

Southington Board of Education Meeting

Thursday, May 25, 2023 6:30 PM
John Weichsel Municipal Center Public Assembly Room
200 North Main Street
Southington, CT 06489



COMMITTEE OF THE WHOLE - INSTRUCTION

1. CALL TO ORDER
2. Executive Session
 - a. UPSEU Negotiations Update
 - b. Personnel Matter - Unaffiliated
 - c. School Safety & Security
3. Reconvene Meeting - Regular Session 7:00 p.m.
4. Pledge of Allegiance
5. Celebration of Excellence - Invention Convention Nationals Finalists
6. Approval of Minutes - May 11, 2023
7. Public Communications
 - a. Communications from Student Board Representatives
 - b. Communications from Board of Education
 - c. Communications from Administration
 - d. Communications from Public - Agenda Items Only
8. Committee Reports
 - a. Policy & Personnel Committee Report - May 10, 2023
 - b. Curriculum & Instruction Committee Report - May 12, 2023
9. Old Business
 - a. Town Government Communications
10. New Business
 - a. 2023-2024 Operating Budget Reallocation/Adoption
 - b. Ratification of UPSEU Local 424, Unit 113, Southington BOE Physical Therapists & Occupational Therapists Contract
 - c. Policy 1316 - Relations Between Public and School Personnel - First Reading
 - d. Approval of Job Descriptions
 1. SHS National World Language Honor Society Stipend - New
 2. High School Assistant Department Leader - Revised
 3. High School Department Leader - Revised
 - e. SHS - Accelerated Biology - Unit 2 - Cell Structure and Function - First Reading
 - f. SHS - Accelerated Biology - Unit 4 - Cell Cycle and Communication - First Reading
 - g. SHS - Forensic Science II - First Reading
 - h. K-5 Math Curriculum - Bridges Math Intervention - First Reading
11. Public Communications
 - a. Public

12. Adjournment

The minutes presented within this document provide a summary of the discussion that took place at the Board of Education meeting. For the complete discussion of the agenda items, please view the video of the Board meeting on our website at www.southingtonschools.org. These minutes are considered a draft until approved at the following regular Board of Education meeting.

**SOUTHINGTON BOARD OF EDUCATION
SOUTHINGTON, CONNECTICUT**

**REGULAR MEETING
MAY 11, 2023**

The regular meeting of the Southington Board of Education (Committee of the Whole - Operations) was held on Thursday, May 11, 2023, at 7:00 p.m. as a public meeting in the John Weichsel Municipal Center Public Assembly Room, 200 North Main Street, Southington, Connecticut with an Executive Session preceding at 6:30 p.m.

1. CALL TO ORDER

Mr. Joseph Baczewski, Vice Chairperson, called the meeting to order at 6:33 p.m.

Board members present: Mrs. Dawn Anastasio, Mr. Joseph Baczewski, Mrs. Terri Carmody, Mr. Sean Carson (arrived at 6:45 p.m.), Mr. James Chrzanowski, Mr. David Derynoski, Mr. Zaya Oshana, Mr. Jasper Williams

Board members absent: Mrs. Colleen Clark, Chairperson

Cabinet administrators present: Mr. Steve Madancy, Superintendent of Schools, and Mr. Frank Pepe, Assistant Superintendent

2. EXECUTIVE SESSION – Student Matters, Personnel Matters & Legal Matter

MOTION: by Mr. Derynoski, seconded by Mr. Oshana:

“Move to go into Executive Session, excluding the public and the press, for the purpose of discussing Student Matters, Personnel Matters and Legal Matter.”

Motion carried unanimously by voice vote.

Mr. Baczewski ended Executive Session at 7:03 p.m.

The Regular Board Meeting was reconvened at 7:05 p.m.

3. RECONVENE MEETING – REGULAR SESSION

Board members present: Mrs. Dawn Anastasio, Mr. Joseph Baczewski, Mrs. Terri Carmody, Mr. Sean Carson, Mr. James Chrzanowski, Mr. David Derynoski, Mr. Zaya Oshana, Mr. Jasper Williams

Board members absent: Mrs. Colleen Clark, Chairperson

Cabinet administrators present: Mr. Steven Madancy, Superintendent of Schools; Mr. Frank Pepe, Assistant Superintendent; Mrs. Jennifer Mellitt, Director of Business & Finance

Student Representatives present: Angelina Miacci, Uptej Singh, and Ryan Ogren.

4. PLEDGE OF ALLEGIANCE

The CyberKnights Team 195 led in reciting the Pledge of Allegiance.

5. CELEBRATION OF EXCELLENCE – CyberKnights Presentation

Mr. Madancy explained that the SHS Robotics Team placed as semifinalists in the FIRST Robotics competition World Championship in Houston, Texas the end of April. He noted that many national and worldwide teams want to build alliances with the CyberKnights, who are one of the top-ranked Robotics teams in the world. He noted that the CyberKnights were active volunteering in the community.

The SHS Robotics CyberKnights Team 195 comprised of 47 students gave a demonstration of this year’s competitive robot with team members explaining the timelines, design, development, manufacturing, programming, assembling, software, and testing of two robots in six weeks for competition. Unfortunately, there was a technical issue with the arm during the World Championship competition, which resulted in them falling in the ranking and end up as semi-finalists this year. Team members explained in detail the various roles within the group and different skills sets, events hosted, donation of supplies to Uganda, sponsorships, mentorship, volunteerism, and community outreach.

Some Board members remembered when Team 195 first started and how they have developed over the years to become a powerhouse within robotics and that they were impressed and proud of their accomplishments. Mr. Oshana stated that the CyberKnights Team 195 were wonderful ambassadors for the town of Southington.

*Mr. Baczewski called for a brief recess at 7:26 p.m.
Mr. Baczewski reconvened the regular meeting at 7:45 p.m.*

MOTION: by Mr. Oshana, seconded by Mr. Derynoski:

“Move to add Agenda Item 10.b ‘Student Expulsion’ to the agenda.”

Motion carried unanimously by voice vote.

6. APPROVAL OF MINUTES – April 27, 2023

MOTION: by Mr. Derynoski, seconded by Mr. Oshana:

“Move to approve the regular Board of Education Minutes of April 27, 2023, as submitted.”

Motion carried by voice vote with Mrs. Carmody abstaining.

7. PUBLIC COMMUNICATIONS

a. Communications from Student Board Representatives

Ryan Ogren reported on the following high school events: FBLA 39th Annual Financial Planning Association of Connecticut State Conference; 2023 Academic Awards Ceremony; AP

Exams; Annual Student Art Show May 15; Scholarship Night May 18; Senior Prom May 20 at Aqua Turf; creating the application and process for selecting two new student representatives to serve on the Board when Ryan and Angelina graduate in June with the new representatives presented at the June 8 Board meeting. He wished all teachers a happy National Teacher Appreciation Week on behalf of the student representatives and all students.

Uptej Singh reported on the SHS athletic season to date with all teams qualifying for the CIAC post-season play. Girls Lacrosse were 13-0 with the most wins in the program's history and ranked 10th in Class L; Girls Softball were 13-0 with Coach Davina Hernandez reaching her 200th career win; Boys Lacrosse ranked 10th in the state in Class L with 10-3 record; Boys Volleyball and Boys & Girls Tennis Teams have 12-2 records to date; Boys and Girls Track Team celebrated Senior Day; Blue Knights Baseball Team will hold a pre-game tribute to the late former Baseball Head Coach John Fontana who was SHS Head Coach for 41 years and retired after the 2002 season.

Angelina Miacci reported on the school events at the other schools. Kennedy Middle School (JFK): Successfully piloted an online sign-out system; two sixth grade students organized a Bottle Collection and non-perishable Food Drive to support Bread for Life; Grade 8 student Arshi Roy received the NJHS Outstanding Achievement Award and will receive \$500 and \$529 College Savings Account; Grade 6 student Mia Wills won the National American Legion Auxiliary Essay Contest for sixth graders; students celebrated Unity Week with theme days. DePaolo Middle School (JAD): The JFK/JAD Annual Drama Club production of Matilda was a tremendous success; SHS Agricultural teachers and staff hosted JAD's Animal Helpers; Grade 6 students celebrated Earth Day; JAD and JFK Spring Sports have started. Derynoski (DES) School: The SHS Key Club helped with the DES PTO-sponsored Family Night, which was a carnival on the playground. Thalberg School (TES): The Thalberg Drama Club will perform Xanadu Junior this month.

Mr. Carson questioned how many AP (Advanced Placement) exams were taken by students. Mr. Madancy explained that those statistics would be reported to the Board in August.

b. Communications from Board Members

Mr. Oshana thanked the businesses in town for their involvement and partnership with the Future Business Leaders of America (FBLA) at the high school.

Mrs. Carmody addressed the Wall of Honor presentations at the high school last week and praised the Maintenance Department for the wonderful job that they did in constructing the Wall of Honor. She also noted that the SHS Art Show was held at the high school the same night as the Wall of Honor with Southington High School having so many talented students. The Special Education students will hold an Art Show Auction at SOCCA (Southington Community Cultural Arts) displaying their photography with the proceeds going to a service dog for one of their classmates.

c. Communications from Administration

1. Southington Education Foundation (SEF): Mr. Madancy thanked the SEF for their work this year for the school district and acknowledged their activities, programs, and grant programs this year. He noted that he and some Board members attended the recent SEF Gala that the community supported.

2. SHS Awards Night: Mr. Madancy reported that a couple of the Board Student Representatives were rock stars and took home a number of awards. The students described the awards that they received.

3. SHS Trip to Dominican Republic: Mr. Madancy explained that he had asked students who recently went on a trip to the Dominican Republic to come to the Board meeting to share their experience. Three students (Nicole Kleinman, Ava Egan, and Francesca Riccio) gave a PowerPoint presentation of their cultural and learning experiences, attending classes at the institute, performing service, and having fun, which enhanced their Spanish language skills resulting in language proficiency. They spoke to students in the Dominican and learned that they have more similarities and interests than differences, which was a learning experience. They thanked the Board for the opportunity to travel. Board members questioned the coffee in the Dominican. The students explained that students in the Dominican never heard of Iced Coffee.

d. Communication from Public – Agenda Items Only

There was no Communication from the Public.

8. SUPERINTENDENT’S REPORT

a. Personnel Report

MOTION: by Mr. Derynoski, seconded by Mrs. Carmody:

“Move to approve the Personnel Report, as submitted.”

Motion carried unanimously by voice vote.

9. OLD BUSINESS

a. Town Government Communications

There was no Town Government Communication.

b. ConEd Battery Storage Project – Tabled from April 27, 2023 Meeting

MOTION: by Mrs. Carmody, seconded by Mr. Williams:

“Move to Table again.”

Motion carried unanimously by voice vote.

10. NEW BUSINESS

a. Approval of Out-of-State/Overnight Field Trip SHS – Austria, Germany & Switzerland

English and Social Studies teachers sponsoring and chaperoning the international travel program to Austria, Germany and Switzerland explained that this was the fourth time doing this trip and it would provide students with an opportunity to explore the culture and history of these countries and that there would be special focus on historical events of World War I and World

War II including the Dachau Concentration Camp. The trip is through EF (Education First) Educational Tours and is for students in grades 9-12 for travel in April 2024.

MOTION: by Mrs. Carmody, seconded by Mr. Derynoski:

“Move to approve the field trip request, as presented by the administration.”

Mr. Derynoski noted that he had visited many of the countries and sites that they would be touring. The teachers explained that they create a Facebook page for their trips posting pictures every day of everything that they do to share their adventures live.

Motion carried unanimously by voice vote.

b. Student Expulsion

MOTION: by Mr. Oshana, seconded by Mr. Derynoski:

“Move to expel Student 2022-2023-20, as presented by the administration.”

Motion carried with Mr. Carson and Mr. Williams abstaining.

11. PUBLIC COMMUNICATIONS

a. Communications from Public on Non-Agenda Items

There was no Communications from the Public on Non-Agenda Items.

12. ADJOURNMENT

MOTION: by Mr. Derynoski, seconded by Mr. Oshana:

:

“Move to adjourn.”

Motion carried unanimously by voice vote.

The meeting adjourned at 8:13 p.m.

Respectfully submitted,

Linda Blanchard

Recording Secretary

Board of Education
Administrative Report
May 25, 2023



1. June 8th-13th as exam half days. June 13th was originally scheduled as a half day. Therefore, we are going to notify families that both the 13th and 14th will be half days.
2. Thank you to Mission Barbecue for their support of the Military Luncheon.



SOUTHINGTON PUBLIC SCHOOLS

Board of Education Southington, Connecticut

Policy & Personnel Committee Meeting Minutes
Wednesday, May 10, 2023 - 5:30pm

Superintendent's Conference Room
Municipal Center, 200 North Main Street
Southington, CT 06489

STEVEN G. MADANCY
SUPERINTENDENT OF SCHOOLS

FRANK M. PEPE
ASSISTANT SUPERINTENDENT
OF SCHOOLS

BOARD OF EDUCATION

COLLEEN W. CLARK
BOARD CHAIRPERSON

JOSEPH BACZEWSKI
VICE CHAIRPERSON

DAWN L. ANASTASIO
SECRETARY

TERRI C. CARMODY

SEAN M. CARSON

JAMES J. CHRZANOWSKI

DAVID J. DERYNOSKI

ZAYA G. OSHANA

JASPER P. WILLIAMS

Members Present: Committee Chair Jasper Williams, David Derynoski, Zaya Oshana.

Members Absent: Dawn Anastasio

Administration Present: Assistant Superintendent Frank Pepe

The meeting was called to order by Chairman Jasper Williams at 5:34 PM.

The committee reviewed suggested edits to Policy 1316 – Relations between Public and School Personnel. The edits prevent using electronic devices to video or record private meetings without District staff express and mutual consent. This policy does not, however, prohibit the recording of public Board meetings; events such as school performances, athletic events, and/or graduation ceremonies; Planning and Placement Team meetings; and/or other meetings in which an individual with a disability is entitled to record such interaction in accordance with the Americans with Disabilities Act.

A proposal for a new stipend for the advisor to the *National World Language Honor Society* (NWLHS) was reviewed. 22 years ago, the Italian Honor Society was founded. In 2008, it expanded to include German, French, Spanish and Latin and was renamed as the NWLHS. It has grown to mirror in size and scope the National Honor Society, (NHS). The advisor responsibilities mirror those of the NHS. The cost of the stipend can be covered by repurposing the unfilled SADD advisor position.

Revisions for both the Assistant Department and Department Chairperson positions were reviewed. The suggested language changes update the descriptions to align with current need based on continuing shifts in the high school's organizational structure. These positions already exist.

The committee unanimously agreed to forward the above items for review of the full Board.

Adjournment – 5:44 PM

Respectfully submitted,


Frank Pepe

200 NORTH MAIN ST.
SOUTHINGTON, CT 06489

WWW.SOUTHINGTONSCHOOLS.ORG

OFFICE TELEPHONE
(860) 628-3202

FAX
(860) 628-3205



SOUTHINGTON PUBLIC SCHOOLS

**Board of Education
Southington, Connecticut
Curriculum & Instruction Committee Meeting Minutes
May 12, 2023 - 9:30 a.m.
Public Assembly Room - Technology Training Lab**

STEVEN G. MADANCY
SUPERINTENDENT OF SCHOOLS

FRANK M. PEPE
ASSISTANT SUPERINTENDENT
OF SCHOOLS

BOARD OF EDUCATION

COLLEEN W. CLARK
BOARD CHAIRPERSON

JOSEPH BACZEWSKI
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JASPER P. WILLIAMS

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Members Present: Committee Chair, Dawn Anastasio; Terri Carmody; Jasper Williams

Administration Present: Assistant Superintendent Frank Pepe; Director of Teaching and Learning for Secondary Education Amy Zappone

School Staff Present: SHS teachers Keagan Radziwon, Heather Pierce and Elementary Math Specialist Christina Mckirryher

Meeting called to order at 9:30 a.m. by Committee Chair Dawn Anastasio.

Southington High School (SHS) teacher Keagan Radziwon presented Unit #2 and #4 of Accelerated Biology. Unit 2, titled *Cell Structure and Function* utilizes the phenomenon of elodea cells changing in salty water as a launch to explore cell structure and transport. Students will delve into the structures of prokaryotes and eukaryotes and determine how the structures of these cells help them to function. Students will pay specific attention to the cell membrane and explore how the structure of this organelle relates to its ability to help maintain homeostasis in living things.

Unit #4 is titled *Cell Cycle and Communication*. Students explore how cells divide, communicate, and differentiate and why small cell size is necessary to maintain homeostasis. Students discover the processes which cells use to accurately divide and explore how differentiated cells work to maintain homeostasis in complex organisms. Students will recognize that errors in differentiation can lead to disease. The anchoring phenomenon is embryonic development through the lens of comparing planaria cells to human cells.

SHS teacher Heather Pierce presented *Forensic Science II* which is a continuation of *Forensic Science I*. It is a half year elective course offered to juniors and seniors and can count as a physical or life science credit. The major topics covered in this course include a review of forensic science basics and the judicial system, DNA fingerprinting, forensic toxicology, forensic anthropology, criminal profiling and psychology, and handwriting analysis. Each unit starts with an actual case study.

Christina Mckirryher and Amy Zappone presented *Bridges Math Intervention*. This program provides targeted instruction and assessment for essential K-5 mathematics skills and concepts. A single expenditure of \$16,500 will provide



SOUTHINGTON PUBLIC SCHOOLS

Teachers Guides, manipulatives, activities and games, assessments, and Bridges Educator Site access across all eight of Southington's elementary schools.

Bridges

- is a strengths-based approach that builds on each student's abilities.
- starts with manipulatives and moves to two-dimensional representations and mental images.
- complements regular math instruction.
- is used in small-group instruction and provides ongoing progress monitoring consistent with Response to Intervention (RTI) and Multi-Tiered System of Support (MTSS).

Committee members unanimously agreed to forward the above items to the full Board for review.

Meeting was adjourned at 10:10 a.m.

