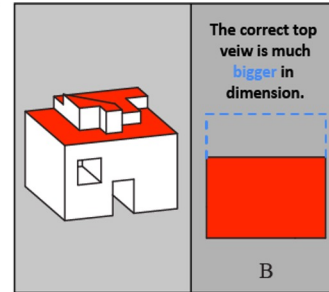
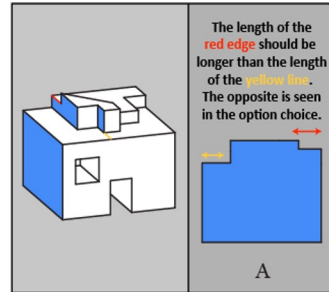
Daily PAT Generator Practice is key to getting a high PAT Score.



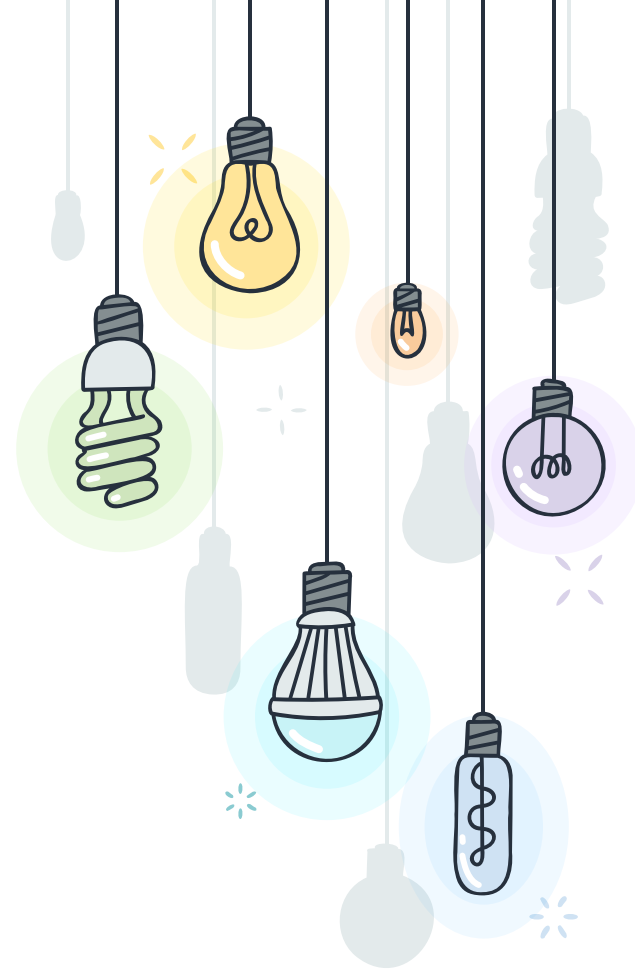
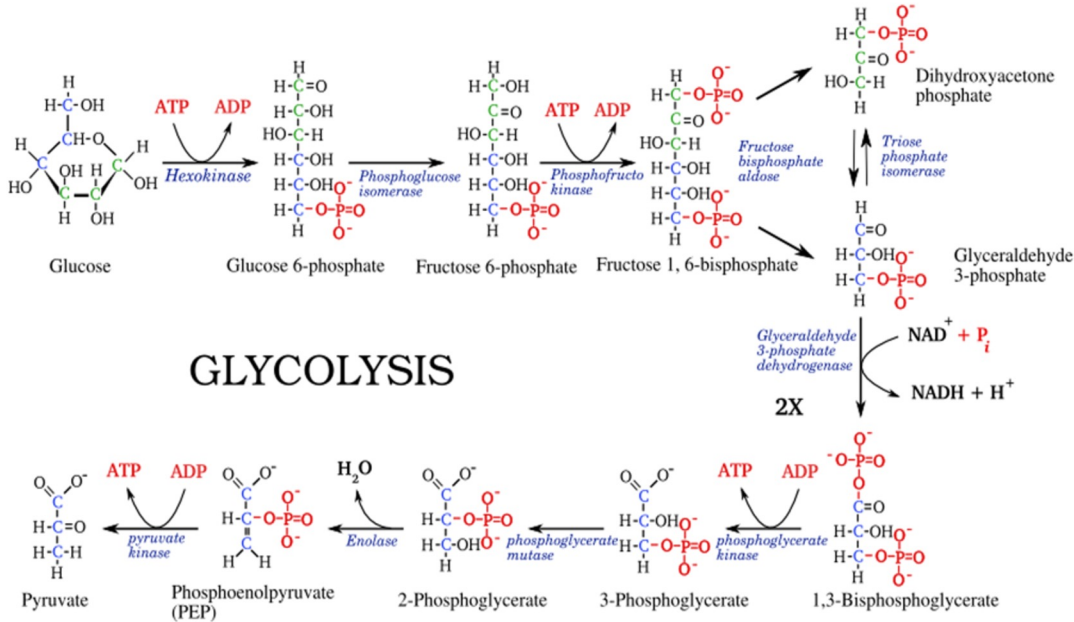
TIP #2 PAT PRACTICE TESTS



