

## **Term Information**

Effective Term Spring 2026

## **General Information**

Course Bulletin Listing/Subject Area Biology  
Fiscal Unit/Academic Org Introductory Biology - D0326  
College/Academic Group Arts and Sciences  
Level/Career Undergraduate  
Course Number/Catalog 1870  
Course Title Biology of Sex  
Transcript Abbreviation Biology of Sex  
Course Description A foundational exploration of the evolution and maintenance of sexual reproduction across species, including sexual selection, mating systems, and reproductive strategies.  
Semester Credit Hours/Units Fixed: 2

## **Offering Information**

Length Of Course 14 Week, 12 Week, 8 Week, 7 Week  
Flexibly Scheduled Course Never  
Does any section of this course have a distance education component? No  
Grading Basis Letter Grade  
Repeatable No  
Course Components Lecture  
Grade Roster Component Lecture  
Credit Available by Exam No  
Admission Condition Course No  
Off Campus Never  
Campus of Offering Columbus, Lima, Mansfield, Marion, Newark, Wooster

## **Prerequisites and Exclusions**

Prerequisites/Corequisites none  
Exclusions Not open to students with credit for 3870.  
Electronically Enforced Yes

## **Cross-Listings**

Cross-Listings

## **Subject/CIP Code**

Subject/CIP Code 26.0101  
Subsidy Level General Studies Course  
Intended Rank Freshman, Sophomore

## Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

## Course Details

### Course goals or learning objectives/outcomes

- 1.1 Define the terms sex and gender.
- 1.2 Describe variation in how different species manifest sex.
- 1.3 Explain the mechanisms of genetic inheritance of chromosomal sex.
- 1.4 Compare mechanisms of sex determination across species.
- 2.1 Describe variation in asexual reproduction across animals, plants and fungi.
- 2.2 Explain the evolutionary advantages and disadvantages of asexual reproduction.
- 2.3 Articulate how selection contributes to the persistence of sexual reproduction in various groups.
- 2.4 Explain how colonial living evolves through division of labor in reproduction.
- 3.1 Explain how sexual selection influences animal mating systems.
- 3.2 Describe different mating systems in plants and how they evolved.
- 3.3 Describe fungal life cycles and mating systems.
- 3.4 Explain how pollinators contribute to the evolution of reproductive strategies in plants.
- 4.1 Discuss how different investment in male and female offspring relates to different sexual strategies.
- 4.2 Describe how parasites influence reproductive behavior and other traits in their hosts.
- 4.3 Examine how evolutionary pressures cause differences in birth strategies across animals.

### Content Topic List

- Chromosomal sex
- Genetics
- Asexual reproduction
- Sexual Selection
- Evolution
- Mating Systems
- Ecology

### Sought Concurrence

No

## Attachments

- Biology 1870 Syllabus.pdf  
(Syllabus. Owner: Andrews, Adam Lee)

## Comments

**COURSE REQUEST**  
1870 - Status: PENDING

Last Updated: Vankeerbergen, Bernadette  
Chantal  
08/11/2025

**Workflow Information**

| Status           | User(s)                                                                                                                   | Date/Time           | Step                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------|
| Submitted        | Andrews, Adam Lee                                                                                                         | 05/13/2025 11:16 AM | Submitted for Approval |
| Approved         | Kulesza, Amy Elizabeth                                                                                                    | 05/14/2025 07:26 AM | Unit Approval          |
| Approved         | Vankeerbergen, Bernadette Chantal                                                                                         | 08/11/2025 10:20 AM | College Approval       |
| Pending Approval | Jenkins, Mary Ellen Bigler<br>Hilty, Michael<br>Neff, Jennifer<br>Vankeerbergen, Bernadette Chantal<br>Steele, Rachel Lea | 08/11/2025 10:20 AM | ASCCAO Approval        |



THE OHIO STATE UNIVERSITY

CENTER FOR LIFE SCIENCES EDUCATION

**Biology 1870**

**The Biology of Sex**

**Spring 2026 – 2 Credit Hours**

**Lecturer:**

**Email:**

**Office:**

**Student Hours:**

*other times scheduled by appointment*

**Course Coordinator:**

**Email:**

**Office:**

**Phone:**

**Class Meeting Schedule:**

**Lecture:** Twice Weekly for 55 minutes

**Prerequisites:**

None. Not open to students with credit for 3870.