Respectfully Submitted,

Frank Pepe

STEVEN G. MADANCY
SUPERINTENDENT OF SCHOOLS

FRANK M. PEPE
*ASSISTANT SUPERINTENDENT
OF SCHOOLS*

BOARD OF EDUCATION

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BOARD CHAIRPERSON

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**BOARD OF EDUCATION
SOUTHINGTON, CONNECTICUT**

Informational Only _____ Board Meeting Date May 25, 2023

Decision Requested X Agenda Code 10 a.

AGENDA REPORTING FORM

Agenda Topic: 2023-2024 Operating Budget Reallocation/Adoption

Summary of Issue: The Town Council adopted the Board of Education budget on May 8, 2023 for the 2023-2024 school year.

Background: Administration will provide their recommended reallocation cut list to the Board under separate cover.

Alternative Strategies: N/A

Cost (if applicable): N/A **Funding Source:** N/A

Beginning Date of Program or Project: July 1, 2023

Ending Date of Program or Project: June 30, 2024

Recommendation or Comment: Recommend that the Board of Education adopt the 2023-2024 Operating Budget with adjustments.



Signature of Superintendent of Schools

Titles of Attachment:

1. Operating Budget Reallocation Plan Draft 2023-2024
(under separate cover)

**BOARD OF EDUCATION
SOUTHINGTON, CONNECTICUT**

Informational Only _____ Board Meeting Date May 25, 2023

Decision Requested X Agenda Code 10 b.

AGENDA REPORTING FORM

Agenda Topic: Ratification of UPSEU Local 424, Unit 113, Southington BOE Physical Therapists & Occupational Therapists Contract

Summary of Issue: The Southington Board of Education and the Southington BOE Physical Therapists & Occupational Therapists Union (UPSEU Local 424, Unit 113) have been negotiating a contract for a three (3) year agreement beginning July 1, 2023 through June 30, 2026.

Background: N/A

Alternative Strategies: N/A

Cost (if applicable): N/A **Funding Source:** N/A

Beginning Date of Program or Project: July 1, 2023

Ending Date of Program or Project: June 30, 2026

Recommendation or Comment: Recommend approving the tentative agreement between the Southington Board of Education and the Southington BOE Physical Therapists & Occupational Therapists Union (UPSEU Local 424, Unit 113).



Signature of Staff Member Submitting Report



Signature of Superintendent of Schools

Title of Attachments:

1. UPSEU Southington BOE Physical Therapists & Occupational Therapists Contract

Policy 1316
Relations Between Public and School Personnel
– Revised Policy
Draft

Relations between Public and School Personnel

Conduct on School Property (Civility)

The Southington Board of Education (Board) expects mutual respect, civility and orderly conduct among all individuals on school property or at school events. District staff will treat parents and other members of the public with respect and expect the same in return. The Board is committed to maintaining orderly educational and administrative processes in keeping schools and administrative offices free from disruptions and preventing unauthorized persons from entering school/district grounds.

This policy promotes mutual respect, civility and orderly conduct among Board members, district employees, parents and the public. It is not intended to deprive any individual of his/her right to freedom of expression, but only to maintain to the extent possible and reasonable, a safe, harassment-free environment for students and staff. Volatile, hostile or aggressive actions and words cannot be tolerated, and individuals who engage in these activities may face legal penalties.

In the interest of presenting Board members and District employees as positive role models to the students as well as to the community, the Board encourages positive communication and discourages volatile, hostile or aggressive actions. The Board seeks public cooperation with this endeavor.

Standards

- A. Expected behaviors include but are not limited to:
 - 1. Respect and courtesy in language, demeanor, and actions
 - 2. Moderate tone and volume of voice
 - 3. Active and respectful listening
 - 4. Respectful acknowledgement of cultural differences
 - 5. Respect for the personal, civil, and property rights of others
 - 6. Appropriate and courteous use of telephone, public address systems, electronic devices and any other verbal communication device
 - 7. Appropriate and courteous written communication, including notes, letters, email and text messages

- B. Unacceptable behaviors include but are not limited to:
 - 1. Rude, insulting or demeaning language and/or actions
 - 2. Persistently unreasonable demands
 - 3. Intrusive and/or interruptive behavior

4. Displays of temper
5. Harassment and intimidation
6. Threatening and/or abusive gestures and behavior
7. Using electronic devices to make a video and/or audio recording of private meetings with District staff without their express and mutual consent. For purposes of this policy, "private meetings" refer to meetings or conferences, whether in person, online, or telephonic, with any District administrator(s), teacher(s), and/or other staff to discuss concerns about a student and/or the operations of the Southington Public Schools. This policy does not, however, prohibit the recording of public Board meetings; events such as school performances, athletic events, and/or graduation ceremonies; Planning and Placement Team meetings; and/or other meetings in which an individual with a disability is entitled to record such interaction in accordance with the Americans with Disabilities Act.

- C. Incidents of uncivil behavior should be resolved cooperatively with the individual(s) most directly involved.
- D. The Superintendent or designee will develop administrative regulations that provide direction for occurrences of disruptive behavior, dispute resolution, and enforcement of this Civility policy.

Safety and Security

The Superintendent or designee will ensure that a safety and/or crisis intervention techniques program is provided ~~in order to~~ to raise awareness on how to deal with these situations if and when they occur.

When violence is directed against an employee, or theft against property, employees shall promptly report the occurrence to their Principal or supervisor and file a written report.

An employee whose person or property is injured or damaged by willful misconduct of a student may ask the District to pursue legal action against the student or the student's parent/guardian.

Enforcement

The Principal or his/her designee shall be responsible for enforcing the conduct required by this civility policy. When the Principal or his/her designee sees or is advised by others of an individual engaged in the prohibited conduct, which in his or her judgment and discretion does not pose any immediate threat of injury to persons or property, the Principal or designee shall tell the individual that the conduct is prohibited and attempt to persuade the individual to stop. The Principal or designee shall also warn the individual of the consequences for failing to stop. If the person refuses to stop engaging in the prohibited conduct, or if the person's conduct, in the judgment and discretion of the Principal or designee poses an immediate threat of injury to persons or property, or to public order, the Principal or designee shall have the individual removed immediately from

the school property or the school function. If necessary, local law enforcement authorities will be contacted to assist in removing the person.

The District may initiate disciplinary action against any student or staff member, as appropriate, in compliance with applicable Board of Education policies and bargaining unit agreements. In addition, the District reserves the right to pursue a civil or criminal legal action against any person violating this policy and its corresponding administrative regulation. **The District further reserves the right to direct that communication with individuals who violate this policy be conducted via writing (e.g., e-mail) rather than in person, via web-conferencing, or by telephone.**

Documentation

When it is determined by staff that a member of the public is in the process of violating the provisions of this policy, an effort should be made by staff to provide a written copy of this policy at the time of occurrence.

Following any violation of the provisions of this policy, the employee will immediately notify his/her supervisor and provide a written report of the incident.

(cf. 1110.1 - Parent Involvement)

(cf. 1120 - Public Participation at Board of Education Meetings)

(cf. 1250 - Visits to Schools)

(cf. 1251 - Loitering or Causing Disturbances)

(cf. 1310 - Relations Between the Public and School Personnel)

(cf. 1312 - Public Complaints)

(cf. 1330 - Use of School Facilities)

(cf. 5131.911 - Bullying)

(cf. 4118.15/4218.15 - Workplace Bullying)

(cf. 1700 - Otherwise Lawful Possession of Firearms on School Property)

(cf. 6145.71 - Use of Alcohol by Adults)

Legal Reference: Connecticut General Statutes

1-225 Meetings of the government agents to be public.

1-232 Conduct of the meeting.

10-221 Boards of education to prescribe rule(s), policies, and procedures.

10-238 Petition for hearing by board of education.

10-239 Use of school facilities for other purposes.

53a-185 Loitering in or about school grounds: Class C misdemeanor.

Policy Updated: 5.10.2023

Relations between Public and School Personnel

Conduct on School Property (Civility)

Standards

- A. Expected behaviors include but are not limited to:
 - 1. Respect and courtesy in language, demeanor, and actions
 - 2. Moderate tone and volume of voice
 - 3. Active and respectful listening
 - 4. Respectful acknowledgement of cultural differences
 - 5. Respect for the personal, civil, and property rights of others
 - 6. Appropriate and courteous use of telephone, public address systems, electronic devices and any other verbal communication device
 - 7. Appropriate and courteous written communication, including notes, letters, email and text messages

- B. Unacceptable behaviors include but are not limited to:
 - 1. Rude, insulting or demeaning language and/or actions
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 - 3. Intrusive and/or interruptive behavior
 - 4. Displays of temper
 - 5. Harassment and intimidation
 - 6. Threatening and/or abusive gestures and behavior
 - 7. Using electronic devices to make a video and/or audio recording of private meetings with District staff without their express and mutual consent. For purposes of this regulation, “private meetings” refer to meetings or conferences, whether in person, online, or telephonic, with any District administrator(s), teacher(s), and/or other staff to discuss concerns about a student and/or the operations of the Southington Public Schools. This regulation does not, however, prohibit the recording of public Board meetings; events such as school performances, athletic events, and/or graduation ceremonies; Planning and Placement Team meetings; and/or other meetings in which an individual with a disability is entitled to record such interaction in accordance with the Americans with Disabilities Act.

- C. Incidents of uncivil behavior should be resolved cooperatively with the individual(s) most directly involved.

Training and Resources

- A. The Superintendent/designee will communicate expectations for civil behavior outlined in **this regulation and its accompanying** policy to all school administrators and central office personnel.
- B. The Principal/supervisor or designee will communicate expectations of civil behavior annually to their staff, students, parents, and community groups as appropriate.
- C. The Principal/supervisor or designee will provide appropriate resources, guidance, and professional development with the goal of promoting civil behavior and addressing related concerns within the school system.

Disruptions

1. Any individual who disrupts or threatens to disrupt school/office operations, threatens the health and safety of students or staff, willfully causes property damage; uses loud and/or offensive language which could provoke a violent reaction; or who has otherwise established a continued pattern of unauthorized entry on District property, will be directed to leave the school or District property promptly by the Superintendent, Principal or designee.
2. If any member of the public uses obscenities or communicates in verbal or written language in a demanding, loud, insulting and/or demeaning manner, **or if an individual attempts to record a private meeting with District administrator(s), teacher(s), or staff without such individual's express consent,** the administrator or employee to whom the remarks are directed will calmly and politely admonish the speaker to communicate civilly **and/or cease recording the meeting** and provide the speaker, **at the speaker's request,** with a copy of this **regulation and the accompanying policy.** If corrective action is not taken by the abusing party, the District employee will verbally notify the abusing party that his/her participation in the meeting, conference, electronic or telephone conversation is terminated and, if there is a meeting or conference on District premises, the offending person will be directed to leave promptly.
3. Disruptions on the part of a staff member or behavior that would be considered insulting or demeaning toward others by a staff member would be treated as described above. Appropriate disciplinary action is to be taken in accordance with applicable Board of Education policies and the current collective bargaining unit agreement.
4. **When an individual records a private meeting without the express consent of those involved and/or is directed to cease recording a private meeting and refuses to do so, the District administrator, teacher, and/or staff member may end the private meeting and**

may require that future communication with the offending individual be conducted via writing (e.g., e-mail) rather than in person, via web-conferencing, or by telephone.

5. When an individual is directed to leave under circumstances outlined in paragraphs 1 or 2, the Superintendent, Principal or designee shall inform the person that he/she may be guilty of a misdemeanor in accordance with Connecticut General Statutes.

Resolution Process for Addressing Concerns and Issues

A. Resolution through Cooperative Agreement

Individuals who feel they have been subjected to uncivil conduct are encouraged to resolve the concern/issue with the person or persons directly involved when appropriate. Through a process of cooperative agreement, the affected individuals may be able to reach a mutually effective resolution.

B. When Resolution is not Reached through Cooperative Agreement

Either party may cite this **regulation and the accompanying** policy and notify the other person that they are ending the conversation or the interaction and removing themselves from the situation (for instance, ending a phone call, walking out of the room, or requesting the other individual leave the room).

Enforcement

The Principal or his/her designee shall be responsible for enforcing the conduct required by this regulation and the accompanying civility policy. When the Principal or his/her designee sees or is advised by others of an individual engaged in the prohibited conduct, which in his or her judgment and discretion does not pose any immediate threat of injury to persons or property, the Principal or designee shall tell the individual that the conduct is prohibited and attempt to persuade the individual to stop. The Principal or designee shall also warn the individual of the consequences for failing to stop. If the person refuses to stop engaging in the prohibited conduct, or if the person's conduct, in the judgment and discretion of the Principal or designee poses an immediate threat of injury to persons or property, or to public order, the Principal or designee shall have the individual removed immediately from the school property or the school function. If necessary, local law enforcement authorities will be contacted to assist in removing the person.

The District may initiate disciplinary action against any student or staff member, as appropriate, in compliance with applicable Board of Education policies and bargaining unit agreements. In addition, the District reserves the right to pursue a civil or criminal legal action against any person violating this administrative regulation. The District further reserves the right to direct that communication with individuals who violate this regulation be conducted via writing (e.g., e-mail) rather than in person, via web-conferencing, or by telephone.

**BOARD OF EDUCATION
SOUTHINGTON, CONNECTICUT**

Informational Only _____

Board Meeting Date May 25, 2023

Decision Requested X

Agenda Code 10 d 1.

AGENDA REPORTING FORM

Agenda Topic: Approval of Job Description – SHS National World Language Honor Society Stipend – New.

Summary of Issue: Approval of Job Description – SHS National World Language Honor Society Stipend – New.

Background: N/A

Alternative Strategies: N/A

Cost (if applicable): N/A **Funding Source:** _____

Beginning Date of Program or Project: N/A

Ending Date of Program or Project: N/A

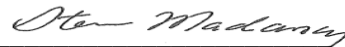
Recommendation or Comment: Move that the Board of Education approve the job description presented by the administration.

Titles of Attachments:

1. Job Description



Signature of Staff Member Submitting Report



Signature of Superintendent of Schools

**SHS National World Language Honor Society Stipend -
New**



SOUTHTON PUBLIC SCHOOLS

JOB DESCRIPTION

TITLE: World Language Honor Society Advisor

QUALIFICATIONS:

1. Current Southington High School World Language Department employee.
2. Possesses knowledge of the World Language Honor Society's associated processes and requirements.
3. Demonstrates experience in working cooperatively and effectively with colleagues.
4. Demonstrates experience in working effectively with students.
5. Demonstrates organizational skills.

REPORTS TO: Southington High School Principal or designee

SUPERVISES: World Language Honor Society members

JOB GOAL: Work with administration, teachers, staff, specialists, parents/guardians to serve the advisor to the World Language Honor Society and offer opportunities and events for students to promote the target languages and cultures.

PERFORMANCE RESPONSIBILITIES:

Section 1. The chapter adviser is responsible for the direct, day-to-day supervision of the chapter and acts as liaison between faculty, administration, students, and the community.

Section 2. The chapter adviser maintains files on membership, chapter history, activities, and financial transactions.

Section 3. The chapter adviser regularly reviews each member for compliance with Society standards and obligations.

Section 4. The chapter adviser helps the chapter officers understand and carry out their respective duties.

Section 5. The chapter adviser serves as a member of the faculty.

Section 6. The chapter adviser supervises the selection process for new members and hosts the annual induction ceremony for new members.

TERMS OF EMPLOYMENT: Annual appointment by the Board of Education.

EVALUATION: Performance evaluated annually by the Southington High School Principal or designee.

Associated Stipend for 2023-2024 is \$1,176.00

**BOARD OF EDUCATION
SOUTHINGTON, CONNECTICUT**

Informational Only _____ Board Meeting Date May 25, 2023

Decision Requested X Agenda Code 10 d 2.

AGENDA REPORTING FORM

Agenda Topic: Approval of Job Description – High School Assistant Department Leader - Revised.

Summary of Issue: Approval of Job Description – High School Assistant Department Leader - Revised.

Background: N/A

Alternative Strategies: N/A

Cost (if applicable): N/A **Funding Source:** _____

Beginning Date of Program or Project: N/A

Ending Date of Program or Project: N/A

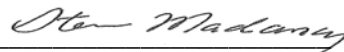
Recommendation or Comment: Move that the Board of Education approve the job description presented by the administration.

Titles of Attachments:

1. Job Description



Signature of Staff Member Submitting Report



Signature of Superintendent of Schools

High School Assistant Department Leader - Revised



SOUTHINGTON PUBLIC SCHOOLS JOB DESCRIPTION

TITLE: High School Assistant Department ~~Chairperson~~ Leader

QUALIFICATIONS:

1. Certification as an ~~intermediate~~ Administrator (092) or ~~a~~ Department ~~chairperson~~ Leader (105) preferred.
2. Demonstrates ~~a~~ knowledge and experience in the department.
3. Demonstrates ~~a~~ experience in working cooperatively and effectively with others.
4. Three (3) years of successful teaching experience.

REPORTS TO: High School Principal or ~~his/her~~ designee and department ~~head~~ leader

SUPERVISES: Department program as directed by department ~~chairperson~~. leader

JOB GOAL: ~~Assist in supervision of the department.~~ Assist in coordination and implementation of curriculum, programs and department operations.

PERFORMANCE RESPONSIBILITIES:

1. Assist with the supervision of staff.
2. Assist with curriculum development and evaluation.
3. Assist with routine matters of concern to teachers.
4. Assist with the development and control of the department's budget.
5. Assist with the management and handling of supplies and equipment.
6. Assist with the student management within the department.
7. Assist with the supervision of substitute teachers.
8. Assist with student scheduling and teacher assignments.
9. Serve as a member to the Department Chairperson's Council. of the School Improvement Team.
10. Assist in coordinating programs with ~~guidance and media personnel.~~ the counseling department and administration.
11. Perform other related duties as may be assigned by the principal or department ~~chairperson~~ leader.

TERMS OF EMPLOYMENT: Annual appointment by the Board of Education.

EVALUATION: Performance ~~to be~~ evaluated annually by ~~the High School Principal.~~ High School Administration.

**BOARD OF EDUCATION
SOUTHINGTON, CONNECTICUT**

Informational Only _____ Board Meeting Date May 25, 2023

Decision Requested X Agenda Code 10 d 3.

AGENDA REPORTING FORM

Agenda Topic: Approval of Job Description – High School Department Leader - Revised.