Develop an answer in your head first without getting help



* TIP #3 BIOLOGY TESTS

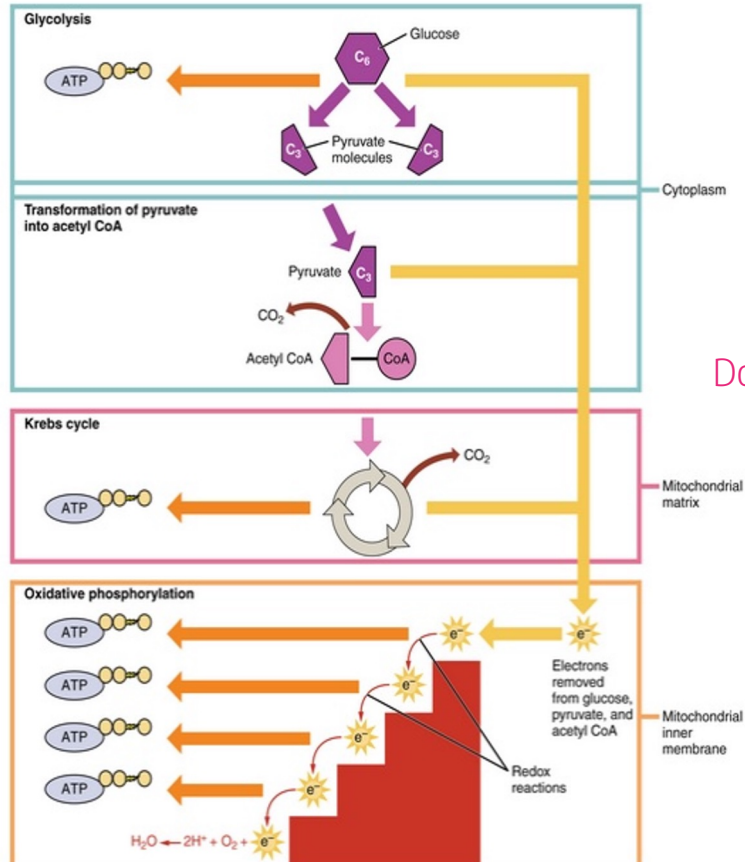


Breadth over depth

TIP #3 BIOLOGY TESTS



Cellular Respiration



Don't memorize small details



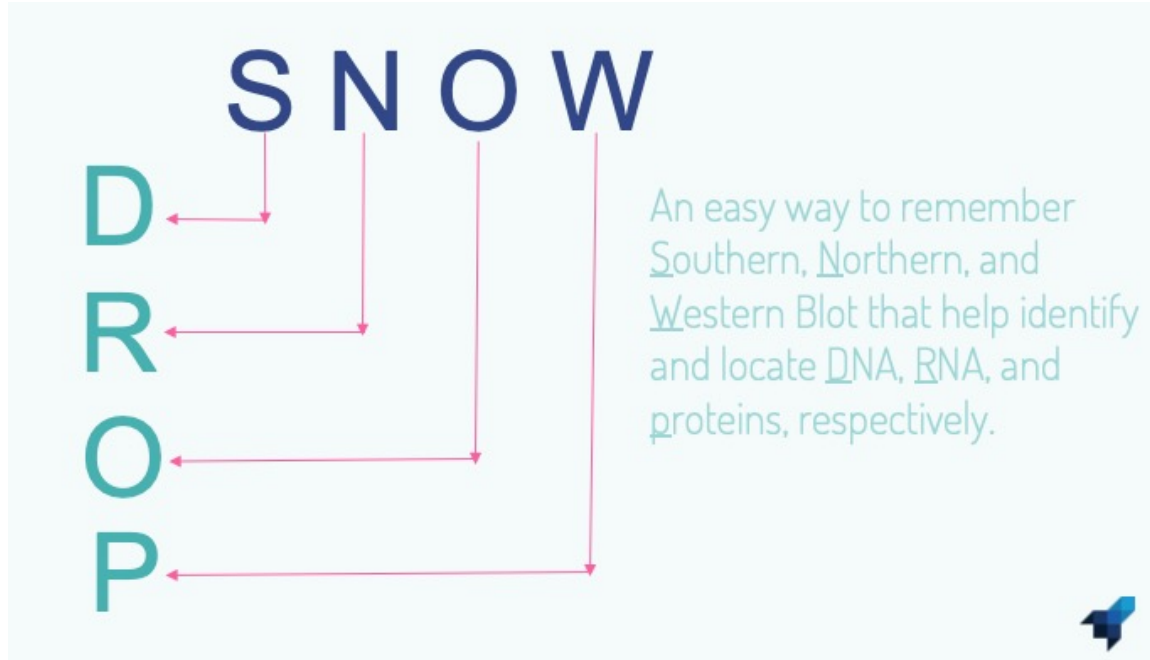
* TIP #4 BIOLOGY TESTS

Use mnemonics to study

S N O W

D R O P

An easy way to remember Southern, Northern, and Western Blot that help identify and locate DNA, RNA, and Proteins, respectively.



TIP #5 GENERAL CHEMISTRY TESTS

You are not allowed to use a calculator. So perform rounding and estimation to eliminate wrong answer choices

A container holds 4.0L of gas at 3.5 atmospheres and a temperature of 27°C. If the pressure is reduced to 0.8 atmospheres without a change in temperature, what would be the volume of the gas?

- A. 11.0 L
- B. 14.0 L
- C. 15.0 L
- D. 18.0 L
- E. 19.0 L

$$P_1 V_1 = P_2 V_2$$

$$(4)(3.5) = (0.8)(V_2)$$

$$V_2 = (14)/(0.8) = 17.5$$

= approximately 18



4

DAT BOOSTER FUTURE UPDATES



UPDATE #1: OUR SCIENCE VIDEO LECTURES

