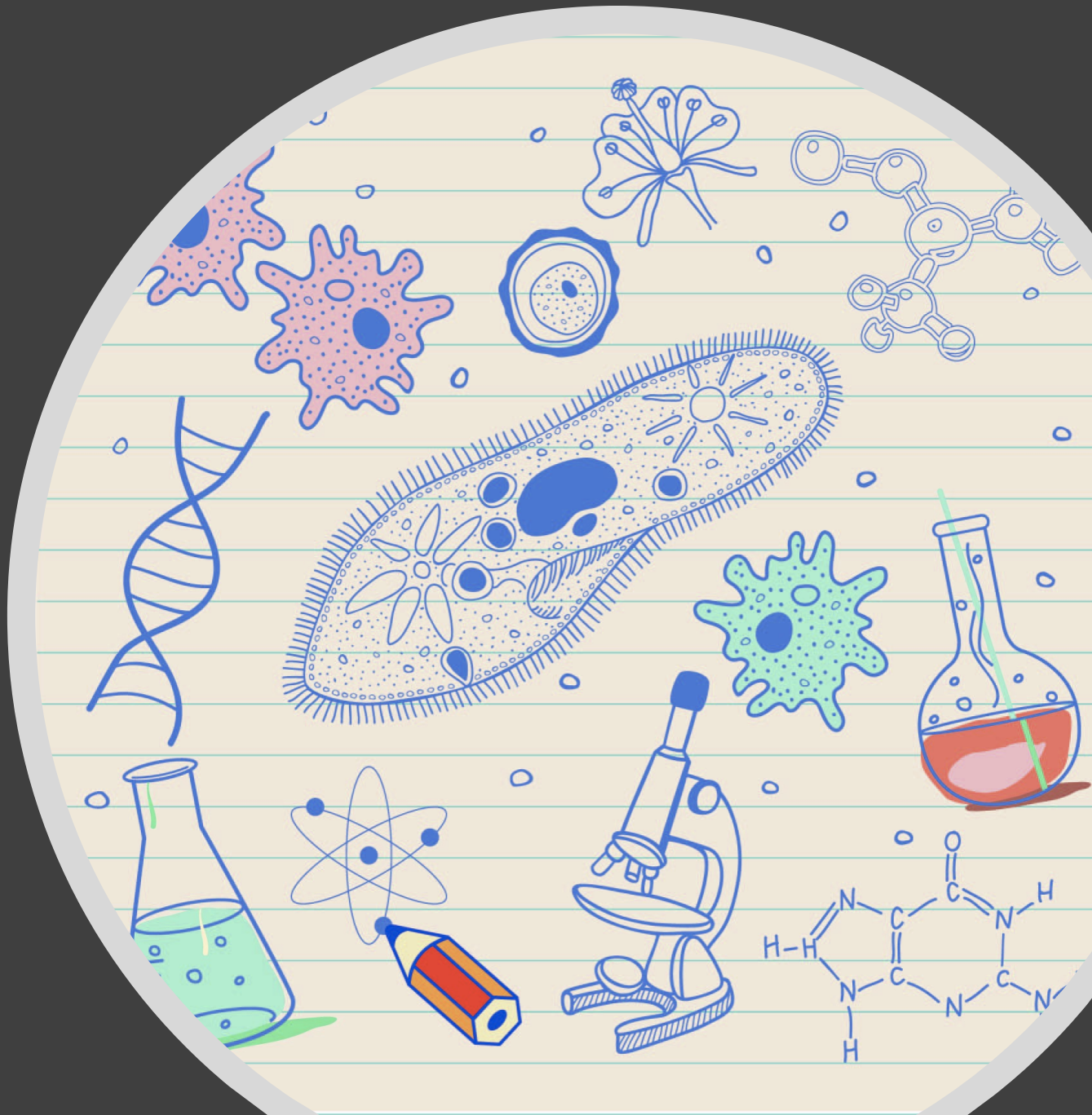
Welcome to Biology 1

Course Syllabus
Mrs. Dobson



About the course

- Students will be introduced to the major units of biological science: inquiry, biochemistry, cells, the cell cycle, cellular energy, structure and function of DNA and RNA, heredity, evolution, and ecology.