Summary of Issue: Approval of Job Description – High School Department Leader - Revised.

Background: N/A

Alternative Strategies: N/A

Cost (if applicable): N/A **Funding Source:** _____

Beginning Date of Program or Project: N/A

Ending Date of Program or Project: N/A

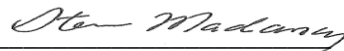
Recommendation or Comment: Move that the Board of Education approve the job description presented by the administration.

Titles of Attachments:

1. Job Description



Signature of Staff Member Submitting Report



Signature of Superintendent of Schools

High School Department Leader - Revised



SOUTHINGTON PUBLIC SCHOOLS JOB DESCRIPTION

TITLE: High School Department ~~Chairperson~~ **Leader**

QUALIFICATIONS:

1. Certification as an intermediate administrator (092) or department chairperson (105).
2. Demonstrated knowledge and experience in the department.
3. Demonstrated experience in working cooperatively and effectively with others.
4. Three (3) years of successful teaching experience.

REPORTS TO: High School Principal or designee ~~and department head~~

JOB GOAL: To effectively lead the department in the coordination and implementation of curriculum, programs, and department operations.

PERFORMANCE RESPONSIBILITIES:

1. Assist with the evaluation and supervision of teachers and ~~paraprofessionals~~ **paraeducators**.
2. ~~Exhibit leadership in the area of~~ **Lead viable** curriculum development and evaluation.
3. **Plan and facilitate professional learning for the department and related staff.**
4. Assist in all routine matters that concern teachers in the department.
5. Assist with the development and control of the department's budget.
6. ~~Assume responsibility for the~~ **Ordering and receiving of** all supplies and materials.
7. Assist the administration in hiring ~~of new teachers~~ **and/or to fill** interim positions.
8. Assist the administration in maintaining proper school discipline.
9. Supervise **substitute teachers**.
10. Assist the administration with student scheduling and teacher assignments.
11. ~~Act Serve~~ as a member of the ~~Department Chairperson's council.~~ **School Improvement Team by actively participating, working towards a consensus and disseminating information to the department.**
12. Act in an advisory capacity to the School Counseling ~~and Media Departments.~~ **Department.**
13. ~~To~~ **Perform** any and all other related duties assigned by the building principal.

TERMS OF EMPLOYMENT: Annual appointment by the Board of Education.

EVALUATION: Performance ~~to be~~ evaluated annually by the High School Principal or ~~his/her~~ designee.

Unit Overview	
Unit Title:	Unit 2: What is Life~Cell Structure and Function
Teacher:	S. Kirsche and K. Radziwon
Grade Level/Course:	Accelerated Biology
Length/Dates:	5 weeks
Unit Summary: 2-4 sentences describing the main ideas, content and skills of the unit.	Students will use the phenomenon of elodea cells changing in salty water as a launching off point to explore cell structure and transport. Students will delve into the structures of prokaryotes and eukaryotes and how the structures of these cells help them to function. Students will pay specific attention to the cell membrane and explore how the structure of this organelle relates to its ability to help maintain homeostasis in living things.

Explanation
Select PEs that work together (bundle) to promote proficiency in using ideas expressed. Often a bundle will include PEs from a single NGSS topic or DCI, but a bundle could draw in PEs from other topics or DCIs.
PE(s) to be addressed (include assessment boundaries and clarification statements).
<p>Unit 2: Cell Structure and Function</p> <ul style="list-style-type: none"> ● HS-PS1-6. Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.* ● HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
Unpack DCI(s), SEPs, and CCCs coded to the PEs to identify implications for instruction.

SEP Implications	DCI Implications	CCC Implications
<p>Constructing Explanations and Designing Solutions</p> <ul style="list-style-type: none"> Refine a solution to a complex real-world problem, based on scientific knowledge, student-generated sources of evidence, prioritized criteria, and tradeoff considerations <p>Planning & Conducting Investigations</p> <ul style="list-style-type: none"> Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design: decide on types, how much, and accuracy of data needed to produce reliable measurements and consider limitations on the precision of the data (e.g., number of trials, cost, risk, time), and refine the design accordingly. 	<p>PS1.B: Chemical Reactions</p> <ul style="list-style-type: none"> In many situations, a dynamic and condition-dependent balance between a reaction and the reverse reaction determines the numbers of all types of molecules present. <p>ETS1.C: Optimizing the Design Solution</p> <ul style="list-style-type: none"> Criteria may need to be broken down into simpler ones that can be approached systematically, and decisions about the priority of certain criteria over others (tradeoffs) may be needed. (secondary) <p>LS1.A: Structure and Function</p> <ul style="list-style-type: none"> Feedback mechanisms maintain a living system's internal conditions within certain limits and mediate behaviors, allowing it to remain alive and functional even as external conditions change within some range. Feedback mechanisms can encourage (through positive feedback) or discourage (negative feedback) what is going on inside the living system. 	<p>Stability and Change</p> <ul style="list-style-type: none"> Much of science deals with constructing explanations of how things change and how they remain stable. Feedback (negative or positive) can stabilize or destabilize a system.

Transfer Goals (Vision of the Graduate)

List the long-term and/or school-wide independent student behaviors that this unit will address.

Collaboration Transdisciplinary Goal:

Students flexibly and cooperatively work with others in physical and virtual environments and assume shared responsibility for completing a project or achieving a goal.

Communication Transdisciplinary Goal:

Students effectively communicate and use interpersonal skills in a range of formal and informal contexts.

TEACHER LEARNING PLAN (including Assessments)

Starting: 2nd week of Oct.

Ending: Beginning of November

Unit 2- Cell Structure and Function

Unit Tracker

Anchoring Phenomenon: Elodea and Salt Water

MATERIALS NEEDED

Elodea Lab

- Elodea plant leaves
- microscope
- paper towels
- eye dropper
- 5% salt solution
- 10% salt solution

Cell Observation Lab

- Microscope
- Clean slide and cover slip
- forceps
- Section of onion (one layer, approximately 1cm-2cm square)
- Flat toothpick
- Iodine *stain*
- Methylene blue *stain*

Dialysis Tubing Membrane Lab

- Glucose Solution,
- Starch Solution,
- Iodine Solution,
- Glucose Test Strips,
- Dialysis Tubing,
- String,
- 400 ml Beaker,
- Pipettes,
- Scissors,
- Ruler

Teacher Target Question

Activity

Standards/Objectives

Students Will Know and Wonder

Anchoring Phenomenon Routine (1 period)

Anchoring Phenomenon- Elodea response to environment

- **Acc Bio Exp 2- Elodea Initial Model**

- Suggested primers: Labeled

Students will make observations and ask questions about DCI:

Learning Target:
I will make appropriate biological

Know:

- Scientific drawings are done in a certain manner.
- Elodea experience changes when placed in salt water.

Wonder:

- What is inside the elodea? Is this

	<p>Elodea diagram to use with lab</p> <ul style="list-style-type: none"> ■ Drawing on background knowledge- draw a cell structure 	<p>drawings and observe changes in Elodea due to environmental changes.</p> <p>Success Criteria:</p> <ul style="list-style-type: none"> ● Observe distinct changes in cell structure shape/arrangement ● Provide a plausible explanation for why change occurred 	<p>the same in all living things?</p> <ul style="list-style-type: none"> ● Why do they change? ● How do the changes happen? <p>Next steps:</p> <ul style="list-style-type: none"> ● Students will begin to explore the structures we were seeing under the microscope and how they compare to other living things?
<p><i>EQa: What are the structures that we see in the Elodea?</i></p> <p><i>EQb: How do Elodea (plant) cells differ from our own?</i></p> <p><i>(5-6 periods)</i></p>	<p>Anchoring Activity:</p> <ul style="list-style-type: none"> ● Lab: Observing Living Cells ● CER: Classifying an Unknown Organism ● Revisit model and add organelle labels before moving on. <p>Suggested Supporting Activity:</p> <ul style="list-style-type: none"> ● What are cells? <ul style="list-style-type: none"> ○ Micrograph Images ○ Real Cell Gallery ○ Cell Image Library ● Mystery Cell Model ● Cell Labeling Activity ● Cell Analogy Project ● Cell Organelle Speed Dating ● Bringing Home Baby Case Study 	<p>Students will gather and analyze data to show how the structure of cells relates to their functions when in stable environments.</p> <p>Recommended Learning Target: I will compare and contrast plant and animal cell structures</p> <p>Reccomeded Success Criteria:</p> <ul style="list-style-type: none"> ● Describe major differences between prokaryotic and eukaryotic cells, and plant vs animal cells. ● Describe the function of major organelles ● Relate the form of cells as a whole and individual organelles to their function 	<p>Know:</p> <ul style="list-style-type: none"> ● The major differences between prokaryotic and eukaryotic cells and which type elodea are. ● Elodea are plant cells based on the organelles seem and will explain how they are different from animals. ● The major organelles have functions that allow all living things to maintain life. <p>Wonder:</p> <ul style="list-style-type: none"> ● Why are prokaryotes smaller and simpler? ● Why are organelles necessary and how do they help maintain homeostasis? <p>Next steps:</p> <ul style="list-style-type: none"> ● Students will explore why larger cells need to be compartmentalized and also why more complex systems have more “parts.”
	<p>Suggested Supporting Activities</p>	<p>Students will construct an</p>	<p>Know:</p>

<p><i>EQ: Why do cells have to have so many parts?</i> (1-2 periods)</p>	<ul style="list-style-type: none"> ● Cell Theory ● Impact of Compartmentalization <ul style="list-style-type: none"> ○ Comparison of Prokaryotes, Eukaryotes ● Big Idea Slide (as review before moving on) 	<p>explanation of how the structures in cells allow them to maintain stable conditions.</p> <p>Learning Target: I will construct an explanation of how the structures in cells allow them to maintain stable conditions.</p> <p>Success Criteria:</p> <ul style="list-style-type: none"> ● Compare small and large cells contributes to the differences in functions. 	<ul style="list-style-type: none"> ● Larger cells have more specialized parts in order to carry out more complex functions. ● Elodea are a relatively large cell so must have these specialized parts. <p>Wonder:</p> <ul style="list-style-type: none"> ● How do these organelles help cells to maintain homeostasis in changing conditions? ● How does this help explain the changes in the elodea leaf? <p>Next steps:</p> <ul style="list-style-type: none"> ● Students will explore the structure of the cell membrane and its specialized functions.
<p><i>EQ: What is special about the structure that separates one cell from another?</i> (3-4 periods)</p>	<p>Anchoring Activity:</p> <ul style="list-style-type: none"> ● Dialysis Membrane Lab or Serendip Membrane Structure & Function Lab <p>Suggested Supporting Activities:</p> <ul style="list-style-type: none"> ● Membrane Structure Coloring ● Membrane Structure/Bubble Lab 	<p>Students will show that the structure of the cell membrane allows it to play a vital role in maintaining homeostasis.</p> <p>Learning Target: I will be able to demonstrate how cell membrane structure helps maintain homeostasis.</p> <p>Success Criteria:</p> <ul style="list-style-type: none"> ● Describe the structure of a cell membrane. ● Explain how cell membrane structure helps a cell maintain homeostasis ● Measurably demonstrate at least one hypertonic, hypotonic or isotonic solution 	<p>Know:</p> <ul style="list-style-type: none"> ● Membranes of all living things (including elodea) are semi-permeable and are constantly responding to their surroundings. ● Membranes are made up of different macromolecules working together to maintain homeostasis. <p>Wonder:</p> <ul style="list-style-type: none"> ● How does the cell control the entrance/release of chemicals across the cell membrane? <p>Next steps:</p> <ul style="list-style-type: none"> ● Students will investigate the different types of transport across the cell membrane.

<p><i>EQ: What are the different ways that substances can move through the membrane?</i></p>	<ul style="list-style-type: none"> • Transport in Cells POGIL • “Why is it deadly to drink salt water?” Big Idea Slide 	<p>Learning Target: I can use models to explain how materials move across a membrane in a variety of situations.</p> <p>Success Criteria:</p> <ul style="list-style-type: none"> • Explain how water moves across a membrane through osmosis. • Predict what would happen to animal/plant cells in various environments. 	<p>Know:</p> <ul style="list-style-type: none"> • Passive transport is the movement of materials without the use of energy and occurs down a concentration gradient. • Osmosis is a specialized type of diffusion and is what we saw occur in the elodea cell. <p>Wonder:</p> <ul style="list-style-type: none"> • Since these are passive processes, what happens when changes to equilibrium occur? <p>Next steps:</p> <ul style="list-style-type: none"> • Students will explore how changes to equilibrium impact human and plant cells.
<p><i>EQ: Why did the water and salt move the way they did in the Elodea?</i> (4-5 periods)</p>	<p>Anchoring Activity:</p> <ul style="list-style-type: none"> • Salt Water Patient Analysis (Kirsche Revision) • Final Elodea Model 	<p>Students will carry out investigations to show that molecules move spontaneously down a concentration gradient through the cell membrane which can impact the stability of the cell.</p> <p>Learning Target: I can plan and carry out an investigation to show the effects of hypertonic, hypotonic, and isotonic solutions their effects on living cells</p> <p>Success Criteria:</p> <ul style="list-style-type: none"> • Design and carry out an investigation. • Explain how the “wrong” tonicity can lead to health problems in living cells 	<p>Know:</p> <ul style="list-style-type: none"> • Osmosis is a specialized type of diffusion. • Plant cells (like elodea) respond differently than animal cells to hypertonic and hypotonic environments. <p>Wonder:</p> <ul style="list-style-type: none"> • These passive processes can cause cell damage or even death. How do living cells prevent this? <p>Next steps:</p> <ul style="list-style-type: none"> • Students will explore active transport.

<p><i>EQ: How might the cell move a substance into or out of the cell that wouldn't naturally move in that direction?</i> (1-2 periods)</p>	<p>Mini Phenomenon: Contractile Vacuoles</p> <p>Suggested Supporting Activities:</p> <ul style="list-style-type: none"> • Intro to Active Transport (CK12 intro) • Membrane Potential POGIL • BioZone Osmotic Potential 	<p>Students will construct an explanation to show that living things can use energy to create a concentration gradient that helps the cell/organism to maintain homeostasis and react to a changing environment.</p> <p>Learning Target: I will be able to explain how cells use energy to maintain a stable environment.</p> <p>Success Criteria:</p> <ul style="list-style-type: none"> • Explain how cells use energy to move chemicals against a concentration gradient to maintain homeostasis. • Understand the difference between the different cell membrane transports. • Explain how active transport transports chemicals against the concentration gradient. 	<p>Know:</p> <ul style="list-style-type: none"> • Some cells have structures unlike the elodea cell that allow them to maintain homeostasis when not at equilibrium, but these use energy. • Cells can use energy to actively move chemicals against a concentration gradient to maintain homeostasis. • Active transport requires ATP. • The Na⁺/K⁺ pump and the H⁺ pump are vitally important forms of active transport in animals and plants, respectively. <p>Wonder:</p> <ul style="list-style-type: none"> • What other things can set up a gradient across a membrane? <p>Next steps:</p> <ul style="list-style-type: none"> • Students will explore Action potential using other materials.

Unit 2 Assessment - 30 pts ([HS-PS1-6](#) and [HS-LS1-3](#))

Other Performance Assessments from Unit

1. CER: Classifying an Unknown Organism (argumentation slide only) - 8 pts. (Communication, **LS1.A: Structure and Function**)
2. Salt Water Patient Analysis - 16 pts (Collaboration, [HS-PS1-6](#))
3. Final Model - 14 pts (Communication, [HS-LS1-3](#))

Teachers should aim to have roughly 100 Performance Points per Unit.