The screenshot displays a digital learning interface. On the left is a blue sidebar with a navigation menu for 'Biology' > '3. Immunology' > '3.3 Immunology Part. III'. The sidebar indicates '100% Complete' for the current section and lists three sub-sections: '3.1 Immunology Part. I', '3.2 Immunology Part. II', and '3.3 Immunology Part. III', all marked as complete. The main content area shows the video player with a title 'Biology > 3. Immunology > 3.3 Immunology Part. III' and a 'COMPLETE' status. Below the title is a 'LESSON PROGRESS' bar at 100% completion. The video content is a hand-drawn diagram titled 'ANTIBODY MEDIATED' illustrating the process of B cell activation and antibody production. The diagram includes the following text and visual elements:

- B LYMPHOCYTES (B CELLS)**:
 - Produce Antibodies
 - Mature in Bone marrow
 - Do not need an APC
 - Bind directly to pathogen
- B CELL RECEPTOR (BCR)**:
 - Each B cell has only one type of BCR
 - Only can bind to only one type of antigen
- ANTIGEN BINDING ACTIVATES B CELLS**: Shows a B cell with a BCR binding to a red antigen.
- CLONAL SELECTION**: A blue box with the text 'ONLY ONE B CELL WILL BE ABLE TO BIND AND ACTIVATE'.
- PLASMA CELLS**: Produce **IMMUNOGLOBULIN = FREE FLOATING ANTIBODY**, shown as blue Y-shaped molecules.
- MEMORY B CELL**: A smaller B cell that remains for future use.

