

**The Living World
Fall 2020**

The living World is full of questions: What do we eat? How do we produce the food that we eat? What happens if I get worms? In doing everything that we do as a species, what have we done to the other species in the living world? Why do some people say we are living in the Anthropocene, and what is it anyway?

We will read Three bestselling books on these questions, and examine some of the scientific studies on which they are based. Each book is paired with a video (*italics*), Students will present oral reports linking the primary research to the public claims.

Readings for the course include:

In Defense of Food by Michael Pollan ISBN 978-0-14-311496-3

The Wildlife of Our Body by Rob Dunn ISBN 978-0-06-180648-3

The Sixth Extinction by Elizabeth Kolbert ISBN 978-1-250-06218-5

Biology 100 is a 3 semester hour course that carries both Natural Science (N) and Research (R) credit. In order to keep the paper pushers in the government happy I must have a “**Verification of Participation Policy**”. After 2 weeks I will be asked if your are there... so you will need to have responded to the first noncredit “who are you post” on Canvas, the DHMO post and the first response to In Defense of Food

Note: All of these are “Trade Books” not textbooks, so you may be able to check them out of a local Library, or find copies on the net. All are available as ebooks, (Kindle some also for Nook) neither the format nor edition you choose to read will matter. Note you can get a free Kindle App so you can read kindle books on a regular computer or some smart phones. My goal was to save you money.

An Excel Spread Sheet is on the course site with a suggested daily schedule. It is setup as a summer term calendar. You can add other courses and assignments to it so you can be aware of “Crunch Times” and see when everything is due on the same page. A note on the spreadsheet Items shaded in **Yellow** are to be read or watched, **light blue** indicates that you need to post on Canvas, and **pale green** indicates work that is to be sent to me as an attachment. Please remember to use your name as the beginning of the file name for each attachment. For example EJonesPaper1.DOCX, or EJonesTest1.docx.

Course Overview (See spread sheet for due dates!)

Week 1 August 24 – 31

What is Scientific Literacy? – What is information literacy?

Evaluating information critically. How do authors and directors try to slant the information to support their point of view?
Review web site <http://www.dhmo.org/>

Unit 1 Sept 1 - 18

In Defense Of Food - Michael Pollan and *Food Inc.*

Unit 2 Sept 19 - Oct 9

The Wildlife of Our Bodies - Rob Dunn and *Videos on Human Microbiome**

Unit 3 Oct 10 - 31

Chapters 1-7 The Sixth Extinction by Elizabeth Kolbert and *Videos on the Sixth Extinction**

Unit 4 Nov 1 - 21

Chapters 8-13 The Sixth Extinction by Elizabeth Kolbert and *Climate Change Videos**

Final at home after Thanksgiving

*Links to videos will be found on the course web site.

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Learning Outcomes for Biology 100

Biology 100 addresses two of the Colleges learning outcomes;

1. "Natural Sciences: Courses fulfilling the natural sciences component of the common curriculum are those that study the natural world through inferences based on systematic observations and controlled experiments. Students who complete these courses increase their knowledge of the critical methods used in such disciplines as biology, chemistry, physics, and experimental psychology. Students also develop a greater understanding of their physical environment, the laws that govern it, and the methods by which these laws are discovered." Curricular Definitions - Adopted by the Mary Baldwin College Faculty on February 19, 2010

To earn the natural science learning outcome students in Biology 100 will read and discuss the sometimes-conflicting world of the Scientific Study. As they read the primary literature they will discover how experiments are conducted, analyzed, and the results presented. By the end of the course, students should be able to investigate the claims made in the popular literature and determine if they have any scientific validity.

2. Information literacy

"Recognize when information is needed and have the ability to locate, critically evaluate, and use information effectively

Approved courses:

- require students to demonstrate an understanding of the research process
- teach how to access information effectively and efficiently from a variety of sources and a diverse range of formats (both hardcopy and on-line)
- provide guidance on evaluating information critically
- teach how to use information to accomplish a specific purpose such as a research paper or thesis, a class project, or an independent study
- provide instruction on proper documentation and citation of sources"

Curricular Definitions - Adopted by the Mary Baldwin College Faculty on February 19, 2010

Research is a process, one that can be done efficiently and in an organized manner, or as a shotgun approach where much of your energy will miss the target. It is the goal of this course that you master the process of finding and evaluating information in an efficient organized manner. For each of the four books we will work with, you will need to find articles that either support or refute the authors' claims. This information will be used for the specific purpose of your class projects.