- a. This unit has a total of 68 points for common assessments
- b. Teachers have the remaining points to use for their own performance tasks/quizzes/reading check-ins, etc

SOUTHINGTON HIGH SCHOOL

Unit 2: Cell Structure & Function

Accelerated Biology

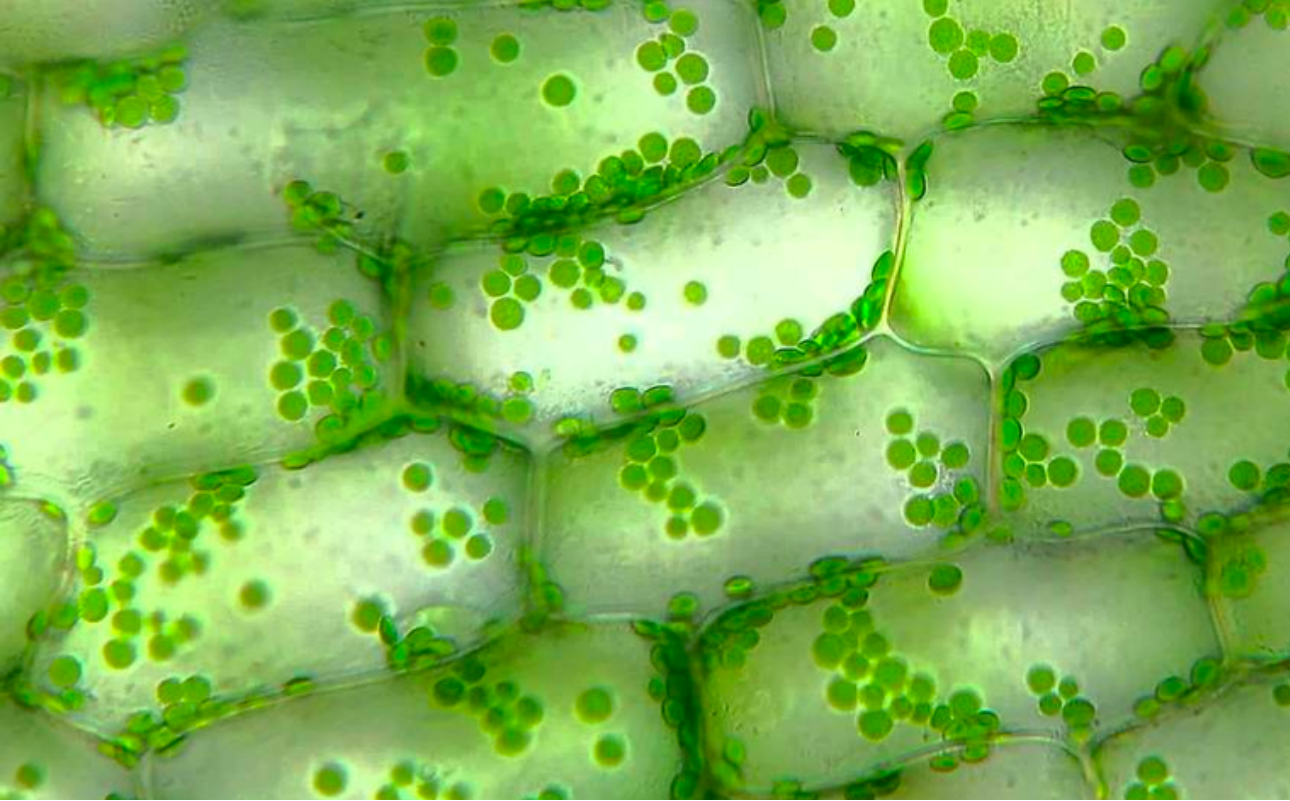


Accelerated Biology Unit 2: Cell Structure & Function

Unit Overview

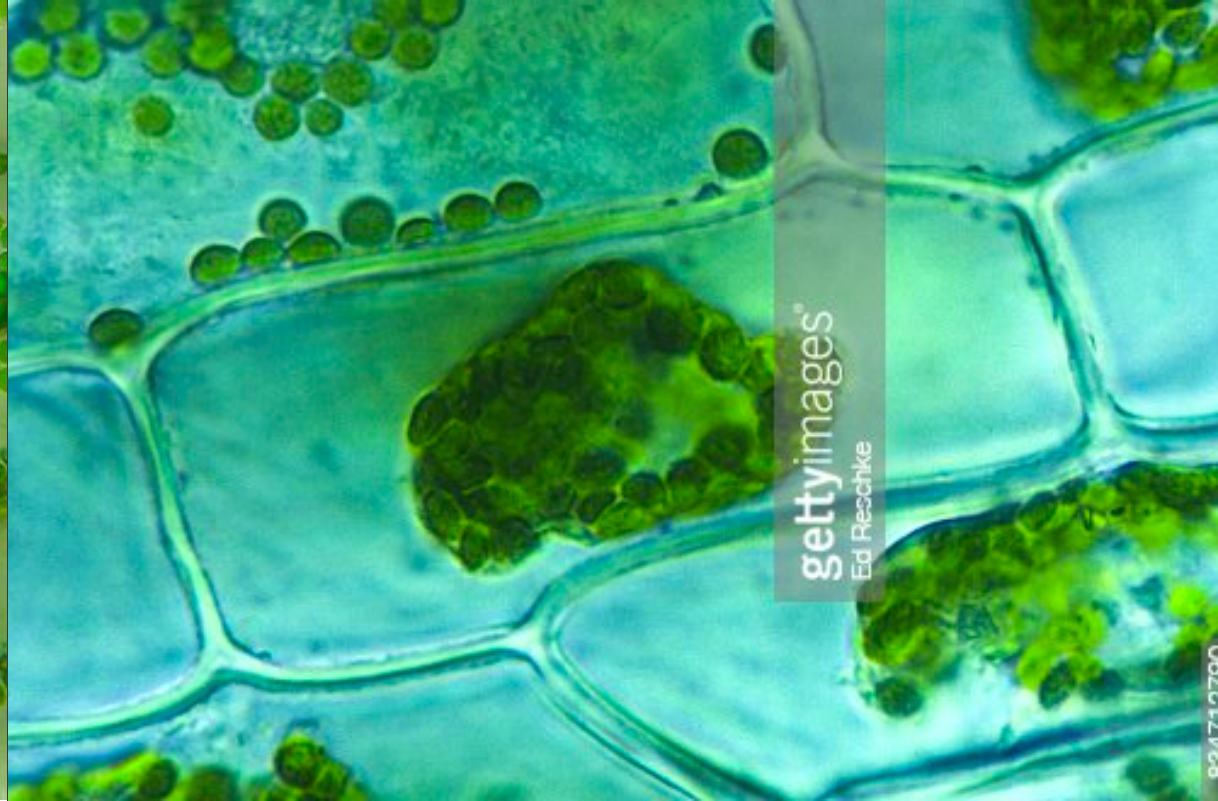
- Students will use the phenomenon of elodea cells changing in salty water as a launching off point to explore cell structure and transport.
- Students will delve into the structures of prokaryotes and eukaryotes and how the structures of these cells help them to function.
- Students will pay specific attention to the cell membrane and explore how the structure of this organelle relates to its ability to help maintain homeostasis in living things.



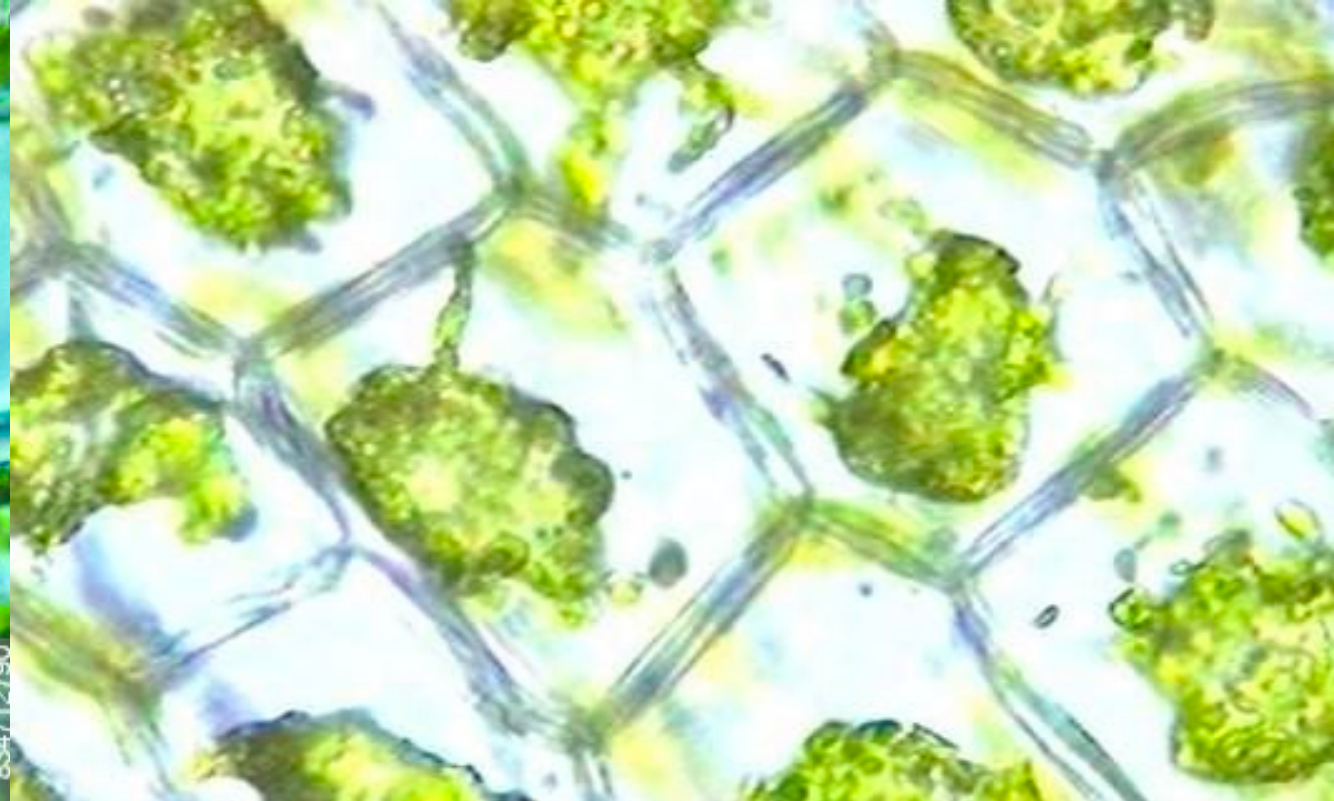


Elodea in Freshwater

(Normal conditions, students are not explicitly told this)



Elodea in 5% Salt Water



Elodea in 10% Salt Solution

Anchoring Phenomenon

How do Elodea cells respond to different environmental stressors?

Driving Questions & Learning Sequence



Acc Biology Unit 2

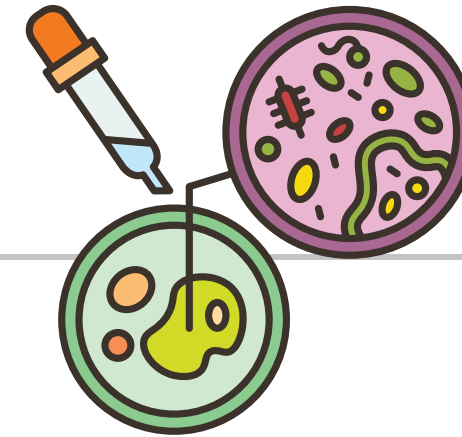
What are the structures that we see in the Elodea?

How do Elodea (plant) cells differ from our own?

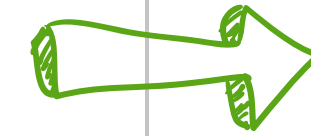
How might the cell move a substance into or out of the cell that wouldn't naturally move in that direction?



Why do cells have to have so many parts?



Why did the water and salt move the way they did in the Elodea?



What is special about the structure that separates one cell from another?



What are the different ways that substances can move through the membrane?



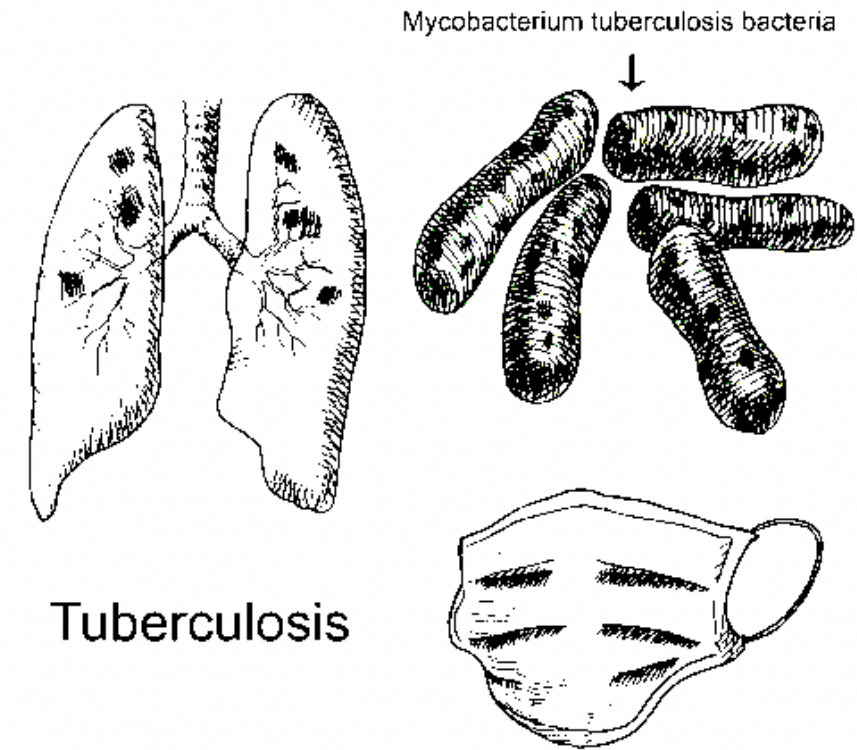
Accelerated Biology Unit 2 Benchmark Assessment: Cell Structure & Function - 30 pts.

Between 1600 and 1800, one quarter of all deaths in Europe and North America were caused by the disease tuberculosis. Tuberculosis is also known as “consumption,” the “wasting disease,” the “white plague”, or simply “TB.” It is an ancient disease. DNA from the bacteria that cause TB has been found in human bodies buried 9,000 years ago.

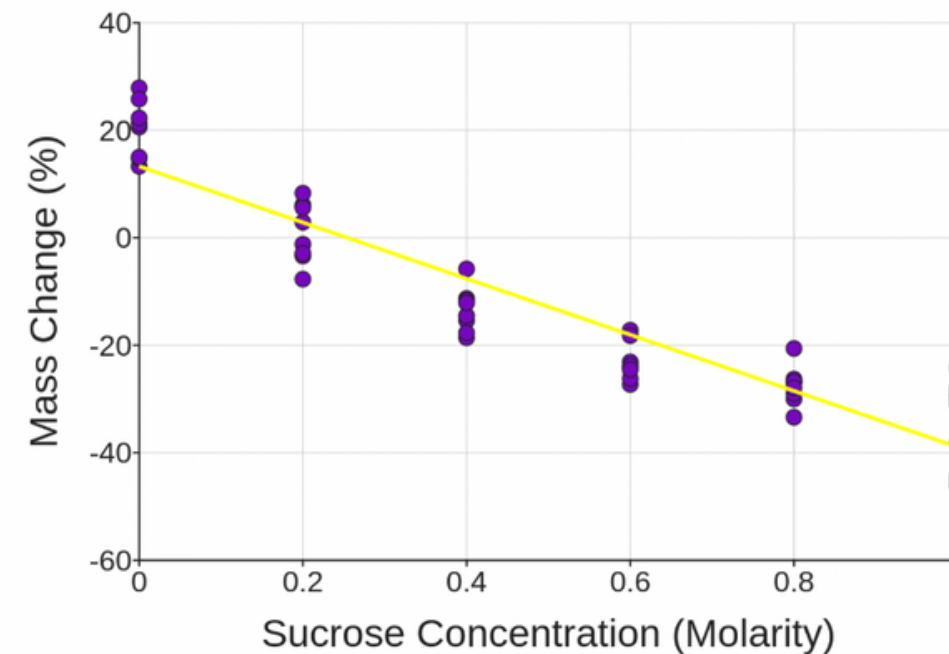
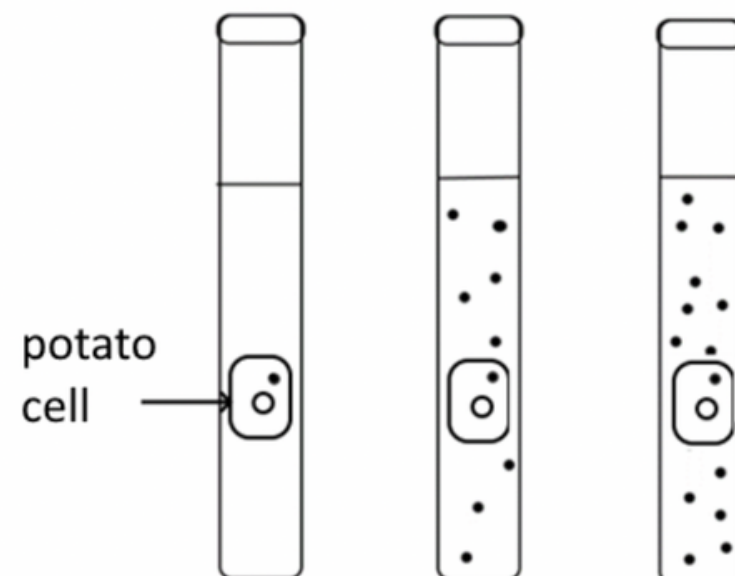
Despite its long history within the human population, it was not until the development of antibiotics that the first treatments for TB became available, approximately 80 years ago. Prior to this, an active TB infection was a death sentence.

Today, eighty-five percent of people with active TB can be treated with 6 to 9 months of antibiotics. The effectiveness of the treatments is evident in the US where 14 million people are thought to be infected, but only 542 deaths occurred in 2018.

Though the number of deaths due to TB are decreasing, tuberculosis remains a global pandemic.



Tuberculosis



Unit Overview	
Unit Title:	Unit 4: Cell Cycle & Communication
Teacher:	S. Kirsche and K. Radziwon
Grade Level/Course:	Accelerated Biology
Length/Dates:	4 weeks (~25 periods)
Unit Summary: 2-4 sentences describing the main ideas, content and skills of the unit.	Students will use the phenomenon of embryonic development to explore how cells divide, communicate, and differentiate. Students will recognize that we have to be made up of many small cells in order to maintain homeostasis and will discover the processes which cells use to accurately divide. Students will also explore how the one cell of the embryo becomes many different types of cells and how these cells work to maintain homeostasis in large and complex organisms. Students will also recognize that errors in this differentiation or in the formation of one of the organ systems can lead to disease and will explore medical interventions to help remedy these. Throughout this unit students will be communicating with small groups to make sense of models and data. These conversations will lead students to discover the key concepts of this unit.

Explanation
<p>Select PEs that work together (bundle) to promote proficiency in using ideas expressed. Often a bundle will include PEs from a single NGSS topic or DCI, but a bundle could draw in PEs from other topics or DCIs.</p>
<p>PE(s) to be addressed (include assessment boundaries and clarification statements).</p> <ul style="list-style-type: none"> ● HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. ● HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. ● HS-LS1-4. Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.
<p>Unpack DCI(s), SEPs, and CCCs coded to the PEs to identify implications for instruction.</p>

SEP Implications	DCI Implications	CCC Implications
<ul style="list-style-type: none"> ● <u>Developing and Using Models</u> Develop and use a model based on evidence to illustrate the relationships between systems or between components of a system. ● <u>Planning and Carrying Out Investigations</u> Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design: decide on types, how much, and accuracy of data needed to produce reliable measurements and consider limitations on the precision of the data (e.g., number of trials, cost, risk, time), and refine the design accordingly. 	<p><u>LS1.A: Structure and Function</u></p> <ul style="list-style-type: none"> ● Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level. ● Feedback mechanisms maintain a living system’s internal conditions within certain limits and mediate behaviors, allowing it to remain alive and functional even as external conditions change within some range. Feedback mechanisms can encourage (through positive feedback) or discourage (negative feedback) what is going on inside the living system. <p><u>LS1.B: Growth and Development of Organisms</u></p> <ul style="list-style-type: none"> ● In multicellular organisms individual cells grow and then divide via a process called mitosis, thereby allowing the organism to grow. The organism begins as a single cell (fertilized egg) that divides successively to produce many cells, with each parent cell passing identical genetic material (two variants of each chromosome pair) to both daughter cells. Cellular division and differentiation produce and maintain a complex organism, composed of systems of tissues and organs that work together to meet the needs of the whole organism. 	<ul style="list-style-type: none"> ● <u>Systems and System Models</u> Models (e.g., physical, mathematical, computer models) can be used to simulate systems and interactions—including energy, matter, and information flows—within and between systems at different scales. ● <u>Stability and Change</u> Feedback (negative or positive) can stabilize or destabilize a system.