**No Required Course Materials**

**Credit Hours and Work Expectation:**

This is a 2-credit-hour course. According to Ohio State policy, students should expect around 2 hours per week of time spent on direct instruction in addition to 4 hours of homework to receive a grade of C average. [ASC Honors](#) provides an excellent guide to scheduling and study expectations.

**Course Description:**

A foundational exploration of the evolution and maintenance of sexual reproduction across species, including sexual selection, mating systems, and reproductive strategies.

**Biology 1870 Course Goals and Expected Learning Outcomes**

| Goals                                                                                                                          | ELOs                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 1. Students will define sex and describe the biology and development of sex differences in humans as compared to other species | Successful students will be able to ...                                            |
|                                                                                                                                | 1.1 Define the terms sex and gender.                                               |
|                                                                                                                                | 1.2 Describe variation in how different species manifest sex.                      |
|                                                                                                                                | 1.3 Explain the mechanisms of genetic inheritance of chromosomal sex.              |
| 2. Students will explain the evolution and maintenance of sexual reproduction.                                                 | 1.4 Compare mechanisms of sex determination across species.                        |
|                                                                                                                                | 2.1 Describe variation in asexual reproduction across animals, plants and fungi.   |
|                                                                                                                                | 2.2 Explain the evolutionary advantages and disadvantages of asexual reproduction. |
|                                                                                                                                | 2.3 Articulate how selection contributes to the persistence of                     |

|                                                                                                                  |                                                                                                           |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 3. Students will explore the evolution of mating systems and the ecological factors that drive them.             | sexual reproduction in various groups.                                                                    |
|                                                                                                                  | 2.4 Explain how colonial living evolves through division of labor in reproduction.                        |
|                                                                                                                  | 3.1 Explain how sexual selection influences animal mating systems.                                        |
|                                                                                                                  | 3.2 Describe different mating systems in plants and how they evolved.                                     |
| 4. Students will examine how reproductive strategies influence the evolution of organisms' traits and behaviors. | 3.3 Describe fungal life cycles and mating systems.                                                       |
|                                                                                                                  | 3.4 Explain how pollinators contribute to the evolution of reproductive strategies in plants.             |
|                                                                                                                  | 4.1 Discuss how different investment in male and female offspring relates to different sexual strategies. |
|                                                                                                                  | 4.2 Describe how parasites influence reproductive behavior and other traits in their hosts.               |
|                                                                                                                  | 4.3 Examine how evolutionary pressures cause differences in birth strategies across animals.              |

### **Grading and Evaluation:**

Graded assignments may come in three forms, and students should note the expectations for each in the descriptions of our class assignments below:

- **Independent Work (👤):** Strictly non-collaborative, original-individual work. You may discuss this assignment only with your instructor. Discussions with other individuals, either in person or electronically, are strictly prohibited and constitute academic misconduct.
- **Required Collaboration (👥):** An explicit expectation for collaboration among students either in-class or outside (i.e., group work).
- **Optional Collaboration (👥❤️):** Students are permitted, but not required, to discuss the assignment or ideas with each other. However, all submitted work must be one's original and individual creation.

| Assignment                           | Points     | Assignment Type |
|--------------------------------------|------------|-----------------|
| Exams (3 x 100 points)               | 300        | 👤               |
| In-class activities (14 x 20 points) | 280        | 👤 👥 ❤️          |
| SALG                                 | 5          | 👤               |
| <b>Total Points Possible</b>         | <b>585</b> |                 |

### **Exams (100 points each)**

Student understanding of the content will be assessed through three summative in-class exams consisting primarily of multiple-choice questions with a few short answers. The final exam will not be comprehensive beyond the natural interconnectedness of course material.

### **In-Class Activities (280 points total)**

Throughout the lectures, participation will be encouraged and assessed through a range of active learning activities, which may include TopHat questions, case-studies, worksheets, and discussions. Some will be completed individually while others will require engagement with other students in the class.

### **Student Assessment of Learning Gains (5 points)**

This survey will be administered at the end of the course to gather information from students about the gains made throughout the course and how various aspects of the course contributed to those gains. Full credit will be awarded for completion.