The diagram also features a 'DATBooster' logo in the bottom right corner and a chat icon in the bottom right corner of the video player.

We are constantly refining and updating our Biology, General Chemistry and Organic Chemistry video lectures

UPDATE #2: OUR QUESTION BANKS AND PRACTICE TESTS

Question Bank
Cell & Molecular Biology

Organized Questions

All | Difficulty | Status

- EASY Question 1 ❌
- EASY Question 2 ❌
- EASY Question 3 ✓
- EASY Question 4 ✓
- EASY Question 5 ✓
- MEDIUM Question 6 ✓
- MEDIUM Question 7 ✓
- MEDIUM Question 8 ❌
- MEDIUM Question 9 ✓
- MEDIUM Question 10 ❌
- MEDIUM Question 11
- MEDIUM Question 12
- MEDIUM Question 13
- MEDIUM Question 14

Questions Completed Hide | 80% Completed

Cell & Molecular Biology - Question Bank #1
Question Category: Cell & Molecular Biology
Difficulty Level: Easy

Easy Medium Hard

Correct: 3 Correct: 9 Correct: 7
Incorrect: 2 Incorrect: 2 Incorrect: 1

Intestinal bacteria in humans is an example of which of the following?

- A. Commensalism
- B. Parasitism
- C. Mutualism
- D. Predation
- E. Saprophytism

Incorrect

CHECK NEXT MARK RESET

We are continuously increasing the numbers of practice problems and practice tests across all the DAT subjects.

UPDATE #3: CHEAT SHEETS

DATBooster **Booster Cheat Sheets™ Chapter 3.10 – Endocrine System** © Copyright 2022, Booster Prep Inc. All Rights Reserved.

General Terms	Hormone Types	Secondary Messengers
<ul style="list-style-type: none"> Endocrine targets a distant cell through the bloodstream Exocrine secretes enzymes into ducts Paracrine target nearby cell Autocrine targets itself 	<ul style="list-style-type: none"> Peptide Hormones: Bind to surface cell membrane receptor → Receptors start cell signaling pathways via secondary messengers Steroids: Diffuse plasma membrane and bind receptor in cytoplasm → hormone + receptor is transported into nucleus to act transcriptionally Tyrosine Derivatives: <ul style="list-style-type: none"> Thyroid hormones: lipid-soluble, bind to receptors in nucleus, and require protein carrier in blood Catecholamines: water-soluble, bind receptors on target tissue, and mainly act via secondary messenger cAMP 	<ul style="list-style-type: none"> Small molecules that pass along signals (such as growth factors and protein hormones) Initiated by ligand-receptor binding Amplify signal strength to target molecules in the cytoplasm Example

Hypothalamus

- Hypothalamus secretes releasing hormones to the anterior pituitary gland (APG)
- APG responds by secreting hormones
- Hypothalamus secretes ADH & oxytocin to be stored in the posterior pituitary gland (PPG)
- PPG stores ADH & oxytocin for release

Anterior Pituitary:

- Tropic hormones** – Stimulate other endocrine glands
 - ACTH:** Stimulates adrenal cortex → releases glucocorticoids
 - TSH:** Stimulates thyroid gland to release thyroid hormones
 - LH & FSH:** Stimulates corpus luteum formation
 - FSH & LH:** Stimulates interstitial cells of testes to produce testosterone
 - FSH & LH:** Stimulates maturation of ovarian follicles to secrete estrogen
 - FSH & LH:** Stimulates seminiferous tubule maturation & sperm production
- Non-tropic hormones** – Directly stimulate target organs
 - GH (somatotropin):** Increases bone & muscle growth
 - Prolactin:** Stimulates milk production