Transfer Goals (Vision of the Graduate)

List the long-term and/or school-wide independent student behaviors that this unit will address.

Communication Transdisciplinary Goal:

Students effectively communicate and use interpersonal skills in a range of formal and informal contexts.

TEACHER LEARNING PLAN (including Assessments)

Starting:

Unit 4- Cell Cycle & Communication

Anchoring Phenomenon: Human Embryonic Development

MATERIALS NEEDED

Planaria Lab:

- Planaria
- Dissecting Scopes
- Petri Dishes


Cell Size Lab:

- Beet
- Knife
- Bleach

- Forceps

Buffer Lab:

- Liver
- Potato
- HCl and NaOH solutions
- pH probes or test strips
- pipettes

Teacher Target Question	Activity	Learning Targets and Success Criteria	Students Will Know and Wonder
<p>Anchoring Phenomenon Routine (1 period)</p> 	<ul style="list-style-type: none"> ● Anchoring Phenomenon: Embryonic Development 	<ul style="list-style-type: none"> ● Engage in a QFT session to create a DQB based on the anchoring phenomenon. ● Learning Target: I will ask questions about how a single cell is able to give rise to a multicellular organism with different tissues types, and how the cells are able to work together to sustain life. 	<p>Student questions should lead them to realize they need to have a better understanding of why multicellular organisms instead of large unicellular organisms exist.</p> <p>Students will need to revisit their DQB to refine their questions after each activity.</p>
<p>Why aren't we one big cell? (2 periods)</p>	<ul style="list-style-type: none"> ● Cell Size Lab OR Lego cell size activity <ul style="list-style-type: none"> ○ Cell Size Lab Student Handout (without answer key) ○ Resource: Utah Genetics Cell Size & Scale ● Extension- Animal Size & Scale 	<ul style="list-style-type: none"> ● Learning Target: I can conduct an investigation to explain how cell size impacts its ability to maintain homeostasis and why cells must be small. 	<p>Know: Embryos (and other complex organisms) must have multiple small cells because:</p> <ul style="list-style-type: none"> ● The surface-area-to-volume ratio gets smaller as the cell gets larger.

			<ul style="list-style-type: none"> • Small cell size creates a surface-area-to-volume ratio that enables more efficient diffusion. <p>Wonder:</p> <ul style="list-style-type: none"> • How do cells divide in order to stay small? • How do cells “know” when they’re getting too big? <p>Next steps:</p> <ul style="list-style-type: none"> • Students will explore the steps cells take to divide.
<p><i>How do cells divide? (5-6 periods)</i></p>	<ul style="list-style-type: none"> • Cell Cycle POGIL • Who Killed Yew? • Cell Cycle Data Lab (onion root tip revision) A version w/ calculation; Observe phases (ID and draw; no calculation) • Cell Cycle Data & Regulation Lab • Intro Planaria Lab - Part 1 and Part 2 (up to #5) • Initial Model 	<ul style="list-style-type: none"> • Learning Target: I can use models and data to identify patterns to explain how cells move through the cell cycle. 	<p>Know:</p> <ul style="list-style-type: none"> • Embryonic cells must all be identical so must follow steps to ensure they divide evenly. • Why chromosome replication must occur prior to mitotic division. • Multicellular organisms use mitotic cell division in order to replace dying or damaged cells. • The cell cycle includes interphase, mitosis, and cytokinesis. • Mitosis has four major steps: prophase, metaphase, anaphase, and telophase. <p>Wonder:</p> <ul style="list-style-type: none"> • Cells seem to divide in some areas and not in others. How do cells know when and how to divide? <p>Next steps:</p>

			<ul style="list-style-type: none"> Students will explore cell communication and regulation to explain how cells know when to divide.
<p><i>How do cells know when and how to divide? (4-5 periods)</i></p>	<ul style="list-style-type: none"> Dropping Signals (Utah Genetics) Cell Communication POGIL Signal transduction Animation <p>**Students should revise their initial models at this point to include cell communication's role in embryonic development.**</p>	<ul style="list-style-type: none"> Learning Target: I can analyze data to predict consequences for biological systems if cell cycle regulation is altered. 	<p>Know:</p> <ul style="list-style-type: none"> Embryonic cells communicate to know when to divide. The importance of interphase in the cycle cycle and the significance of the 2 growth phases and the S phase. The division of cells is highly regulated by both internal and external signals and checkpoints. Cancer cells form when cell division continues without regulation. <p>Wonder:</p> <ul style="list-style-type: none"> Why do some cells divide continuously and others don't? <p>Next steps:</p> <ul style="list-style-type: none"> Students will explore the differences between the cells in their planaria and their own cells.
<p><i>How are planaria cells different from our cells? (1 period)</i></p>	<ul style="list-style-type: none"> Planaria lab - finish Part 2 and Part 3 	<ul style="list-style-type: none"> Learning Target: I will plan and carry out an investigation to show how planaria cells regenerate and draw conclusions about why they are different from ours. 	<p>Know:</p> <ul style="list-style-type: none"> Planaria contain a special type of cell that allows them to regenerate the parts that they have lost. These cells are similar to embryonic cells.

			<ul style="list-style-type: none"> Depending on where the cut is made, some planaria will successfully regenerate and others will not. <p>Wonder:</p> <ul style="list-style-type: none"> Why are the cells of the planaria different from our own? Why can't we regrow a missing body part? How do embryos develop their own unique "cells"? <p>Next steps:</p> <ul style="list-style-type: none"> Students will explore stem cells
<p><i>What cells do planaria and human embryos have that most adults don't?</i> (3 periods)</p>	<ul style="list-style-type: none"> Stem Cell Intro & Inquiry (play-doh) Stem Cell Reading <ul style="list-style-type: none"> Evaluate: "What type of stem cells do planaria and human embryos have?" Discussion board post. What type of stem cell would you use? Learn.Genetics stem cell WebQuest 	<ul style="list-style-type: none"> Learning Target: I can use models to explain what stem cells are and how they are able to become different types of cells. 	<p>Know:</p> <ul style="list-style-type: none"> All cells have the same instructions, but "read" different segments to differentiate. Stem cells can be totipotent, pluripotent, or multipotent and this determines what they can differentiate into. Planaria contain pluripotent stem cells. Human embryos contain totipotent cells that can become a variety of different cell types. <p>Wonder:</p> <ul style="list-style-type: none"> How do these different types of cells help a complex organism maintain homeostasis? <p>Next steps:</p> <ul style="list-style-type: none"> Students will explore how specialized tissues form organs

and organ systems that contribute to maintaining homeostasis in an organism.

How do cells work together to support life? (3-4 periods)

- [Cell Specialization and Organ Systems](#)
 - [Student Answer Sheet](#)
 - [Lab Station Sheets](#)
 - [Patient Slide Sheets](#)
 - [Supplemental Materials](#)

****Students should add to their model to include stem cells and cell differentiation.****

- **Learning Target:** I can analyze data to explain how cell structures in different types enable specialized cellular functions.

Know:

- Multicellular organisms have specialized cells that perform a wide variety of functions. a. During development, cells become specialized and develop into higher-order systems (i.e., tissues, organs).
- Specialized cells perform a wide variety of unique functions for organisms (e.g., muscle cells, red blood cells).
- Human embryos contain many specialized cells that have the same functions as their specialized cells in adults.

Wonder:

- How do these cells form organs and organ systems that help more complex organisms maintain homeostasis?

Next steps:

- Students will explore organization in complex organ systems as well as feedback mechanisms.

How do organ systems work together to maintain homeostasis and what happens when there is a disruption? (3 periods)

- Feedback Mechanism POGIL
- [Feedback Mechanism Stations](#)
- Extension: Buffer Lab

- **Learning Target:** I can use models to show how organ systems work together to maintain homeostasis.

Know:

- Describe how organ systems work together to maintain homeostasis in all living organisms including embryos.

****Students should add final touches to their model to how ONE organ system relates to homeostasis of the embryo.****

This [Wonder of Science Assessment](#) could be used as a well-scaffolded model of embryonic development.

- Predict how an organism might respond to a change from the external environment in order to maintain homeostasis.
- Predict the consequence of a disruption in homeostasis.
- Organisms have positive or negative responses to external stimuli in their environment in order to maintain dynamic homeostasis.

Unit 4 Assessment (addresses all PEs)

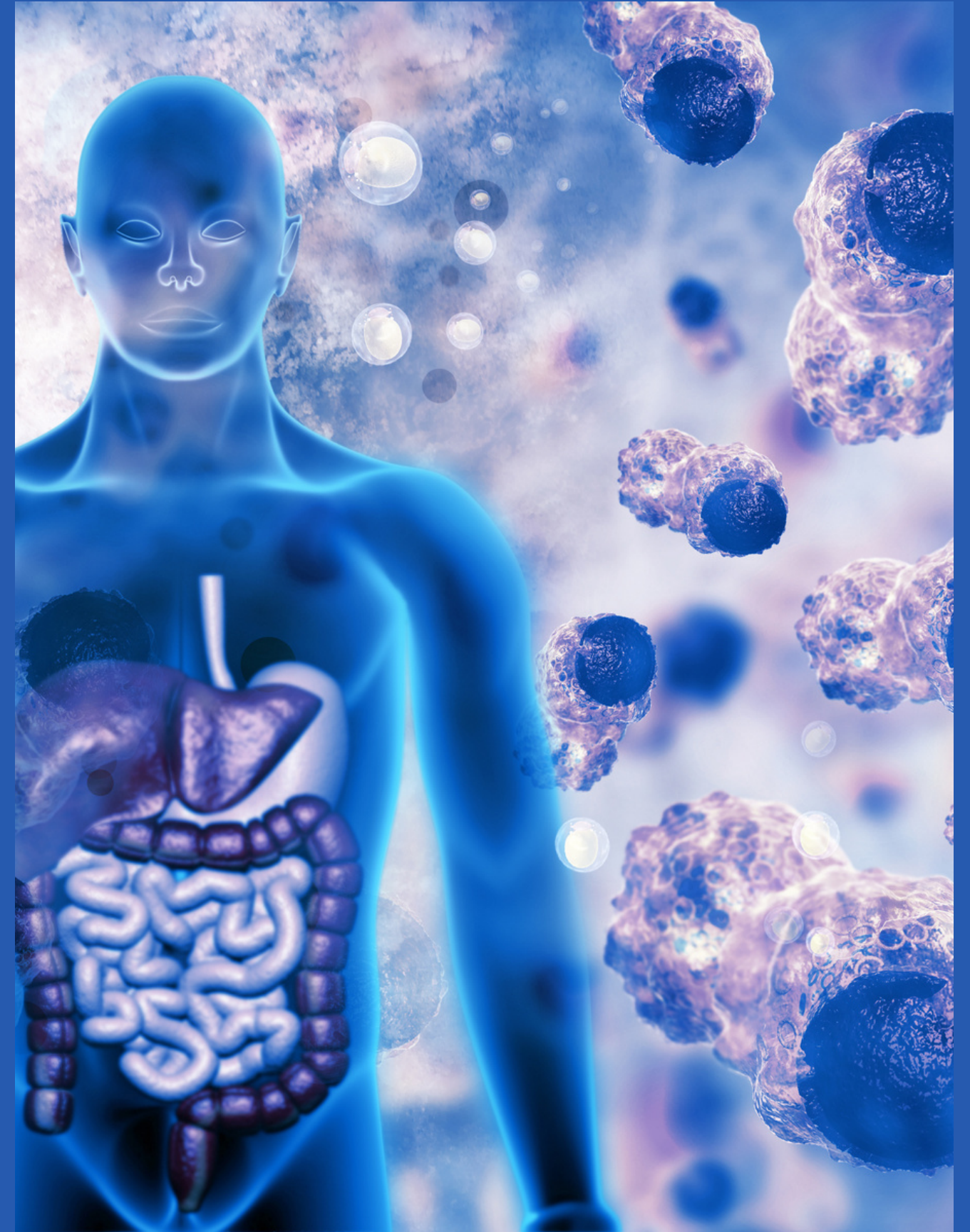
Other Performance Assessments from Unit

1. Planaria Lab Conclusions ([HS-LS1-4](#), Communication)
2. Cell Specialization and Organ Systems (Connections and Applications ONLY) ([HS-LS1-2](#)) (HS-LS1-3)