- Critical thinking and an appreciation for the nature of science will be developed through virtual laboratory experiences.

- Students must pass this course in order to receive a high school diploma. There is also an end-of-course test students must take at the end of the semester.

"THE IMPORTANT THING IS TO NEVER STOP QUESTIONING." —ALBERT EINSTEIN

course standards

- Standard H.B.1: The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content.
- Standard H.B.2: The student will demonstrate the understanding that the essential functions of life take place within cells or systems of cells.
- Standard H.B.3: The student will demonstrate the understanding that all essential processes within organisms require energy which in most ecosystems is ultimately derived from the Sun and transferred into chemical energy by the photosynthetic organisms of that ecosystem.
- Standard H.B.4: The student will demonstrate an understanding of the specific mechanisms by which characteristics or traits are transferred from one generation to the next via genes.
- Standard H.B.5: The student will demonstrate an understanding of biological evolution and the diversity of life.
- Standard H.B.6: The student will demonstrate an understanding that ecosystems are complex, interactive systems that include both biological communities and physical components of the environment.

Contact Information

- Email: mdobson@fsd5.org
- School phone number: **386-2707**
- Contact methods: email, Remind, Schoology, Teams meeting
- Any question submitted after 5pm through Schoology/Remind/email will be answered the following morning

Contact Information

- Teams meetings for virtual students:
  - Tuesdays and Thursdays
    - 2nd block 8:30 to 9:00 am
    - 3rd block 9:00 to 9:30 am
    - 1th block 9:30 to 10:00 am

  - If you need assistance outside of these times, please email me or message me on Remind to schedule an alternate time

Assessment Plan

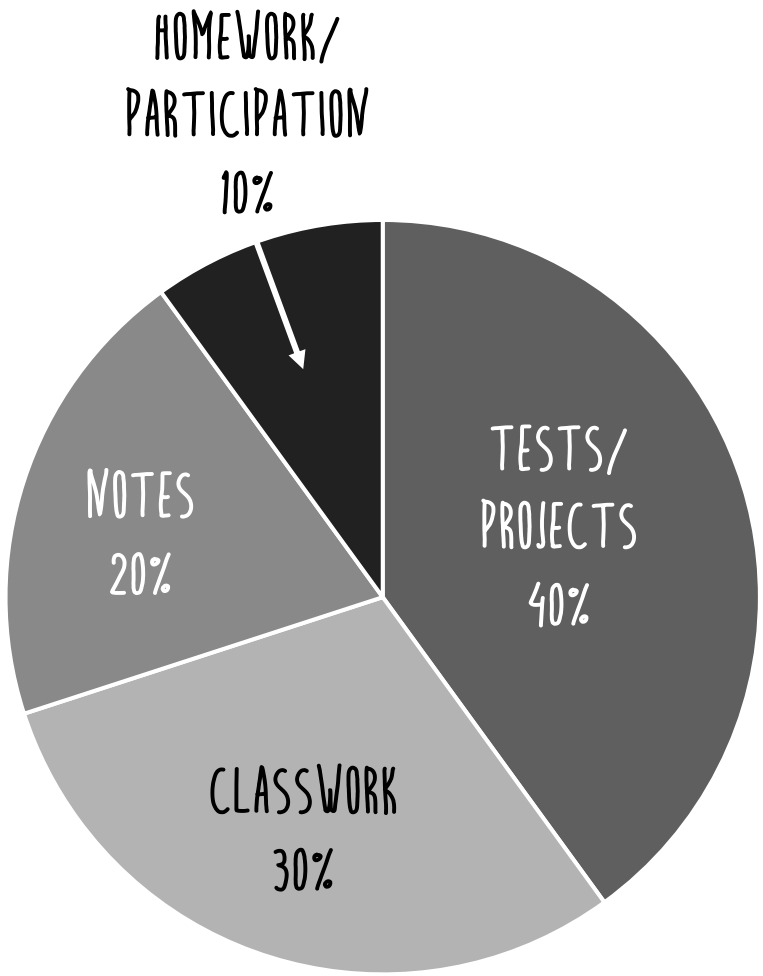
Major Tests and Projects: Units will be assessed through either a test or a project. You will always be given notice of how you will be assessed. All projects will have specific guidelines and rubrics.