Posterior Pituitary:

- Does not synthesize hormones
- Stores ADH & oxytocin for release
- ADH (vasopressin):** Increases reabsorption of water by increasing permeability of nephron's collecting duct
- Oxytocin:** Increases strength of uterine contractions; stimulates milk ejection; induces maternal behavior

Adrenal Glands

Adrenal Medulla

- Epinephrine & Norepinephrine**
 - "Fight or flight" catecholamines
 - Converts glycogen to glucose [↑ blood glucose]
 - Vasodilator to kidneys and bladder
 - Vasoconstrictor to skeletal muscle
 - increased heart rate
 - lipid mobilization
 - Prepares body for intense physical activity

Pineal Gland

- Secretes **melatonin**
- Regulates circadian rhythm (sleep)

Thymus

- Immune function
- Secretes thymosins that stimulate white blood cells to become T-cells

Testes & Ovaries

- Testosterone:** Increases spermatogenesis, secondary sex characteristics
- Estrogen:** Menstrual cycle regulation, secondary sex characteristics
- Progesterone:** Menstrual cycle regulation, pregnancy

Parathyroid

- PTH:** Antagonistic to the function of calcitonin
- Raises Ca^{2+} levels in blood by:
 - Stimulating osteoclasts to breakdown bone
 - Increasing kidney reabsorption of calcium
 - Increasing calcium uptake from the gut

Thyroid

- Thyroxine (T₄) & Triiodothyronine (T₃)**
 - ↑ basal metabolic rate in body
 - Iodine is necessary to synthesize thyroid hormones and prevent goiters
- Calcitonin**
 - Stimulates osteoblast activity (builds up bone by using calcium in the blood)

Glucagon

- Secreted by Alpha cells, released when energy levels are low
- ↑ glucose levels in blood
- Stimulates liver to convert glycogen to glucose
- Stimulates gluconeogenesis in liver
- Converts stored adipose tissue into blood lipids

DATBooster **Booster Cheat Sheets™ Chapter 1.1 – Biomolecules and Macromolecules** © Copyright 2022, Booster Prep Inc. All Rights Reserved.