SOUTHINGTON HIGH SCHOOL

Unit 4: Cell Communication & Division

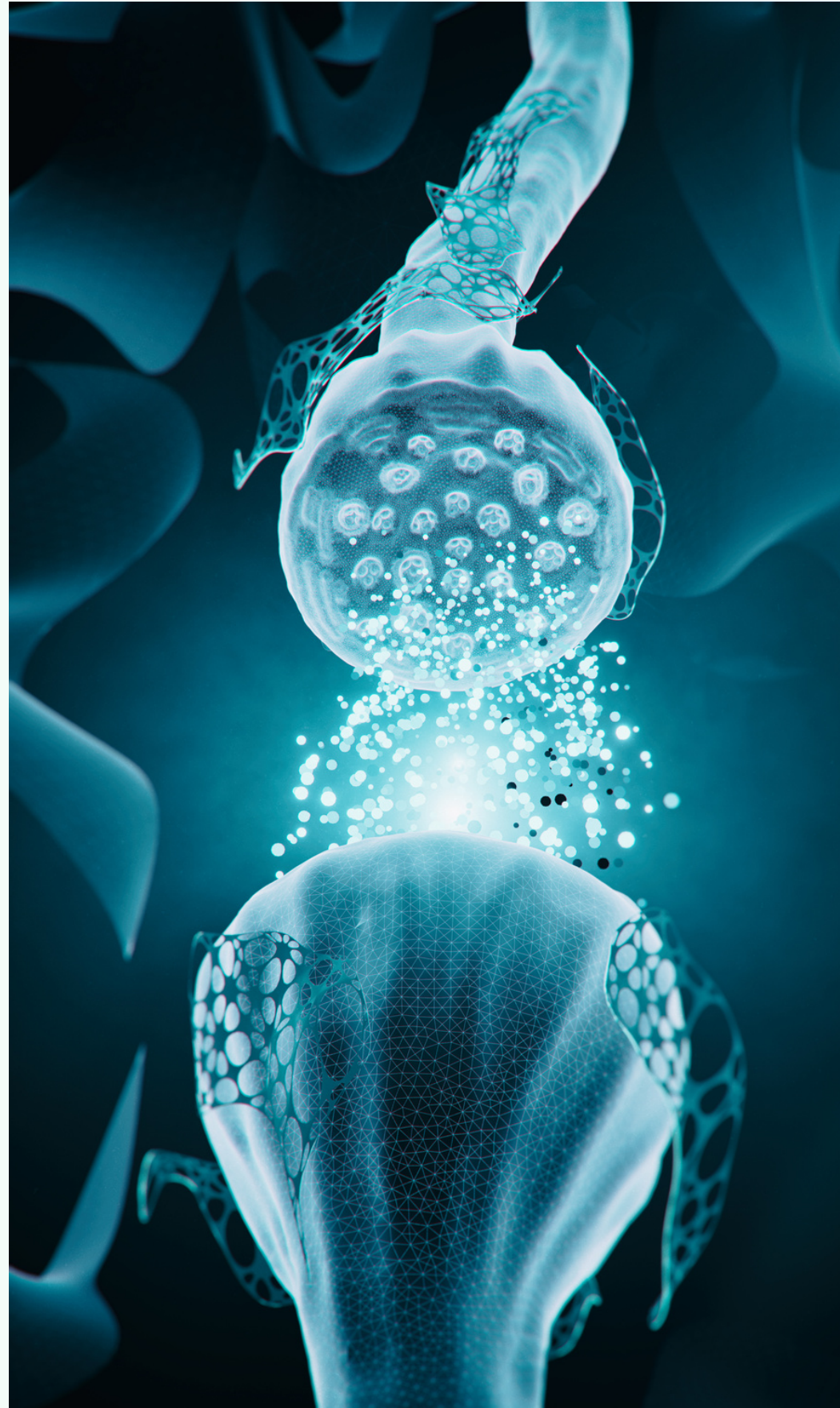
Accelerated Biology



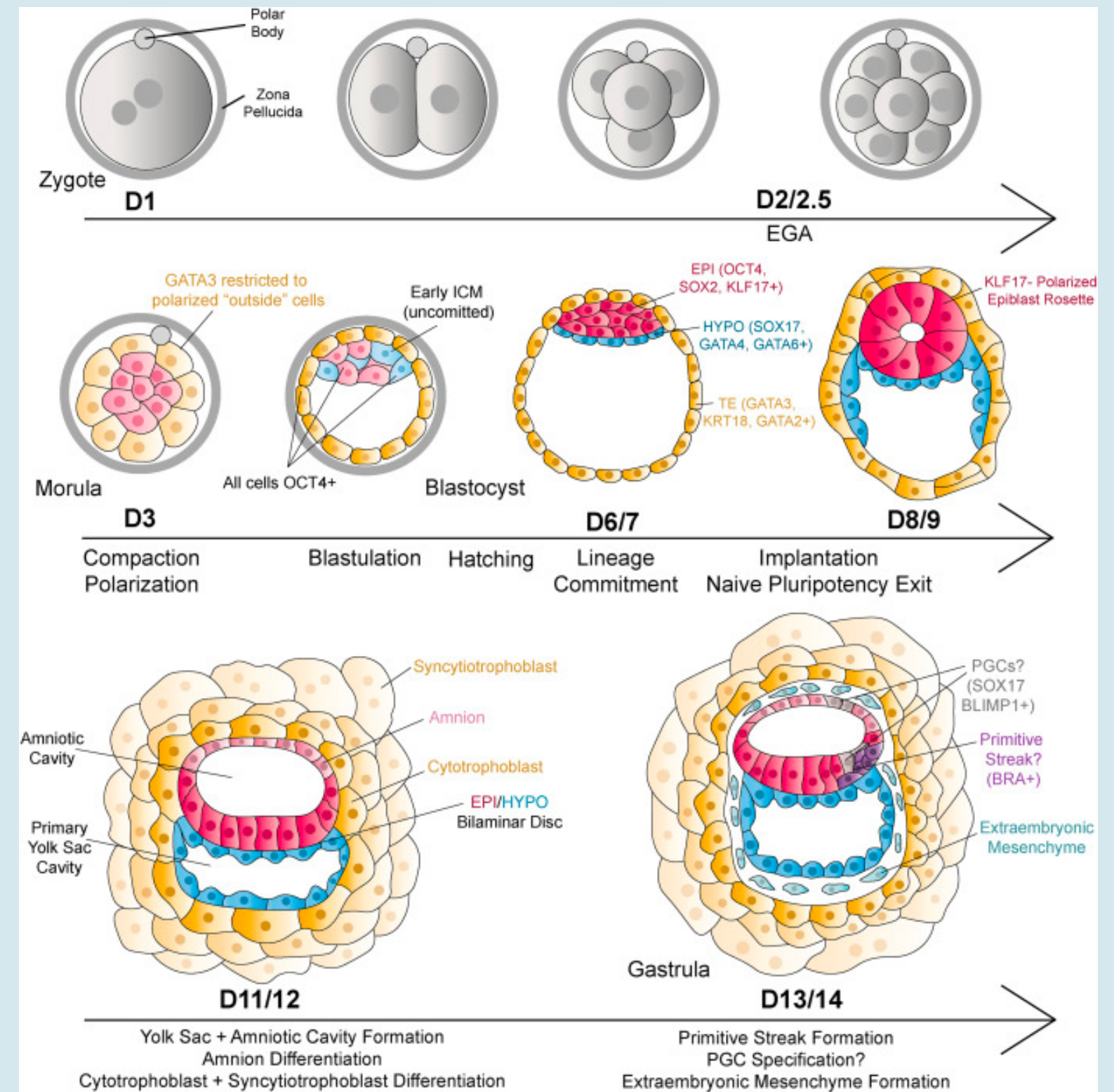
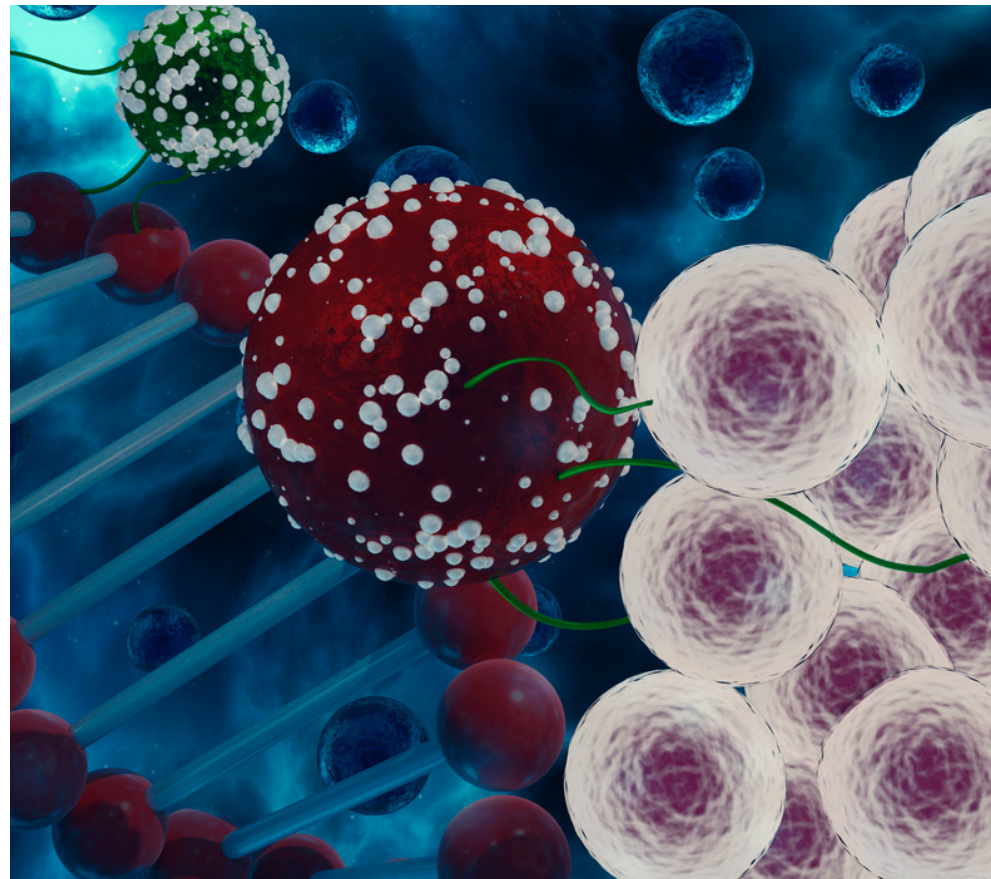
Unit Overview

Students will...

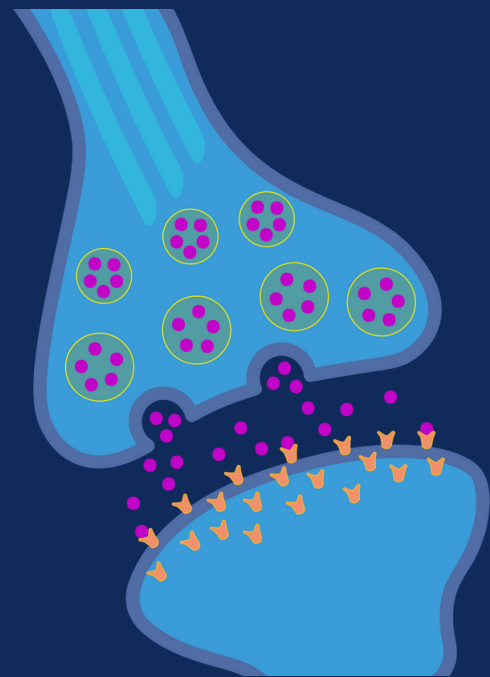
- Explore how cells divide, communicate, and differentiate.
- Small cell size is necessary to maintain homeostasis
- Discover the processes which cells use to accurately divide.
- Explore how differentiated cells work to maintain homeostasis in large and complex organisms.
- Recognize that errors in differentiation can lead to disease.



Anchoring Phenomenon: Embryonic Development



Driving Questions & Learning Sequence



Acc Biology Unit 4

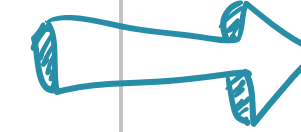
Why aren't we one big cell?



How do cells divide?



How do cells know when and how to divide?



How are planaria cells different from our cells?



How do organ systems work together to maintain homeostasis and what happens when there is a disruption?



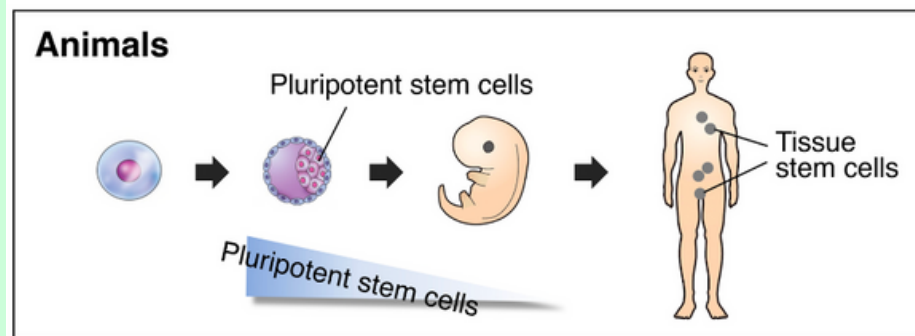
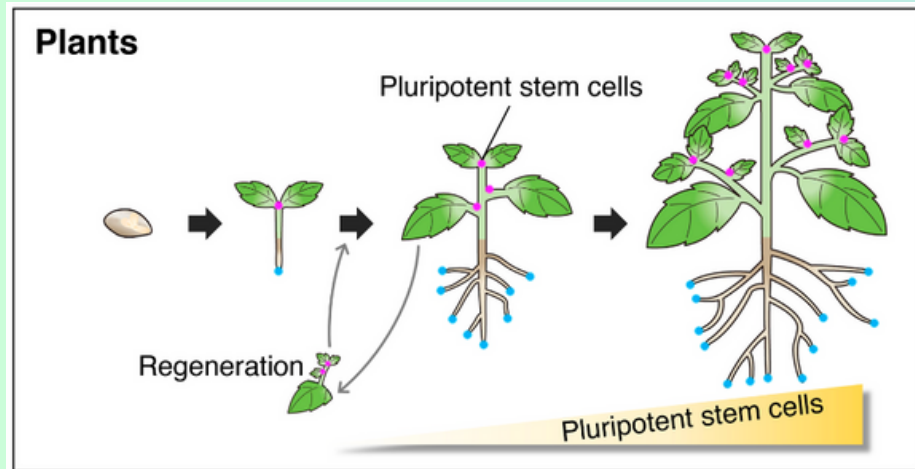
How do cells work together to support life?



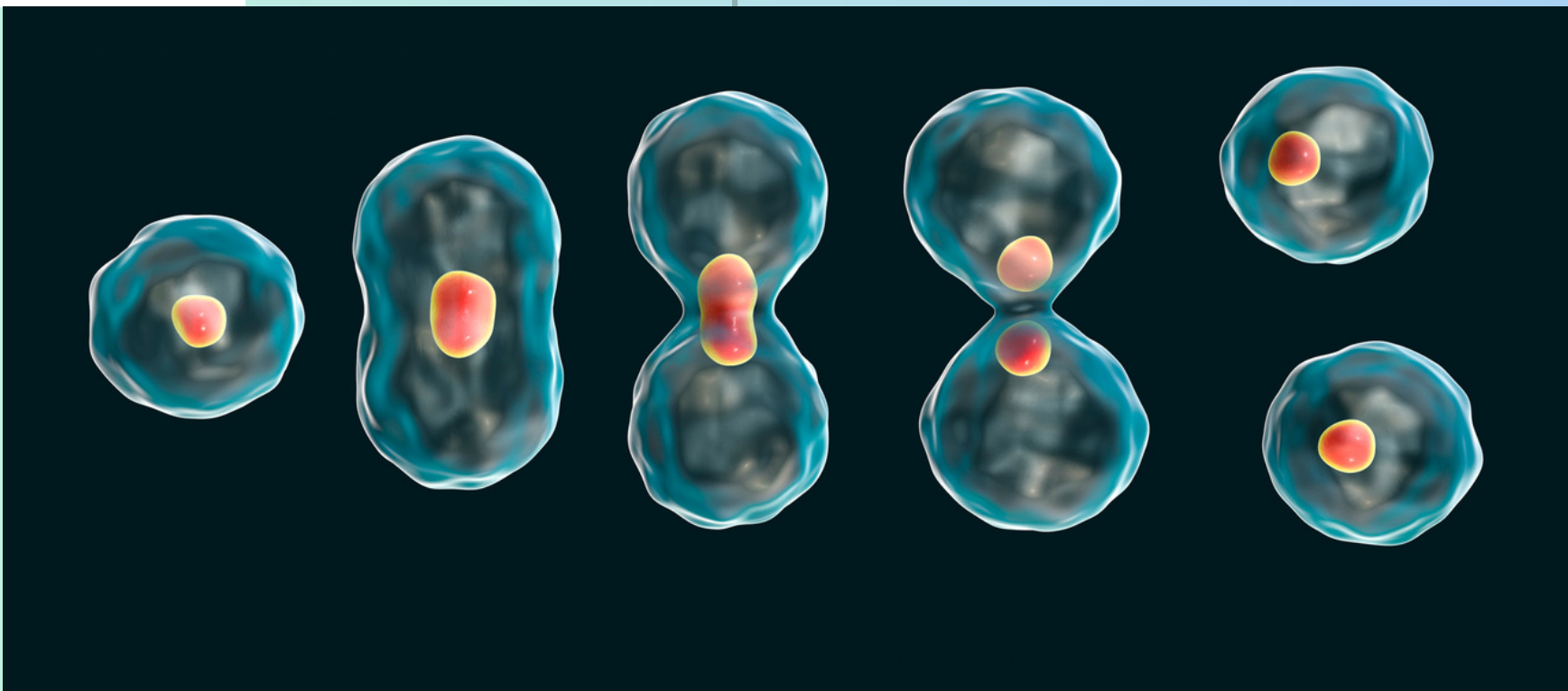
What cells do planaria and human embryos have that most adults don't?

The Secret Life of Plants - Unit 4 Assessment

Look at the picture of the potted house plant to the right. What do you think when you see it? Do you think that this plant can express itself? What about communicating with other species?



Location		Branch	Leaf Exterior	Leaf Interior
Surface Area		40 μm^2	10 μm^2	30 μm^2
Volume		5 μm^3	2 μm^3	15 μm^3



Assessment Highlight:
Critical Thinking

**BOARD OF EDUCATION
SOUTHINGTON, CONNECTICUT**

Informational Only _____ X _____ Board Meeting Date May 25, 2023

Decision Requested _____ Agenda Code 10 g. _____

AGENDA REPORTING FORM

Agenda Topic: SHS – Forensic Science II – First Reading.

Summary of Issue: The Curriculum & Instruction Committee has reviewed the SHS – Forensic Science II – First Reading.

Background: _____

Alternative Strategies: N/A _____

Cost (if applicable): N/A _____ **Funding Source:** N/A _____

Beginning Date of Program or Project: N/A _____

Ending Date of Program or Project: N/A _____

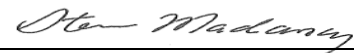
Recommendation or Comment: The Board of Education Curriculum & Instruction Committee is bringing the SHS – Forensic Science II to the full Board for a First Reading.

Titles of Attachments:

1. Course Proposal



Signature of Staff Member Submitting Report



Signature of Superintendent of Schools

Forensic Science II Curriculum Map

Unit Overview	
Unit Title:	A Review of Forensic Science Basics, the Judicial System, and Forensic Reporting
Teacher:	Heather Pierce and Elisabeth Treado
Grade Level/Course:	Forensic Science II, Grades 11/ 12
Length/Dates:	Approximately 4 weeks
Unit Summary: 2-4 sentences describing the main ideas, content and skills of the unit.	In this unit, students will review the basic concepts from forensic science I related to evidence, crime scene investigation, and observation. Students will also be introduced to the judicial system where they will examine the process of a criminal case from the arrest through the trial. They will also examine testimonial evidence from interview and interrogations and explore how it is used in criminal cases.

Topic (SEP, CCC, DCI)	Description (What the teacher will do)	Activities (What the students will do)	Target Questions	Target Outcome (What the students will know)
Unit 1 Introduction to Forensics and the Judicial System Timeline: Approximately 3 weeks SEP: -Asking Questions and Defining Problems -Engaging in Argumentation from Evidence -Obtaining, Evaluating,	Phenomenon/ Case Study: Cold Cases Examples: Barbara Hamburg (Madison CT) Zodiac Killer (The Most Dangerous Animal of All) Elizabeth Short	Forensic Science Waiver Notes: Chapter Notes Introduction to Forensics Chapter Notes Introduction to Forensics Student Version Chapter Notes Forensic	-What is forensic science? -How does forensic science rely on multiple disciplines to solve crimes? -How is the scientific method used to solve forensic problems? -How are crime scenes processed and	-Forensic science is the branch of science dedicated to applying scientific knowledge to legal questions. -Forensic scientists specialize in fields such as chemistry, toxicology, pathology, and firearms. -Forensic scientists analyze and interpret evidence from crime scenes. -Forensic scientists obtain, evaluate, and communicate information about evidence from a crime scene.

<p>and Communicating Information</p> <p>CCC: Patterns Cause and Effect</p> <p>4C's: Communication Collaboration</p>	<p>The Boy in the Box</p> <p>Natalie Holloway</p> <p>Jimmy Hoffa</p> <p>Jack the Ripper</p> <p>The Torso Killer</p> <p>Madeleine McCain</p> <p>The Connecticut River Valley Killer</p> <p>The Oakland County Child Killer</p> <p>For Interviews/Interrogations: Brendan Dassey</p> <p>Video 1: Now This- The Wrongful Conviction of Brendan Dassey</p> <p>Video 2: Breaking Down Brendan Dassey's Confession</p>	<p>Reporting</p> <p>Chapter Notes Forensic Reporting Student Version</p> <p>Student Handouts: Chapter 1 Review Sheet</p> <p>Chapter 2 Review Sheet</p> <p>CIA's Harsh Interrogations Described Article aCIA's Harsh Interrogation Techniques Described Article.docx and Reading Questions</p> <p>Labs/Activities/Projects:</p> <p>The Sock Lab</p> <p>Crime Scene SPOT: Jack and Jill Forensic Style</p> <p>Activity 1-1 Pick A Penny</p> <p>Cold Case Project Directions and Cases</p> <p>*Capstone Rubric to be used to assess project= Communication*</p>	<p>analyzed?</p> <p>-How is physical and biological evidence collected and packaged?</p> <p>-What is the difference between class and individual evidence?</p> <p>-What steps are taken in the judicial process from identification of a suspect through the trial?</p> <p>-Why is it important to have a code of ethics in forensic science and law enforcement?</p> <p>-How do interviews and interrogations differ?</p> <p>-What are the five different models used during interrogations?</p> <p>-What special considerations must be taken when interviewing a child?</p> <p>-Why is it important to maintain objectivity in report writing?</p>	<p>-Forensic scientists look for patterns in evidence that is later used to determine what happened at a crime scene.</p> <p>-Processing a crime scene requires a thorough and systematic approach to identify evidence and patterns. The size and location of the crime scene determine the search methods used to look for evidence at the scene.</p> <p>-Physical evidence is any substance that can link a potential suspect to a victim or crime. Examples include footprints, fingerprints, tire tracks, hair, fibers, blood, fingerprints, and DNA evidence.</p> <p>-When processing a scene, investigators use identification and comparison tests to attempt to make connections between victims, suspects, and crime scenes.</p> <p>-Evidence that possesses class characteristics can be associated with a group rather than with a specific individual. This evidence can help narrow the field of suspects.</p> <p>-Evidence that possesses individual characteristics can be associated with a single person with a high degree of certainty. This sort of evidence can be used to show that a specific individual was involved.</p> <p>-A chain of custody is necessary to</p>
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		<p>Interrogation Stations Skit Activity and Requirements</p> <p>Crime Scene SPOT: Sibling Rivalry</p> <p>Activity 2-1 Drive By Shooting</p> <p>Activity 2-2 Ethical Errors</p> <p>Videos:</p> <p>Assessments:</p> <p>Assessment for part 1</p> <p>Assessment for part 2</p>		<p>maintain the integrity of the evidence.</p> <ul style="list-style-type: none">-The judicial process in the United States is based on the U.S. Constitution. The process follows from the identification of a suspect through the trial.-Law enforcement personnel must prove probable cause before a judge will sign a search or arrest warrant.-In court, a jury of the suspect's peers hears evidence from both sides. The jury is instructed to assume that the suspect is innocent until proven guilty.-A code of ethics is a set of guidelines for appropriate behavior as well as a system to enforce professional conduct.-During an interview, an investigator asks questions designed to gather information. During an interrogation, the investigator expects to gather incriminating statements or a confession.-Special considerations are given when interviewing children, but the ultimate goal is to obtain the truth.-The five common models of interrogation are suspect decision making, cognitive-behavioral, psychoanalytical, emotional, and interaction process.
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				<p>-Accurate, truthful, and objective reporting is essential to maintaining professionalism in forensic science fields. Objectivity is a focus on facts without influence from opinion or bias.</p>
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Unit Overview	
Unit Title:	DNA Fingerprinting
Teacher:	Heather Pierce and Elisabeth Treado
Grade Level/Course:	Forensic Science II, Grades 11/12
Length/Dates:	Approximately 4 weeks
Unit Summary: 2-4 sentences describing the main ideas, content and skills of the unit.	In this unit students will explore how the structure of our genetic makeup allows forensic scientists and DNA analysts to identify a specific suspect from a crime scene. Students will investigate DNA technologies including the polymerase chain reaction, gel electrophoresis, and short tandem repeat analysis. Students will analyze data from the different DNA technologies in order to match crime scene samples to suspect and unknown samples.