Classwork: Any assignment given to reinforce learning, including (but not limited to) tutorials, quizzes, worksheets, drawings, webquests, virtual labs, etc.

Notes: These assignments will be graded on a student's viewing of required instructional videos and completion/submission of accompanying note handouts.

Homework: Minor assignments given for completion outside of class and/or graded for completion and participation. Jumpstarts and exit slips will also be included within this category.

Grading Scale: 100-90 A, 89-80 B, 79-70 C, 69-60 D, 59-below F



Expectations

1. Be on time
2. Be prepared
3. Be respectful
1. Be attentive
5. Be responsible
6. Give your best

consequences

1. Verbal/written warning
2. Student-teacher conference
3. Same as 2nd + parent contact
1. Referral to office

REPEATED OR SEVERE OFFENSES WILL RESULT IN IMMEDIATE REFERRAL TO OFFICE

completing/submitting work

- Work is due by 8 am the day after assigned
  - Example: assignments given on Tuesday 9/9 would be due by 8 am Wednesday 9/10
  - Attendance counts for virtual learners!
  - Next day's assignments will be opened at 1 pm the day before
- Make sure to save notes/assignments to flash drive and upload to OneDrive
- Follow the school-wide honor code!

completing/submitting work

- Absences and Make-up Work
  - If absent, follow the agenda for the day(s) you missed to complete your make-up work, asking for assistance as needed
  - Make-up work is to be completed/submitted by the due date as specified by the teacher or a 0 will remain in the gradebook for that work.
  - <u>Special Note:</u> If new material is covered during your absence and a graded assessment involving that material is assigned on the day of your return, you may request an extension on that assessment. However, the extension must be requested before 8 a.m. of the graded assessment's due date or a zero will be entered. If you request an extension, do <u>not</u> open the graded assessment until the teacher gives you further instructions. Once the graded assessment is opened, the teacher may grade your work.

Technology Etiquette

- Students are expected to follow the school-wide policies outlined in the virtual honor code
- Treat devices with respect/take care of them
- Use devices for course-approved activities

Textbook

- You have access to a hard-copy textbook

- If you would like access to an online version of the textbook, contact me for log-in information
  - Disclaimer! *Online textbook loads slowly*

suggested supplies

- Flash drive (at least 16 GB) → helpful to have in case saving to OneDrive is not working
  - You can upload contents of the flash drive to OneDrive as well

- In-person learners: you may wish to have a 3-ring binder and/or folder, notebook paper, and a writing utensil

Remind

- Used to communicate important information/assignment and test reminders
- Sign-up instructions posted in Schoology and on school website in "General Class Information"
- Class code: dobsonbio

Pacing Guide

*Please note this is a tentative guide and is subject to change!

Unit	Topics	Estimated Time
1	Introduction to Biology and Scientific Method	1 week
2	Biochemistry *(organic compounds, enzymes)*	2 weeks
3	Cell Structure and Function *(anatomy, cell types, cellular transport)*	2 weeks
4	Energetics *(ATP and ADP, photosynthesis, cellular respiration)*	1.5 weeks
5 and 6	DNA, RNA, and Protein Synthesis *(structure of DNA and RNA, DNA replication, transcription and translation, mutations)*	1.5 weeks
7	Cell Growth and Division *(cell differentiation, cell cycle, cell cycle regulation, cancer)*	1 week
8	Heredity *(meiosis, Mendelian genetics, alternate genetic patterns)*	2 weeks
9	Biotechnology *(mutations review/genetic disorders, modes of biotechnology)*	1 week
10	Evolution *(natural selection, evidence for evolutionary theory, mechanisms, results, patterns, and rates of evolution, phylogenetic trees)*	1.5 weeks
11	Ecology *(population ecology, community ecology, ecosystems)*	2 weeks
Exam Review	*Review of all topics from the semester*	1 week