Biomolecules	Types of Molecular Bonds	Formation of Macromolecules
<p>Atoms & Molecules</p> <ul style="list-style-type: none"> Atoms: Single unit made up of neutrons, protons, and electrons Molecule: Groups of 2+ atoms held together by chemical bonds due to electron interactions Macromolecules: Large molecules (polymers) formed from the bonding of smaller molecules (monomers) 	<ul style="list-style-type: none"> Ionic Bonds: Transfer of e^- from one atom to another atom of <u>very different</u> electronegativity Covalent Bonds: Sharing of e^- between atoms of similar electronegativities <ul style="list-style-type: none"> Nonpolar: equal e^- sharing Polar: unequal e^- sharing, forms dipole Hydrogen Bonds: Weak bond between a hydrogen atom and an electronegative atom (F, O, or N) 	<ol style="list-style-type: none"> Dehydration Reaction: Links monomers to form polymers, forming H_2O in the process Hydrolysis: Uses water to break polymers into monomers
<p>The 4 Types of Organic Macromolecules</p> <p>Proteins</p> <ul style="list-style-type: none"> Monomer: Amino acid Polymer: Peptide Linkage type: Peptide bonds Function: Structure, transport, defense, storage, enzymes <p>Carbohydrates</p> <ul style="list-style-type: none"> Monomer: Monosaccharide Polymer: Polysaccharide Linkage type: Glycosidic Function: Store energy <p>Lipids</p> <ul style="list-style-type: none"> Nonpolar, hydrophobic molecules Monomer: Hydrocarbon Polymer: Hydrocarbon chain Linkage type: Covalent carbon-carbon Function: Insulation, energy storage, endocrine signaling, cell structure <p>Nucleic Acids</p> <ul style="list-style-type: none"> Monomer: Nucleotide Polymer: Nucleic acid (DNA, RNA) Linkage type: Phosphodiester bond Function: Encode, express, and store genetic info 	<p>Classes of Carbohydrate</p> <ul style="list-style-type: none"> Monosaccharides: Single sugar molecule (e.g. Glucose) Disaccharides: 2 joined sugar molecules (e.g. Glucose + Fructose = Sucrose) Polysaccharides: Polymer of sugar molecules. Includes starch (α-glucose), glycogen (α-glucose), cellulose (β-glucose), chitin (β-glucose) <p>Protein Structures</p> <ol style="list-style-type: none"> Primary: Linear chain sequence of amino acids Secondary: Local folding of chain into α-helices/β-sheets via H-bonding between amino & carboxyl groups of adjacent amino acids Tertiary: 3D shape due to noncovalent interactions between R groups Quaternary: 3D protein shape consisting of 2+ separate peptide chains <p>Chemical Structure of Amino Acid:</p> $ \begin{array}{c} \text{H} \\ \\ \text{H}-\text{C}-\text{C}=\text{O} \\ \quad \\ \text{R} \quad \text{OH} \\ \text{Amino} \quad \text{Carboxyl} \\ \text{Group} \quad \text{Group} \end{array} $ <p>Structure of DNA/RNA</p> <p>Nucleotide:</p> <ul style="list-style-type: none"> Structure: Nitrogenous base + 5-C sugar + phosphate group DNA: -H attached to 2' carbon of the sugar RNA: -OH attached to sugar instead <p>Nitrogenous Base:</p> <ul style="list-style-type: none"> DNA: bases are A, T, C, G. Contains deoxyribose sugar and 2' complementary antiparallel (5' to 3') strands of double helix. A & T pair via 2 H-bonds C & G pair via 3 H-bonds 1 GC base pairs = 1 H-bonds 1 temp to split strands <p>RNA: bases are A, U, C, and G, with a ribose sugar and is single stranded</p> <p>Chargaff's Rule:</p> <ul style="list-style-type: none"> A & T, and G & C are always present in equal amounts (i.e., if DNA is 20% A, it is also 20% T) 	

We are constantly reviewing our content and replacing outdated information with the most representative information from the DAT.

UPDATE #4: ADMISSIONS SERVICES

Get Accepted to Your Dream School

Gain an unfair advantage with tailored advice aimed to maximize your chance of acceptance.



Complete application review, personal statement review, secondary application review and mock interview preparation is now available.

UPDATE #5: CRASH COURSES

Quantitative Reasoning

Organic Chemistry

Perceptual Ability

Biology

NOV

16

Perceptual Ability

November 16th • 6pm EST

\$125

Register

Expert



By Dr. Bayesteh

Topics

- Keyholes
- Top-Front-End
- Angle Ranking
- Hole Punching
- Cube Counting
- Patten Folding
- Includes 5 New PAT Exams (Premium Memberships Required)



Emily Hwang

Organic Chemistry Crash Course



I HIGHLY recommend taking the crash course no matter where you are in your studying journey.

I wouldn't have survived studying for organic chemistry if it weren't for Dr. Ampaw's crash course. I've been advised I should take these once I've finished all of my organic chemistry material, but I still found it so helpful taking them early on in my studying.

[Read more](#) ▾

UPDATE #6: CASPER BOOSTER

What does Casper assess for?