Topic (SEP, CCC, DCI)	Description (What the teacher will do)	Activities (What the students will do)	Target Questions	Target Outcome (What the students will know)
Unit 2: DNA Fingerprinting/Profiling Timeline: Approximately 3 weeks SEP: -Asking Questions and Defining Problems -Engaging in Argument from Evidence -Obtaining, Evaluating, and Communicating Information -Using Mathematics and Computational Thinking	Phenomenon/ Case Study: OJ Simpson Documentary: The DNA Evidence Against OJ Simpson Student Notes Sheet for Documentary Case Study: OJ Simpson Introduction: We all know that DNA evidence is considered	Notes: DNA Fingerprinting PowerPoint DNA Fingerprinting Guided Notes Student Handouts: Amoeba Sisters-Gel Electrophoresis Labs/Activities/Projects:	-What is the basic structure and function of DNA? -How are unique differences among individuals is the basis for forensic identification? -Compare and contrast	-DNA is a nucleic acid that contains the genetic information necessary for a cell to replicate and make proteins. The code of DNA is found within the sequence of nitrogenous bases. -DNA sequences are unique to each individual (except an identical twin). The variations within non-coding parts of the DNA molecule are the basis for forensic identification. -DNA analysis can help solve crimes and exonerate the falsely accused by looking for patterns in known and unknown DNA samples.

<p>-Analyzing and Interpreting Data -Planning and Carrying out Investigations -Developing and Using Models</p> <p>CCC: Patterns Cause and Effect Scale, Proportion, and Quantity</p> <p>4Cs: Collaboration Critical thinking Communication</p>	<p>the gold standard in criminal cases when trying to prove a suspect was at a crime scene and committed a crime. In the case of OJ Simpson, there was a great deal of DNA evidence found at the primary and secondary crime scenes. However, sometimes the DNA evidence can be used against the prosecution's argument, particularly when there were errors made in the collection and store of the DNA evidence. This case study will introduce you the importance of DNA evidence in cases but also examine where fault lies.</p>	<p>Edvotek DNA Fingerprinting by Restriction Enzyme Patterns -Pre-lab questions for gel electrophoresis lab</p> <p>The Case of the Desert Bones</p> <p>Who's the Daddy?</p> <p>The Break-In</p> <p>Who are the Parents?</p> <p>STR Analysis: The Blakett Family</p> <p>Who Robbed the Bank? Activity Student worksheet for Who Robber the Bank?</p> <p>Videos: Forensic Files: DNA Dragnet</p> <p>Forensic Files: Southside Strangler</p> <p>Forensic Files: Fresh Heir</p> <p>Assessments:</p>	<p>a gene and a chromosome, and an intron and an exon; what does this comparison tell us?</p> <p>-How can DNA can be important to criminal investigations?</p> <p>-How can minute traces of DNA be collected and used in the lab to solve crimes?</p> <p>-What is a short tandem repeat (STR), and what is the importance to DNA Profiling?</p> <p>-How can the use of DNA profiling using mtDNA and Y STRs to help identify a person using the DNA of family members?</p>	<p>-Using PCR amplification, minute amounts of DNA evidence can be used to solve crimes.</p> <p>-DNA contains within its noncoding regions many repeated sequences, including STRs, which vary in number among individuals; these differences are used to produce a DNA profile of a person.</p> <p>-DNA profiling has dramatically improved over the past 25 years due to improvements in biotechnology, computers, and automated processing of DNA. STR analysis has replaced gel electrophoresis in forensics work.</p> <p>-DNA profiling enables us to determine whether DNA samples came from the same person or different persons or to establish kinship by analyzing and interpreting data.</p> <p>-Analyses of hypervariable base sequences of mtDNA in noncoding regions can help identify people through their maternal.</p> <p>-CODIS and the NDIS have helped to prevent and solve crimes by improving communication among law enforcement agencies at the local, state and national levels.</p>
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		<u>DNA Fingerprinting Assessment (Pierce 2021)</u> <u>DNA Fingerprinting Test</u>	<p>-How do law-enforcement agencies compare new DNA evidence to existing DNA evidence?</p>	
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Unit Overview	
Unit Title:	Forensic Toxicology
Teacher:	Heather Pierce and Elisabeth Treado
Grade Level/Course:	Forensic Science II, Grades 11/12
Length/Dates:	Approximately 3 weeks
Unit Summary: 2-4 sentences describing the main ideas, content and skills of the unit.	In this unit students explore how substances that are classified as drugs, toxins, and poisons are analyzed in criminal cases. Students will conduct different experiments to analyze how drugs, toxins, and poisons can be positively identified in the body and in crime scene samples. Students will also differentiate between presumptive testing and confirmatory testing for substances. Finally, they will identify signs and symptoms of drug overdose and toxin and poison exposure.

Topic (SEP, CCC, DCI)	Description (What the teacher will do)	Activities (What the students will do)	Target Questions	Target Outcome (What the students will know)
Unit 3: Forensic Toxicology Timeline: Approximately 3 weeks SEP: -Asking Questions and Defining Problems -Planning and Carrying Out Investigations -Analyzing and Interpreting Data -Engaging in Argumentation from	Phenomenon/Case Study: Angel of Death Killer Mom: Janie Lou Gibbs	Notes: SHS Forensic Toxicology Notes Teacher Version SHS Forensic Toxicology Notes Student Version Toxicology PowerPoint Student Guided Notes Student Handouts:	What is forensic toxicology? -What are examples of substances that are classified as drugs, poisons, and toxins? -What role does a toxicologist play in analyzing substance evidence? -What are some similarities and	-Toxicology is the study of poisons, toxins, drugs, and other substances a person may use for medical, recreational, or criminal purposes. Forensic toxicologists study the harmful effects of these substances on the body typically after a death. -The toxicity of a substance depends on the dose, the duration of exposure, the nature of exposure, interactions with other substances, and the byproducts formed when metabolized. -Exposure to heavy metals, poison

<p>Evidence -Obtaining, Evaluating, and Communicating Information</p> <p>CCC: -Patterns -Scale, Proportion, and Quantity -Structure and Function</p> <p>4C's: -Critical Thinking -Collaboration</p>		<p>Drug Analysis</p> <p>Urine Analysis</p> <p>Drug Identification</p> <p>Forensic Toxicology Celebrity Research Project option 1</p> <p>Forensic Toxicology Celebrity Research Project Option 2</p> <p>Forensic Drug Analysis Lab</p> <p>Finding the Lighthouse Diamond Thief</p> <p>Videos:</p> <p>Forensic Files: Penchant for Poison</p> <p>Forensic Files: A Bitter Pill to Swallow</p> <p>Forensic Files: Bitter Poison</p> <p>Assessments:</p> <p>Unit 2 Forensic Toxicology Assessment</p>	<p>differences that exist between presumptive testing and confirmatory testing?</p> <p>-How do people become exposed to environmental toxins? What are the effects on their body?</p> <p>-How can different signs and symptoms from an overdose be used to identify the specific substance or combination of substances taken during the overdose?</p>	<p>gasses, other poisons, toxins, or radiation may occur accidentally or as a result of a crime (or punishment) and have harmful or lethal effects on the body.</p> <p>-Drugs are classified by their effect on the body as stimulants, depressants, narcotics, hallucinogens, or anabolic steroids; drugs are classified under five schedules created by the 1970 Controlled Substances Act.</p> <p>-Use of drugs can affect a person's health, mood, awareness, metabolism, and/or perception of reality.</p> <p>-Extended exposure to drugs can lead to tolerance, dependence, addiction, and illness.</p> <p>-Drug combinations can have compounding effects and result in accidental death.</p> <p>-Forensic toxicologists examine patterns in order to construct an explanation about the drug or toxin affected the body.</p>
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		Forensic Toxicology Study Guide		
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Unit Overview	
Unit Title:	Criminal Psychology and Profiling
Teacher:	Heather Pierce and Elisabeth Treado
Grade Level/Course:	Forensic Science II, Grades 11/12
Length/Dates:	Approximately 3 weeks
Unit Summary: 2-4 sentences describing the main ideas, content and skills of the unit.	In this unit students will explore how criminal profilers use evidence from a crime scene to determine the behavioral patterns and personality traits of criminals. Students will examine the process used by the criminal profilers of the Behavioral Analysis Unit of the FBI to understand how profiles are developed and used in criminal investigations. Students will develop their own profiles based on case studies and analyze how accurate their profiles were. Students will also examine how the study of victimology plays a role in the development of a criminal profile.

Topic (SEP, CCC, DCI)	Description (What the teacher will do)	Activities (What the students will do)	Target Questions	Target Outcome (What the students will know)
Unit 4: Criminal Psychology and Profiling Timeline: Approximately 3 weeks SEP: -Asking Questions and Defining Problems	Phenomenon/Case Studies: Gary Ridgeway (The Green River Murderer) The Green River Murderer Case Study and Reading Questions	Notes: Criminal Profiling Notes Part 1 Criminal Profiling Notes Part 2 Student Version Criminal Profiling Notes Part 1	-What is criminal profiling? -Who are the key contributors in the field	-Criminal profilers are responsible for estimating the characteristics and traits of a perpetrator by examining patterns and analyzing data to narrow the field of suspects. -Criminal profiling has a deeply rooted history dating back to the 1800s beginning with Cesare Lombroso, who concluded that there were three types of criminals.

<p>-Obtaining, Evaluating, and Communicating Information -Engaging in Argument from Evidence -Developing and Using Models</p> <p>CCC: -Patterns -Structure and Function</p> <p>4C's -Creativity</p>	<p>Preferred Green River Murder Documentary -Notes sheet for documentary</p> <p>(Alternative) Green River Murderer Documentary</p> <p>Other possible case studies: Ted Bundy</p> <p>Jeffrey Dahmer</p> <p>John Wayne Gacy</p>	<p>Student Version Criminal Profiling Notes Part 2</p> <p>America's Most Notorious Serial Killers PowerPoint</p> <p>Why Do People Commit Crimes Notes</p> <p>Why Do People Commit Crimes Notes Student Version</p> <p>Student Handouts: America's First Serial Killer: H. H. Holmes Reading with Questions</p> <p>Serial Killer Profile: Black Widow</p> <p>Serial Killer Profile: Dating Game Killer</p> <p>Serial Killer Profile: The I-5 killer</p> <p>Serial Killer Profile: Little Old Lady Killer</p> <p>Serial Killer Profile: The Trailside Killer</p> <p>Serial Killer Profile: The Long Island Serial Killer</p> <p>Serial Killer Profile: The</p>	<p>of criminal profiling, and why is their work important?</p> <p>-Explain the stages of the criminal process.</p> <p>-Define a victim and victimology.</p>	<p>-In 1972, Jack Kirsh opened the FBI's Behavioral Science Unit and helped law enforcement solve cases by developing criminal profiles of unknown suspects.</p> <p>-The process of criminal profiling consists of six stages with a goal of apprehension of a suspect. The stages are input, decision process models, crime assessment, criminal profile, investigation, and apprehension.</p> <p>-A victim is a person who has experienced harm, injuries, loss or death. Victimology is the study of victims who have been affected by crime, accidents, or natural disasters.</p> <p>-By assessing a victim's lifestyle, preferences, family relationships, and routines, investigators may gather clues about potential suspects who had access to the victim based on patterns and habits.</p> <p>-The investigator will collect and analyze physical evidence, and the profiler makes inferences about the personality and characteristics of a suspect based on information gathered from the scene.</p> <p>-A timeline of the victim's events helps investigators determine who had access to the victim. The 24 hours leading up to the crime generally provide the most helpful information.</p>
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		<p>Coast-to-Coast Killer</p> <p>Serial Killer Profile: The Green River Killer</p> <p>Serial Killer Profile: The Genesee River Killer</p> <p>Labs/Activities/Projects: Typological Offender Profiling Activity Questions and Directions/Crime Scene</p> <p>Creating A Criminal Profile Activity and Murder Victims Document and Grading Rubric Eugene Watts Article and Video (Eugene is who the creating a criminal activity is based on)</p> <p>Case Studies on Psychiatric Disorders Psychiatric Disorders Associated With Criminal Behavior</p> <p>Episode Analysis: Criminal Minds Worksheet Episode: "Magnus Opus" (Criminal Minds, Season 8 Episode 13)</p>	<p>-What is the importance of victimology in the criminal profiling process?</p> <p>-What is the difference between the role of the investigator and the profiler?</p> <p>-What is the importance of developing a victim's timeline?</p>	<p>-Investigators develop a model of behavior based on patterns exhibited by the suspect and data collected from the crime scene(s).</p>
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[Cereal Box Serial Killer Project](#)

[Cereal Box Serial Criminals Project](#)
(updated to include all serial criminals)

Capstone Rubric to be used to assess project: Creativity

Videos:

Episode Analysis:
Criminal Minds Season 1, Episode 9 "Derailed"
(focus on psychiatric disorders)

Episode Analysis:
Criminal Minds Suspect Behavior Season 1, Episode 3 "See No Evil"
(evidence used to make profile)

Assessments:

[Unit 3 Criminal Psychology and Profiling Assessment](#)

Unit Overview	
Unit Title:	Forensic Anthropology
Teacher:	Heather Pierce and Elisabeth Treado
Grade Level/Course:	Forensic Science II, Grades 11/12
Length/Dates:	Approximately 3 weeks
Unit Summary: 2-4 sentences describing the main ideas, content and skills of the unit.	In this unit students will explore how the human skeleton is used in criminal investigations. Students will analyze biological differences in the skeleton that allow forensic anthropologists to identify the approximate age, height, race, and biological sex of a victim. Students will use synthetic bones and data in order to determine who the bones may have belonged to from criminal cases. Students will also explore how forensic anthropologists reconstruct a victim's facial features from skull remains.

Topic (SEP, CCC, DCI)	Description (What the teacher will do)	Activities (What the students will do)	Target Questions	Target Outcome (What the students will know)
Unit 5: Forensic Anthropology Timeline: Approximately 3 weeks SEP: -Asking Questions and Defining Problems -Analyzing and Interpreting Data -Engaging in Argument from Evidence	Phenomenon/Case Study: Richard Crafts (The Woodchipper Murderer) Forensic Files Video Case Study Richard Crafts Wood Chipper Murderer and Reading Questions	Notes: Background Notes for Anthropology Student Notes for Anthropology Student Handouts: Height estimation formula The Human Skeleton	-What is forensic anthropology? -How does bone develop during embryonic development and through childhood? -What information does a forensic anthropologist derive from skeletal remains to construct a biological profile of the	-Bones cells are alive and carry on the same functions as other body cells. -Ossification is the formation of bone as calcium phosphate replaces cartilage. -The condition and chemical analysis of bones provide clues to a person's origin, health, nutrition, occupation, and activity level during his or her life. -Adult male and adult female skeletons

<p>-Using Mathematics and Computational Thinking -Obtaining, Evaluating, and Communicating Information</p> <p>CCC: -Patterns -Cause and Effect -Structure and Function</p> <p>4C's: -Critical Thinking -Collaboration</p>		<p>Labs/Activities/Projects: Chapter 13 Activities Master</p> <p>No Bones About It</p> <p>Whose Bones Are They?</p> <p>Bits and Pieces Version 1 Bits and Pieces Version 2</p> <p>Activity 13-4 Estimation Of Body Size From Individual Bones</p> <p>Activity 13-5 What The Bones Tell Us</p> <p>Activity 13-1 Determining the Age of a Skull</p> <p>Activity 13-2 Bones: Male or Female</p> <p>Videos: Catching Killers: Skeletal Secrets</p> <p>Assessments:</p> <p>Unit 4 Forensic Anthropology</p>	<p>victim?</p> <p>-What is the significance of examining the growth plate, bone caps, bone shafts, and sutures in forensic anthropology?</p> <p>-How do an adult's and a child's skeleton compare in terms of composition, number of bones, suture marks, and growth plates?</p> <p>-How is the knowledge of bone growth (ossification) used to estimate the age of the deceased at the time of death based on skeletal remains?</p> <p>-What formulas are used to estimate the height of a person based on individual bone length?</p> <p>-How are the structure, the size, and shape of the skull, the pelvis, and the long bones used to distinguish between male and female skeletal remains?</p> <p>-How would different types of skeletal trauma</p>	<p>differ in many ways, including the roughness and thickness of bones, size and shape of the skull and pelvic bones, and the shape of the pelvic cavity. Forensic anthropologists can identify patterns in the male and female skeleton that they then use to analyze an unknown skeleton recovered from a scene.</p> <p>-The age of a person at death can be estimated from the number of bones and teeth, skull suture marks, the presence or absence of growth plates, wear on bones and teeth, along with the observation of the surface of pubic and sternal rib bones.</p> <p>-The height of a person can be estimated from the length of the long bones in the arms and legs using standardized formulas. (estimates are most accurate when the sex and ancestry of the deceased are known).</p> <p>-Current methods to identify skeletal remains include nuclear DNA STR profiling; radiology: X-rays, CT, and MRI scanning; photographic facial superimposition; and facial reconstruction.</p> <p>-DNA extracted from bones is used to help establish individual identity using nuclear STR testing or to establish maternal ancestry using mitochondrial DNA. Familial ancestry through the paternal line can be traced through the Y chromosome.</p>
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		Assessment	<p>due to disease, injuries, occupation, or environmental factors provide clues to the identity of the skeletal remains?</p> <p>-How are radiology, computer imaging, DNA technology, video or photographic superimposition, and craniofacial reconstruction used to analyze skeletal remains?</p>	<p>-Skeletal trauma analysis examines the bones for evidence of damage; which may provide clues to the person's identity and to the manner and cause of death.</p> <p>-X-rays are used to reveal skeletal features, number of bones, conditions of bones, previous fractures, implants, disease, and disorders of the bone.</p>
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Unit Overview	
Unit Title:	Handwriting Analysis
Teacher:	Heather Pierce and Elisabeth Treado
Grade Level/Course:	Forensic Science II, Grade 11/12
Length/Dates:	Approximately 3 weeks
Unit Summary: 2-4 sentences describing the main ideas, content and skills of the unit.	In this unit students will examine how handwriting samples are analyzed in criminal cases. Students will explore famous cases where handwriting samples were critiqued to try and determine who authored the item in question, like JonBenet Ramsey's ransom note. Students will also investigate how handwriting experts help financial, legal, and governmental institutions, as well as the general public, detect and prevent forgery, counterfeiting, and other fraudulent crimes.