### **Your Final Grade:**

Your final grade will be based on the percentage of the 585 points that you earn during the course of the semester as described above. We do not grade the course on a curve. Final letter grades will be determined by the grade scale below:

### **Grade Scale:**

| A              | A-              | B+              | B               | B-              | C+              | C               | C-              | D+              | D               | E            |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| 100 –<br>93.0% | 92.9 –<br>90.0% | 89.9 –<br>87.0% | 86.9 –<br>83.0% | 82.9 –<br>80.0% | 79.9 –<br>77.0% | 76.9 –<br>73.0% | 72.9 –<br>70.0% | 69.9 –<br>67.0% | 66.9 –<br>60.0% | 59.9 –<br>0% |

### **Posting of Grades:**

All grades will be posted on Carmen. After grades are posted you have 10 working days to challenge any grade or inquire regarding an unposted or missing grade. **After that time, grades are final.** To challenge or inquire about a missing grade, contact your laboratory instructor.

### **\*\*IMPORTANT\*\***

*Make sure that all of your grades are properly posted on Carmen as you receive them. Challenges about grades, particularly after the end of the semester, will not be entertained after the 10-day grace period.*

### **Late Assignments:**

All assignments are due on the date and time prescribed in the course schedule. Late work will not be accepted except in rare (and documentable) circumstances.

### **Absences:**

#### **Exams:**

If you are too ill to take an exam or must miss for another legitimate unscheduled reason, you must contact the Course Coordinator within 24 hours of the exam. Make up exams will be given only to students who produce, at the make up or before, documentation of a legitimate reason (at the time of the absence) for missing the exam. Valid excuses are limited to problems that are beyond the student's control, such as military duty, intercollegiate athletic or academic activities, funerals, etc. Medical excuses will be considered only if you have been treated by a medical professional on the day of the exam (excuses from the student health center website will not be accepted). Lack of transportation, loss of electricity, travel plans, etc. are not considered valid excuses. If you anticipate having to miss an exam due to attendance at a university sanctioned event or other qualifying conflict, you must contact the Course Coordinator at least one week in advance of the exam.

If you have no documentation to support your absence, or your absence from the exam is not for an excused reason, you will still be offered the opportunity for a makeup exam, with a 25% overall deduction on your exam score if arrangements are made within 24 hours of the original exam. The format of makeup exams is at the discretion of the instructors.

**Note: Check the date and time of the final examination now and make sure that this time does not conflict with your future plans. No early final exams will be given.**

**Disability Services:**

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let the Course Coordinator know immediately so that we can privately discuss options. To establish reasonable accommodations, we may request that you register with Student Life Disability Services. After registration, make arrangements with the Course Coordinator as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. Only the course coordinator is authorized to complete SLDS accommodations. This will help us ensure that your individual needs will be met appropriately and fairly.

If you are ill and need to miss class, including staying home and away from others while experiencing symptoms of a viral infection or fever, please let your instructor know immediately. If your illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations. You can connect with them at [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; or [slds.osu.edu](http://slds.osu.edu).

**Religious Accommodations:**

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the **Office of Institutional Equity**.

Policy: **Religious Holidays, Holy Days and Observances**

### **Weather or Other Short-Term Closing:**

Should in-person classes be canceled, students will be notified as to which alternative methods of teaching will be offered to ensure continuity of instruction for this class. Communication will be via Carmen announcements and course-wide email.

### **Instructor Feedback and Response Expectations:**

- **Email response:** The CLSE's expectation of instructors is that emails will be responded to within one business day. If your email is sent during the evening or over the weekend, you may not receive a response until the next business day.
- **Class announcements:** I will send important class-wide messages through the Announcements tool in Carmen. Please check [your notification preferences](https://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to ensure you receive these messages.
- **Graded assignments:** Assignments will be graded and returned to you within one week after they were due. All scores are posted on Carmen no later than the day the graded assignment is returned.