COLLABORATION



COMMUNICATION



EMPATHY



EQUITY



ETHICS



MOTIVATION



PROBLEM
SOLVING



PROFESSIONALISM



RESILIENCE

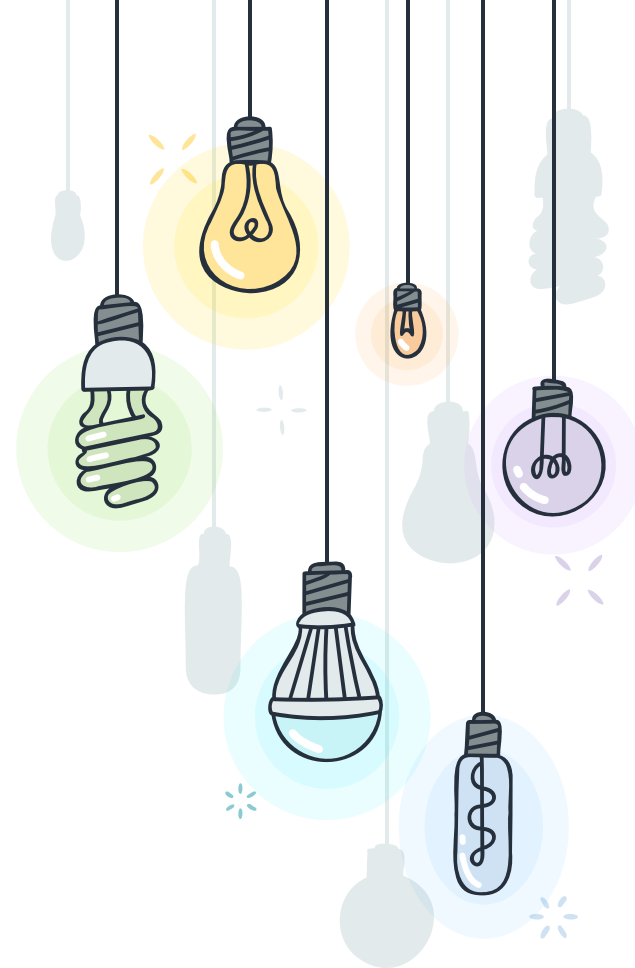


SELF
AWARENESS

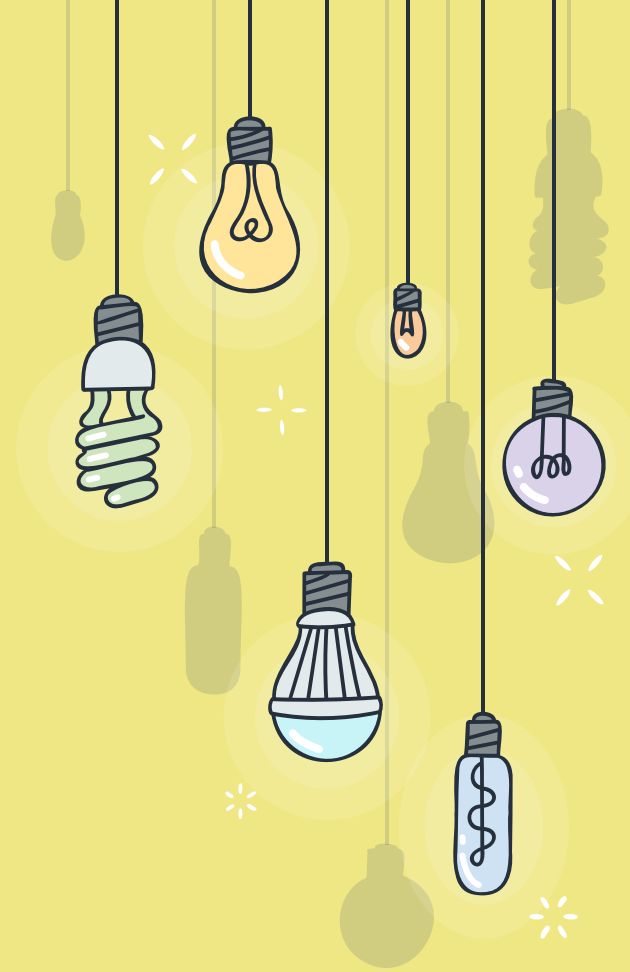
AND SO MUCH MORE

The screenshot shows the 'Classroom' page for a user named Linda Schmidt. The interface is clean and modern, with a dark sidebar on the left containing navigation options for 'TOPICS' (Biology, General Chemistry, Organic Chemistry, Perceptual Ability, Reading Comprehension, Quantitative Reasoning) and 'STUDY TOOLS' (Your Notes, Study Guide, Marked Questions, Video Content, PAT Generators, Full Length Tests, Crash Courses, Past Test Results). The main content area features a 'Biology Practice Test 1' section with a 'Continue Test' button and a progress indicator of 33% complete. Below this is a 'Your Overall Results' section with a line graph showing progress from May 1 to May 21, and a 'Personalized Feedback' box stating 'You scored low in Biology. We recommend to take extra Practice Tests to improve your overall score.' A 'Hot Summer Updates' section is also present, with a 'Read more' link. On the right, there is an 'Upgrade your account to get access to all content' prompt with an 'Upgrade now' button, and a 'Your Progress' section listing subjects with their respective progress bars: Biology (44%), General Chemistry (50%), Organic Chemistry (33%), Perceptual Ability (0%), Reading Comprehension (25%), and Quantitative Reasoning (0%).

