

Alexandra Leslie

Brighton MA, 02135 | alexandra.leslie.48@gmail.com | (845) 826-4886 | Website: allieleslie.com

❖ About Me

Teacher at heart, with a career that has never fit neatly into one box. Eight years of experience spanning science classrooms, college labs, outreach programs, tutoring, SCUBA, and fitness. Curious, creative, and happiest doing work that involves people, learning, and trying something new.

❖ Teaching Experience

Chemistry Instructor Interphase | Massachusetts Institute of Technology | Summer 2026

- Taught an intensive six-week chemistry course for incoming MIT first-year students.
- Developed lectures, assessments, practice materials, and review activities.

AP & General Biology Teacher | Pembroke High School | February 2025 – June 2026

- Taught AP Biology and PLTW Human Body Systems using hands-on labs, clay modeling, case-based learning, conceptual games, and manipulatives (e.g., “acting out” gas exchange and modeling allele frequencies with beads).
- Led a full sheep pluck dissection, bridging structure and function through experiential learning.
- Integrated tools like My Short Answer, NOVA labs, and Blooket to boost engagement and FRQ performance.
- Ran after-school sessions for AP Bio exam prep, focusing on data interpretation and lab skills.

BioBuilder Instructor | BioBuilder Educational Foundation | Summer 2025 – Present

- Led Summer Research Program, mentoring students in wet lab synthetic biology research.
- Facilitated the Design–Build–Test–Learn (DBTL) cycle to support experimental design and analysis.
- Filmed instructional video to support laboratory training for educators.

Group Fitness Instructor | Healthworks & Republic Fitness | Fall 2024 – Present

- Teach Les Mills BODYPUMP™ and other strength- and cardio-based group fitness classes.
- Create an energetic, approachable environment while coaching proper technique, form, and modifications.

Physical Science Teacher | Public Schools of Brookline | Fall 2024

- Delivered NGSS-aligned physical science curriculum using OpenSciEd and Green Ninja programs to engage a diverse group of 8th-grade students in inquiry-based learning.
- Curriculum Scope & Sequence: Contact Forces • Energy & Waves • Chemistry & Climate Change + Social Justice
- Collaborated with grade-level team, special education teachers, and language specialists to ensure all students receive instruction at their academic and language levels.

General Science Teacher | Maine-Endwell Middle School | September 2021 – June 2024

- Planned and taught NGSS-aligned science courses for 6th, 7th, and 8th grade students, while collaborating with colleagues and communicating with families:

Life Science (7th grade)	Physical Science (7H & 8th grade)	Sixth Grade Science
observations & inferences • scientific method • life characteristics • classification • ecology • climate change • sustainability • cells • genetics • human development • evolution	metric measurement • motion • forces • energy • simple machines • waves • sound • light & optics • astronomy • matter • chemistry	weather & climate • biomes & adaptations • human body systems • earth’s layers • geological time scale

- Extended learning beyond the classroom through advising, facilitating, and coaching:

Science Olympiad Advisor	Board Game Club Founder/Facilitator	Socratic Club Co-Founder/Facilitator	Musical Co-Assistant Director/Choreographer
National science competition with 22 events across multiple disciplines.	Students learn a variety of games from the classics to complex strategy games that require collaboration.	Student-led seminar where students bring challenging and/or controversial topics to an open platform discussion.	Students develop and exercise skills in performing arts.

PADI Open Water SCUBA Instructor | Deep Water SCUBA | September 2017 – May 2024

- Conducted classroom lectures and detailed skill demonstrations in confined water.
- Assisted students with individual challenges, including language barriers and difficulty equalizing.
- Collaborated with other instructors and guided supporting staff (Divemasters).

Summer Enrichment | Maine-Endwell Middle School | August 2022 – 2024

- Designed and taught a two-week science enrichment course for incoming 6th graders, aimed at building scientific curiosity and easing the transition to middle school.
- Led hands-on activities including blind taste tests, optical illusions, oobleck experiments, cheek-cell microscopy, spy deception games, and density columns.

Instructor of Record | Binghamton University | June 2016 – August 2018

- Taught Intro to Molecular Biology, designing lectures, assignments, and exams.
- Coordinated with the laboratory teaching assistant on pedagogy, scheduling, and curriculum.

Lab Coordinator/Teaching Assistant | Binghamton University | September 2015 – May 2017

- Ran weekly meetings and led the team of graduate and undergraduate teaching assistants.
- Designed and conducted laboratory activities, created evaluation criteria, and maintained records.

❖ Education

Master of Arts, Teaching	GPA: 3.81	Binghamton University	2016—2018
Master of Science, Molecular Genetics	GPA: 3.81	Binghamton University	2015—2019
Bachelor of Science, Integrated Neuroscience	GPA: 3.49	Binghamton University	2012—2015

❖ Professional Development & Licensure

Academic Teacher General Science	2024	MEPID:58116333
OpenSciEd: Contact Forces	2024	
SEI Endorsement	2025	
Professional Learning Communities - Rethinking Assessments	2023	
Professional Learning Communities - Introduction	2022	
NYS Biology 7-12 Initial Certificate + General Science Extension	2021	Teacher ID #3771284
Educating All Students Test	2018	Score: 576/600
Biology Content Specialty Test	2018	Score: 277/300

❖ Skill Sets

Teaching Technologies: Blooket • BrainPOP • Canvas • EdPuzzle • Gizmos • Gimkit • Google Suite • Kahoot! • Microsoft Office • Promethean Board • Quizizz • Quizlet • Schoology • SmartBoard • TeamSnap • WeVideo

Laboratory Techniques: Aseptic Technique • cDNA Synthesis • Cloning • DNA/RNA Isolation and Processing • Gel Electrophoresis • Microscopy • PCR • qPCR • Seed Processing/In Vitro Germination

Bioinformatics: DESeq2 • Geneious™ • R Programming

❖ Additional Certifications and Licenses

PADI Open Water Dive Instructor #429672 March 2020 to Present	CPR & First Aid Instructor March 2020 to Present	Lifeguard June 2023 to Present	Les Mills BODYPUMP™ Instructor June 2024 to Present
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❖ Publications

Differential Gene Expression Drives Emergence of Hyper-Localized Dispersal in Mimulus Limestone Endemic

Investigated tissue-specific differential expression of genes contributing to a novel dispersal phenotype. Findings highlighted auxin transporters as key drivers of phototropism and evolutionary adaptation.