### **Course Technology:**

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** [8help@osu.edu](mailto:8help@osu.edu)
- **TDD:** 614-688-8743

### **Carmen**

- Carmen, Ohio State's Learning Management System, will be used to host materials and activities throughout this course. To access Carmen, visit [Carmen.osu.edu](https://carmen.osu.edu). Log in to Carmen using your name.# and password. If you have not setup a name.# and password, visit [my.osu.edu](https://my.osu.edu).
- Help guides on the use of Carmen can be found at <https://resourcecenter.odee.osu.edu/carmen>
- **This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.**
- [Carmen accessibility](#)

### **CarmenZoom**

- Office hours will be held through Ohio State's conferencing platform, CarmenZoom. A separate guide to accessing CarmenZoom and our office hours is posted on the course Carmen page under Files.
- Students may use the audio and video functions if a webcam and microphone are available. If not, there is still a chat function within CarmenZoom for the student to live chat with the professor or TA in the virtual office hours room.
- [Carmen Zoom](#) help guide

### **TurnItIn**

- Students at The Ohio State University are accountable for the integrity of the work they submit. Therefore, you should be familiar with the guidelines provided by the [Committee on Academic](#)

[Misconduct \(COAM\)](#) and [Section A of OSU's Code of Student Conduct](#) in order to meet the academic expectations concerning appropriate documentation of sources. In addition, OSU has made TurnItIn, a learning tool and plagiarism prevention system, available to instructors. For this class, you will submit your papers to TurnItIn from Carmen. When grading your work, I will interpret the originality report, following [Section A of OSU's Code of Student Conduct](#) as appropriate. For more information about TurnItIn, please see [the vendor's guide for students](#). Note that submitted final papers become part of the OSU database.

- Please know that I view TurnItIn first and foremost as a teaching tool to make you a better writer. You will see in your individual originality reports exactly what the instructors see. We WANT you to look at this report as soon as you submit your assignments. If you see an issue, please correct it right away, before we start grading the assignment. You can resubmit without penalty as many times as you want prior to the established due date for any assignment. After the due date, the late policy is in effect.

### **TopHat**

- TopHat is a web-based response system that allows students to use their own devices provide responses in the classroom. This course uses Top Hat to promote active engagement, allow for synchronous feedback, and monitor attendance.
- [TopHat](#) help guide

### **Discussion and Communication Guidelines:**

The following are expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online and is not always appreciated in-person. The instructional team work very hard to provide a positive learning experience. Please keep this in mind and remain civilized and respectful in your class communications.
- **Citing your sources:** In academic discussions, please cite your sources to back up what you say.

### **Issue Resolution:**

The CLSE believes that student concerns are usually most effectively addressed by the staff closest to the situation. Therefore, students are ordinarily expected to address issues or concerns first with their instructors. If the issue cannot be resolved by your instructor, or for some reason you feel that you absolutely cannot address your concern with your instructor, please feel free to contact the Course Coordinator or Assistant Director Adam Andrews ([andrews.171@osu.edu](mailto:andrews.171@osu.edu)).

### **Building Emergency Action Plan:**

Each building on campus has a Building Emergency Action Plan (BEAP) outlining that specific building's specific procedures to be followed in the event of a range of emergency situations, including fire, weather, terrorism, chemical spills, etc. It is the role of every Buckeye to help keep each other safe and to be aware of these procedures. You can find all of the campus BEAPs at <https://dps.osu.edu/beap>.

### **Lyft Ride Smart:**

Lyft Ride Smart at Ohio State offers eligible students discounted rides, inside the university-designated [service area](#), from 7 p.m. to 7 a.m. Prices may be impacted by distance, traffic, time of day, special events and prime time surcharges. To qualify for program discounts, users must select

“shared ride” when booking in the Lyft app. For more information, visit: <https://ttm.osu.edu/ride-smart>.

### **Mental Health:**

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student’s ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life’s Counseling and Consultation Service (CCS) by visiting [ccs.osu.edu](https://ccs.osu.edu) or calling 614-292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

### **Title IX:**

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator at [titleix@osu.edu](mailto:titleix@osu.edu).

### **Diversity:**

The Ohio State University affirms the importance and value of diversity of people and ideas. We believe in creating equitable research opportunities for all students and to providing programs and curricula that allow our students to understand critical societal challenges from diverse perspectives and aspire to use research to promote sustainable solutions for all. We are committed to maintaining an inclusive community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among all members; and encourages each individual to strive to reach their own potential. The Ohio State University does not discriminate on the basis of age, ancestry, color, disability, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, race, religion, sex, gender, sexual orientation, pregnancy, protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. (To learn more about diversity, equity, and inclusion and for opportunities to get involved, please visit: <https://odi.osu.edu/> or <https://cbsc.osu.edu>)

### **Academic Misconduct:**

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed, illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>. We will adhere to this policy.