Students will develop an awareness of **the research process** as they discover how knowledge is added to the field of **biology** through an examination of the scientific literature and classroom discussion. You will also learn **how to access information** as you seek out the sources on which several books are based. You will learn to

follow up older information with current data, as you check on the changes that have occurred in the endangered species described by Douglas Adams in 1990.

What others have already learned is always recorded, once by Monks carefully copying manuscripts, then the printing press, and now the computer. The use of illustration was critical in many scientific studies. The works of John James Audubon and other biological illustrators, beautifully demonstrates the old cliché “a picture is worth a thousand words.” As we have gone from the Pleistocene artist recording the hunt with pigments and fats on the walls of the cave, to brush and canvas, then film and now digital images the availability of shareable information has exploded. You are no longer limited to print resources. Many universities and academic societies record lectures and make them available for the public. You will discover the wealth of information to be found on iTunes U - podcasts and online lectures and, horror of horrors, by term’s end, your iPod may contain something more than music and movies.

You will work on your **electronic search techniques**. You will discover that *to Goggle* may be a verb in your high school vocabulary, but one that will be replaced in many instances by more advanced search engines. You will investigate the controversy about *Wikipedia*, does it have a place in your search for information, and if so what is that place?

Canvas Discussions and Research Papers are to be based on an investigation of the background information for a section of the book and or video for that unit. You will choose the section that most interests you, HINT - before you pick it, search for it and make sure it is something that you can find information on. Once you have collected the information you will weave it into a **Canvas post**. Your chosen topic will help you to determine what information you need. If two students find contradictory information on a given topic it will make for a better discussion.

One of the important responsibilities you have as a student is to document where you discovered the information that you present. We will follow the APA (*American Psychological Association*) format for citations. This is one of the more widely used citation styles, and mastering it is an important part of scholarship. Increasingly software is taking over the role of formatting; by mastering APA you will ensure that you record all of the needed information for any citation style.

You will write four 3-4 page **papers (research summaries)** (one per unit) in which you may take any piece of information from the book and or video and examine whether or not it was based on research. Research summaries will be due on the Wednesday of the third week of each unit. Proper citations will be expected for all sources consulted.

The skills to be mastered in this course should serve you well in the rest of your academic career.

Class Organization

Each unit is based on a book and related video. In the first week of each unit you are expected to watch the video, and read the first half of the book. You need to have finished reading the book by end of the unit.

Many students are visual learners, and to provide background for each book I have selected a video that you will need to watch. As of this writing all are available on line. I have prepared a sheet of questions for each video so that we will all be on the same page in terms of content, since I've seen some of them 20 times by now these questions will also be used to limit what I ask you on a unit test. (I'm assuming that after 20 views I've seen things that you will not pick-up on your first view and it would be unfair not to limit my questions.)

Since the course is online and discussions on Canvas are a key aspect I expect everyone to follow the rules of netiquette. A good a summary of what netiquette is can be found at the following link. Take home *If you would not say it to someone's face don't say it on line!* <http://www.albion.com/netiquette/corerules.html>

The course divides into an introduction and 4 units. The introduction deals with finding and evaluating sources. These include both published (available in print/pdf format) and electronic (web sources). I do not want you to limit yourselves to printed text, many excellent talks and documentaries have been recorded and are available on the web through sites like iTunes, FORA, and TED. You need to be able to evaluate the author/presenter more than the form of the presentation.

Grade based on;

Unit questions online. I will post a few lead off questions for each unit, you will need to respond to either my question, or to a fellow student's response. Your post should bring in new information into the discussion but can easily take the discussion away from the content of the book. The Books and Video's are starting points, not boundaries for class discussion. These discussions will run for 3 to 4 weeks and at least 5 posts are expected. (See general guidelines at end of syllabus)

Research Summaries and online Discussions one set per unit. These provide a record of what you discovered about a piece of information that you found of interest in the text. And your reactions to what two others found. You are expected to create a thread due Monday of week 3, and respond to two other threads by Friday week 3. Your thread must contain citations to get full credit. You will develop your thread in a 3-4 page paper due Wednesday in week 4 of each unit. Each unit test may include a question asking you to discuss what you or other students have found.