Topic (SEP, CCC, DCI)	Description (What the teacher will do)	Activities (What the students will do)	Target Questions	Target Outcome (What the students will know)
Unit 6: Handwriting Analysis Timeline: Approximately 3 weeks SEP: -Asking Questions and Defining Problems -Analyzing and Interpreting Data	Phenomenon/Case Study: JonBenet Ramsey Revisited - JonBenet Handwriting Comparison Documents - Parent Handwriting Exemplars - Page 1, page 2 , and page 3 of the JonBenet ransom note	Notes: Chapter 10 Handwriting Notes Student Handouts: Analysis of your own handwriting Labs/Activities/Projects: Analysis of Ransom Note & Testimony	-What is fraudulence? -What does the process of handwriting analysis consist of? Where does this come into play?	-Fraudulence, or fraud, is attempting to get financial or other gain from forgery. -Handwriting analysis by document experts is the examination of questioned documents compared with exemplars to establish the authenticity and/or authorship of the documents. -Document experts use their expertise along with scientific methods and technology to compare handwriting

<p>-Obtaining, Evaluating, and Communicating Information -Engaging in Argument from Evidence</p> <p>CCC: -Patterns -Cause and Effect -Structure and Function</p> <p>4C's: -Collaboration -Critical Thinking -Communication</p>	<p>Zodiac Killer Website with all of the letters he wrote</p> <p>The Lindbergh Kidnapping Background Information and Ransom Note (FBI website)</p> <p>History Video Clip: Crime of the Century- The Lindbergh Kidnapping</p>	<p>Examination of U.S. Currency: Is it Real or is it Forgery?</p> <p>House Divided Activity and Answer Key</p> <p>Analyze Your Own Handwriting Part 1</p> <p>Analyze Your Own Handwriting Part 2</p> <p>Videos: Forensic Files Episode Analysis: "If I Were You" Episode Questions</p> <p>Forensic Files-Sign Here</p> <p>Forensic Files-Sign of the Zodiac</p> <p>Assessments:</p> <p>Unit 5 Handwriting Assessment</p>	<p>-What are the ways in which businesses prevent check forgery?</p> <p>-What are the features of new paper currency that protect against counterfeiting?</p>	<p>characteristics of a questioned document to those of an exemplar to help identify authors and detect any alterations, erasures, and obliterations.</p> <p>-Handwriting analysis has always been an important tool, especially for forensic scientists. Handwriting experts help financial, legal, and governmental institutions, as well as the general public, detect and prevent forgery, counterfeiting, and other fraudulent crimes.</p> <p>-Technological advances, such as biometric signature pads and the infrared spectroscope, have improved objectivity, increased quantitative analysis, and enhanced the detection of forged documents.</p> <p>-Countries, including the United States, continue to refine methods to protect their currency from counterfeiters, changing designs and experimenting with different stocks.</p>
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FORENSIC SCIENCE II

Heather Pierce (SHS) and
Elisabeth Treado (KSA)



FORENSIC SCIENCE II COURSE OVERVIEW

- This course is a continuation of the Forensic Science I course. Students must take Forensic Science I in order to enroll in Forensic Science II.
- Offered as a half year course elective for juniors and seniors.
- The major topics covered in this course include a review of forensic science basics and the judicial system, DNA fingerprinting, forensic toxicology, forensic anthropology, criminal profiling and psychology, and handwriting analysis. Laboratory work is required in this course.
- This course can count as a physical or life science credit.


WHY FORENSIC SCIENCE II?

- Student request
- Full enrollment in forensic science I
- An increased number of students are looking into careers in either forensic science or law enforcement
- Continued popularity in pop culture drives student interest



UNITS OF STUDY



1 A Review of Forensic Science Basics, and the Judicial System, and Forensic Reporting 

2 DNA Fingerprinting 

3 Forensic Toxicology 

4 Criminal Profiling and Psychology 

5 Forensic Anthropology 

6 Handwriting Analysis 



Unit 1: A Review of Forensic Science Basics, the Judicial System, and Forensic Reporting

UNIT OVERVIEW: In this unit, students will review the basic concepts from forensic science I related to evidence, crime scene investigation, and observation. Students will also be introduced to the judicial system where they will examine the process of a criminal case from the arrest through the trial. They will also examine testimonial evidence from interview and interrogations and explore how it is used in criminal cases.

Performance Tasks in Unit 1:

- 1) Cold Case Project**
- 2) Interrogation Station**
- 3) Scenario-based written assessment**

Unit 2: DNA Fingerprinting

UNIT OVERVIEW: In this unit students will explore how the structure of our genetic makeup allows forensic scientists and DNA analysts to identify a specific suspect from a crime scene. Students will investigate DNA technologies including the polymerase chain reaction, gel electrophoresis, and short tandem repeat analysis. Students will analyze data from the different DNA technologies in order to match crime scene samples to suspect and unknown samples.

Performance Tasks in Unit 2:

- 1) DNA Fingerprinting by Restriction Enzymes Lab
- 2) DNA Profiling Case Study: Earthquake Victims
- 3) Scenario-based written assessment

Unit 3: Forensic Toxicology

UNIT OVERVIEW: In this unit students explore how substances that are classified as drugs, toxins, and poisons are analyzed in criminal cases. Students will conduct different experiments to analyze how drugs, toxins, and poisons can be positively identified in the body and in crime scene samples. Students will also differentiate between presumptive testing and confirmatory testing for substances. Finally, they will identify signs and symptoms of drug overdose and toxin and poison exposure.

Performance Tasks in Unit 3:

- 1) Identification of Unknown Substances Lab**
- 2) Forensic Toxicology Celebrity Research Project**
- 3) Scenario-based written assessment**

Unit 4: Criminal Profiling and Psychology

UNIT OVERVIEW: In this unit students will explore how criminal profilers use evidence from a crime scene to determine the behavioral patterns and personality traits of criminals. Students will examine the process used by the criminal profilers of the Behavioral Analysis Unit of the FBI to understand how profiles are developed and used in criminal investigations. Students will develop their own profiles based on case studies and analyze how accurate their profiles were. Students will also examine how the study of victimology plays a role in the development of a criminal profile.

Performance Tasks in Unit 4:

- 1) Creating a Criminal Profile Project**
- 2) Serial Criminals Cereal Box Project**
- 3) Scenario-based written assessment**

Unit 5: Forensic Anthropology

UNIT OVERVIEW: In this unit students will explore how the human skeleton is used in criminal investigations. Students will analyze biological differences in the skeleton that allow forensic anthropologists to identify the approximate age, height, race, and biological sex of a victim. Students will use synthetic bones and data in order to determine who the bones may have belonged to from criminal cases. Students will also explore how forensic anthropologists reconstruct a victim's facial features from skull remains.

Performance Tasks in Unit 5:

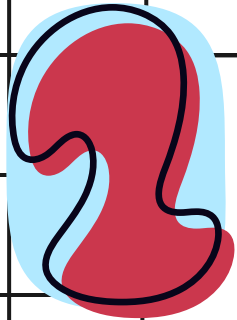
- 1) No Bones About It Lab**
- 2) Whose Bones Are They? Lab**
- 3) Scenario-based written assessment**

Unit 6: Handwriting Analysis

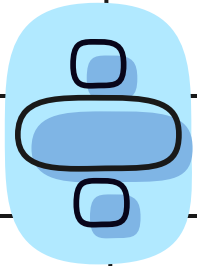
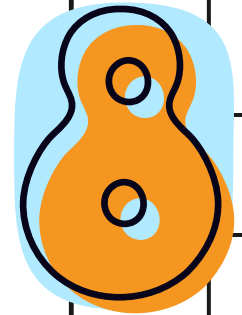
UNIT OVERVIEW: In this unit students will examine how handwriting samples are analyzed in criminal cases. Students will explore famous cases where handwriting samples were critiqued to try and determine who authored the item in question, like JonBenet Ramsey's ransom note. Students will also investigate how handwriting experts help financial, legal, and governmental institutions, as well as the general public, detect and prevent forgery, counterfeiting, and other fraudulent crimes.

Performance Tasks in Unit 6:

- 1) A House Divided Lab
- 2) Analysis of a Ransom Note Activity
- 3) Scenario-based written assessment



Bridges Math Intervention



bridges[®]
intervention

What is a Scientifically Research Based Intervention - SRBI

1. Guaranteed: Equal Opportunity to Learn (Access)
2. Viable: Time for the teaching and learning


“A guaranteed and viable curriculum is the variable most strongly related to student achievement at the school level.” That is, one of the most powerful things a school can do to help enhance student achievement is to guarantee that specific content is taught in specific courses and grade levels.

It is important to note the two parts in the concept of a guaranteed and viable curriculum: The fact that it is guaranteed assures us that specific content is taught in specific courses and at specific grade levels, regardless of the teacher to whom a student is assigned. The fact that it is viable indicates that there is enough instructional time available to actually teach the content identified as important.” *Robert Marzano*



Why Bridges?

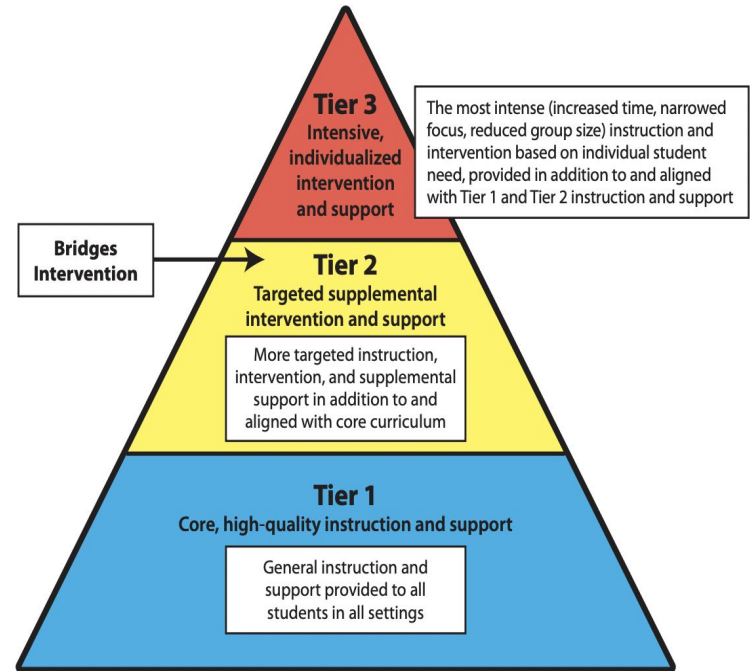


- Targeted instruction and assessment for essential K-5 mathematics skills and concepts.
 - Strengths-based approach builds on each student's abilities
 - Starts with manipulatives, then moving to two-dimensional representations and mental images.
 - Complements regular math instruction,
 - Small-group instruction and ongoing progress monitoring are consistent with Response to Intervention (RTI) and Multi-Tiered System of Support (MTSS)
 - Ease of use: each set includes Teachers Guides, manipulatives, activities and games, assessments and Bridges Educator Site access.
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What is Bridges Math Intervention

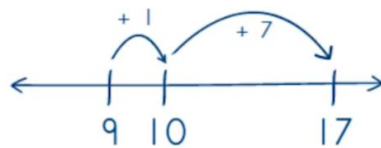
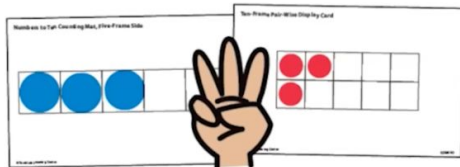
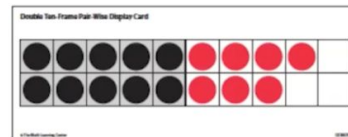
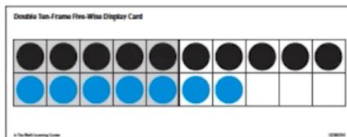
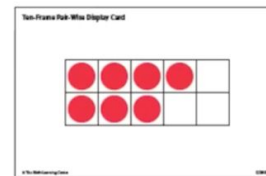
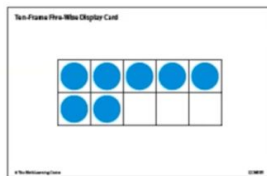
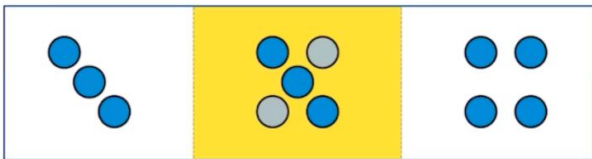
Bridges Intervention is a mathematics resource designed to provide students with short periods of targeted instruction to support specific skills and concepts. It is designed to support all students in making sense of mathematics by building on what they already know and understand.

- Designed for Tier 2 instruction, used in both Tier 2 and 3
- Provides additional opportunities to fill gaps in critical areas
- 40 - 65 sessions are included in each volume
- 30 minutes of instruction
- Additional Placement Assessments ensure teachers are working with students at their zone of proximal development
- Instruction is organized around a learning progression, rather than by grade level
- Sessions include fluency activities along with explicit instruction on a concept



Volumes 1 - 4

Models for Addition & Subtraction to 20



$$9 + 1 + 7 = 17$$

8

Volumes 5 - 8

Models for Thinking

Set 2: Materials to meet 3–5 standards

Volume 5: Operations: Basic Multiplication and Division within 100

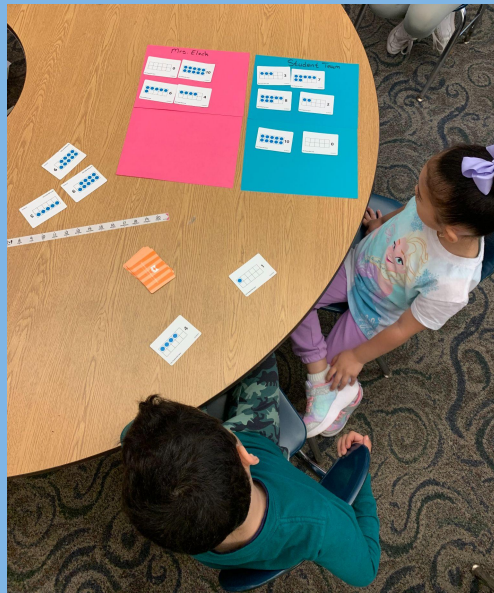
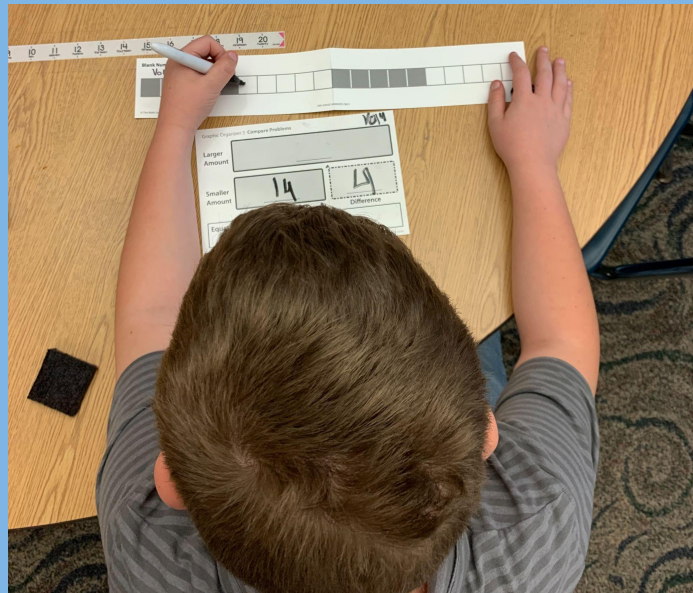
Volume 6: Base Ten Operations: Multiplication and Division of Multi-Digit Numbers

Volume 7: Multiplication and Division Word Problems

Volume 8: Adding, Subtracting, and Making Sense of Fractions

Volume 9: Money and Decimals





This is like recess but doing work at the same time! ~Hatton 1st Graders