- Unless otherwise specified for a particular assignment, all submitted work should be a student’s own unique effort. Collaborative efforts are not permitted unless expressly sanctioned for a particular assignment.

- Unless otherwise specified for a particular assignment, use of AI-generated materials for course submissions is not permitted.
- Reusing past work: In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.
- Using others' verbatim words without the use of quotation marks and citation is plagiarism. Paraphrased work requires citation to denote the use of others' ideas. Copying other's words without quotation while using citations is still considered plagiarism.
- Use of any technology during a quiz or exam (including but not limited to cell phones, smart watches, headphones, electronic dictionaries, etc.) is strictly prohibited.

### **Copyrighted Class Materials:**

© The Instructor's lectures and all course materials, including power point presentations, tests, outlines, assignments, and similar materials, are protected by copyright. You may take notes and make copies of course materials for your own use. You may not and may not allow others to reproduce or distribute lecture notes and course materials publicly whether or not a fee is charged without the express written consent of the course instructor or course coordinator.

### **Course Schedule: Spring 2026**

*Schedule and assignments subject to change with as much advance notice as possible*

| <b>Week</b> | <b>Lecture Topic</b>                                                                                                                      | <b>Readings</b>                                                                                                                                                                                                                                                                                          | <b>Assignments</b>                          |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 1           | What is sex? Definitions of sex and gender. The scope of sex. Examples throughout organisms                                               | Opinion: Biological Science Rejects the Sex Binary, and That's Good for Humanity by Agustín Fuentes, The Scientist, 27Aug 2024                                                                                                                                                                           | Group assignment on definitions of sex      |
| 2           | Sex in humans. Sex chromosomes and fetal sexual differentiation in humans. The SRY gene and hormonal cascades.                            | Choosing sex by Blanche Capel, The Scientist, 1 Oct 2009                                                                                                                                                                                                                                                 | Meiosis group assignment                    |
| 3           | Variation in human sex. SRY crossing over and androgen insensitivity.                                                                     | Sex Redefined: The idea of 2 sexes is overly simplistic, Scientific American (reprinted from Nature magazine 2015) by C. Ainsworth, 2018.<br><br>Short video - <a href="https://www.biointeractive.org/es/classroom-resources/meiosis">https://www.biointeractive.org/es/classroom-resources/meiosis</a> | HHMI module group assignment                |
| 4           | Asexual reproduction Advantages and disadvantages of asexual reproduction. The paradox of sex and why sex is evolutionarily advantageous. | The sex paradox by Megan Scudellari, The Scientist, 1 Jul 2014<br>Why sex evolved by Jeff Akst, The Scientist, 13 Oct 2010<br><br>Sexual Reproduction and the Evolution of Sex by S. Otto, Nature Education 1(1):182, 2008                                                                               | Paradox of sex game group assignment        |
| 5           | Sexes across animals. Temperature-dependent sex                                                                                           | Genetic mechanisms of sex determination, by L. Hake & C. O'Connor, C., Nature Education 1(1):25 2008<br><a href="https://www.nature.com/scitable/topicpage/genetic-">https://www.nature.com/scitable/topicpage/genetic-</a>                                                                              | Infographic gallery walk about variation in |