Unit tests will cover the main points of each book, video, and the Canvas discussions. They will be short answer / essay. You may be asked how you would evaluate two conflicting sources. These will be posted on BB in the last week of each unit and are to be emailed to me as attachments in MS Word, or Google Doc format. The files **MUST BE NAMED AS FOLLOWS**. YourNameTestXBiol100f20.docx for example: EricJonesTest1Biol100f20.docx or EJonesPaper2Biol100f20.docx This is important when you turn in a paper and just call it "paper1" it could result in 30 files with the same name. Each new one could wipe out someone's paper if it had the same name! It also allows me to easily search my computer to see if a blank spot in my grade book is due to my having misplaced your paper, or your not having turned it in. With your name as part of the file name things do not get lost!

Participation You will need to contribute to the online discussion in a timely manner. Points will be deducted for late work, BUT late work will be taken, *you cannot get out of doing something by being late.*

Final exam will cover the entire course.

DHMO insights	1@	10	10
Canvas Unit Paper Topics	4@	25	100
Canvas Discussions	4@	50	200
Posts	3@10		
Comment	2@10		
Unit Tests	4@	50	200
Research Papers	4@	75	300
Final Exam			200
Total			1010

Policy on ET's and Late Work. Life happens. When students have had a good reason why they need extended time and contact me in advance I have normally said yes. In short I am interested in what you know, more that when you learn it. All tests including the final will be take home with a week to get them done. Note: late work will have a deduction taken, it would be unfair to another student who missed out on something fun to get the assignment in on time if there was no penalty for being late. But that said being late does not get you out of doing the work.

Honor Pledge

Believing in the principles of Student Government, I pledge myself to uphold the ideals and regulations of the Mary Baldwin University community. I recognize the principles of honor and cooperation as the basis of our life together. I shall endeavor faithfully to order my life accordingly. I will not lie, cheat, steal, plagiarize, or violate my pledge of confidentiality. I will encourage others to fulfill

the ideals of the Honor System and will meet my responsibility to the community by reporting incidents of Honor offenses.

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General guidelines for online discussion.

(1) Protocol for posting threads and contributing to an online discussion are as follows:

Postings should be evenly distributed during the discussion period (not concentrated all on one day or at the beginning and/or end of the period).
Postings should be a minimum of one short paragraph and a maximum of three paragraphs.
Avoid postings that are limited to 'I agree' or 'great idea', etc. If you agree (or disagree) with a posting then say why you agree by supporting your statement with concepts from the readings, video or by bringing in a related example or experience.
Address the questions as much as possible (don't let the discussion stray).
Try to use quotes from the articles that support your postings. Include citations when you do that.
Build on others responses to create threads.
Bring in related prior knowledge (work experience, prior coursework, readings, etc.)
Use proper etiquette (proper language, typing, etc.).

(2) Rubric for evaluating online discussions:

Unit Question Online Discussion Rubric				
Criteria	Excellent	Good	Average	Poor
Timely discussion contributions	5-6 postings well distributed throughout the unit	4-6 postings distributed throughout the unit	3-6 postings somewhat distributed	2-6 not distributed throughout the unit
Responsiveness to discussion and demonstration of knowledge and understanding gained from assigned reading	very clear that readings were understood and incorporated well into responses	readings were understood and incorporated into responses	postings have questionable relationship to reading material	not evident that readings were understood and/or not incorporated into discussion
Adherence to on-line protocols	all on-line protocols followed	1online protocol not adhered to	2-3 online protocols not adhered to	4 or more online protocols not adhered to
Points per post	9-10 (Max 50)	8 (max 40)	6-7 (30 max)	5 or less

Based on a Weekly rubric by Dr. Dabbagh

<http://mason.gmu.edu/~ndabbagh/wblg/online-protocol.html>