This screenshot shows the mobile version of the DATBooster interface. The layout is adapted for a smaller screen, with the sidebar collapsed into a hamburger menu at the bottom left. The 'Classroom' page content is visible, including the 'Biology Practice Test 1' section, the 'Your Overall Results' graph, and the 'Your Progress' list. The interface is user-friendly and easy to navigate on a mobile device.



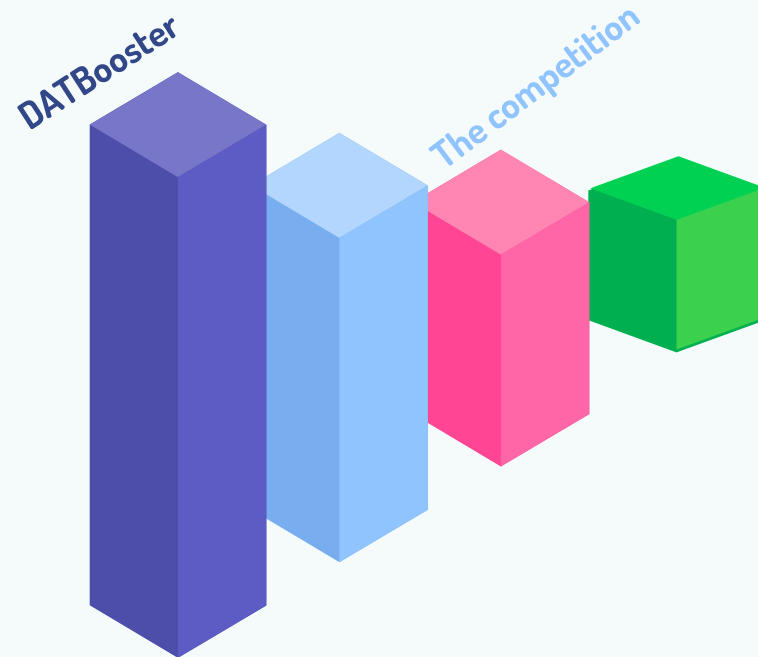
DATBooster is one of the most affordable, comprehensive, and representative DAT Resources on the market



DATBooster vs. The Competition: Affordable | Powerful | Representative

	DATBooster
Number of Practice Tests	80 Practice Tests
Number of Questions	6200+ Questions
PAT Content Videos	65+ HD Videos
Biology Videos	33+ HD Videos
Reading Comprehension Videos	22+ HD Videos
DAT-Specific Study Notes	20+ Chapters
DATBooster Included	✓
PAT Generators with Analytics	✓
Keyhole Generator	✓
Built-in 3D Models	✓
Tiered TFE Question Bank	✓
Mark-Learning System	✓
Visualized Progress	✓
One-on-One Tutoring	✓
Created for the 2022 DAT	✓
Higher Score Guarantee	✓
Average Scores by Students	24AA

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THANK YOU!