|    |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                    |
|----|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|    | determination, variation in sex chromosomes, and sex changing fish.                 | <a href="#">mechanisms-of-sex-determination-314/</a><br>Sex Determination: It's in the Genes—Sometimes by Hannah Thomasy, The Scientist, 12 Mar 2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | animal sex assignment<br><br>Midterm exam 1                                        |
| 6  | Reproduction in plants. Asexual reproduction in plants, selfing, and sex.           | Flower Power: A Close Look at Plant Reproduction by Dahlhausen et al. Frontiers for Young Minds, 2020.<br><br>Angiosperms Chapter 26.3, Biology 2e, OpenStax                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Plant sex group assignment                                                         |
| 7  | Sexes and plants. Why are plants monocious, dioecious, etc.?                        | Best to be bisexual by Barrett, S., Current Biology 31(6): 22 March 2021, Pages R298-R300<br><br>Botanical Battle of the Sexes. By K. Wong, Scientific American. 29 Sep 2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Presentation on variation in breeding systems                                      |
| 8  | Fungal sex. Fungal mating types, temporary reproductive structures, and life cycle. | Characteristics of Fungi, Chapter 24.1, Biology 2e OpenStax<br><br>Ecology: Fungal Mimics Dupe Animals by Transforming Plants. By Slot, J. and Kassen, MT. Current Biology 31 (5): R250- 2021<br><br>Fungal Pseudo-flowers. Blog post: <a href="https://plantpathogens.net/chapters/2-hijacking_pollinators">https://plantpathogens.net/chapters/2-hijacking_pollinators</a>                                                                                                                                                                                                                                                                                                                                                                                       | Fungal sex group assignment                                                        |
| 9  | Sex with help Pollinators, bee mimic orchids, fig wasps, and fungal pollinators.    | Figs & Wasps: How are Figs Pollinated? By Melvin, M. Foodunfolded. 2024. <a href="https://www.foodunfolded.com/article/figs-wasps-how-plant-and-pollinator-work-together">https://www.foodunfolded.com/article/figs-wasps-how-plant-and-pollinator-work-together</a><br><br>Pollination by sexual deception. by R. Peakall, Current Biology 33(11): R489-R496.                                                                                                                                                                                                                                                                                                                                                                                                     | Pollinator group assignment                                                        |
| 10 | Giving up sex. Colonial living with and without haplodiploidy                       | The fascinating lives of colonial animals. By L. Beckman, 2021. <a href="https://natureaccordingtosam.wordpress.com/2021/11/09/the-fascinating-lives-of-colonial-animals/">https://natureaccordingtosam.wordpress.com/2021/11/09/the-fascinating-lives-of-colonial-animals/</a><br><br>Lessons from the pond: Clues from green algae on the origin of males and females by Attwooll, C., The Salk Institute. 2010 <a href="https://www.salk.edu/news-release/lessons-from-the-pond-clues-from-green-algae-on-the-origin-of-males-and-females/">https://www.salk.edu/news-release/lessons-from-the-pond-clues-from-green-algae-on-the-origin-of-males-and-females/</a><br><br>An Introduction to Eusociality. By N. Plowes, Nature Education Knowledge 3(10):7 2010 | Eusociality group assignment<br><br><br><br><br><br><br><br><br><br>Midterm exam 2 |
| 11 | How to succeed in mating. Sexual selection in animals.                              | Sexual Selection by P. Brennan, Nature Education Knowledge 3(10):79. 2010<br>The Hidden Side of Sex by P. Brennan, The Scientist, 1 July 2014<br>The Weapons of Sexual Rivalry by Kendall Powell, Scientific American, 24 Dec 2019.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Infographic gallery walk about variation in sexual selection                       |
| 12 | Sexual strategies. Sex ratios, investment                                           | Sexual selection in plants, by J. Moore and J. Pannell. Current Biology 21(5). 2011                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Investment in offspring game                                                       |

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|            | in males vs. female plant structures, and investment in offspring of different sexes.                                          |                                                                                                                                                                                                                                                                       |                                              |
| 13         | Parasites and sex. Brood parasites, parasitoids, complex life cycles of parasites, and ecological and evolutionary strategies. | The Ecology of Avian Brood Parasitism. R. Croston & M. E. Hauber M. E. Nature Education Knowledge 3(10):56. 2010<br>Animal Mind Control by Jef Akst, The Scientist, 1 Jan 2012<br><br>Zombie Fungi Hijack Hosts' Brains by Hannah Thomasy, The Scientist, 29 Oct 2024 | Parasites and sex group assignment           |
| 14         | Birth strategies. Viviparity, ovoviviparity, oviparity. Placentals, marsupials and monotremes.                                 | The Prescient Placenta by Christopher Coe, The Scientist, 1 Aug 2015<br>5 Things We Bet You Didn't Know About The Placenta by Adrian Erlebacher and Susan J. Fisher, Scientific American, 1 Oct 2017                                                                  | Variation in birth strategy group assignment |
| Final<br>s | <b>Final Exam in class</b>                                                                                                     |                                                                                                                                                                                                                                                                       |                                              |