

St. Athanasius Academy
6th Grade Marine Biology
Fall and Spring semester 2022/2023
Tuesday and Thursday @ 10:00 am EST

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I. Rationale:

This St. Athanasius Academy secondary school science course is designed as an introduction to Marine habitats based upon topical geographical regions. Each habitat will include what elements fosters life and what really causes changes since creation. Each student will be exposed to this life science from an Orthodox and basic science perspective.

We will explore the similarities and differences between each marine habitat to include the geographic composition and properties of the water. We will study the influence of the moon, sun, salt and freshwater, oxygen content and water pressure on marine life. Each class will explore how life adapts to its environment and even thrives with shifting tectonic plates, volcanos, earthquakes, increase of plankton, predators, changes in the water temperatures and by a spinning planet around the sun .

II. Course Aims and Outcomes:

A. Aims

To reveal the patterns that make our underwater world exist. To see how all creatures adapt and continue to thrive for millions of years. Also, to see the similarities in life below the surface with life above.

B. Specific Learning Outcomes

By the end of this course, students will:

- 1) Will be able to have a vocabulary of terms that can express what happens in each marine habitat and what creatures can live in these environments.
- 2) Understand what elements are required to allow for life to reproduce and thrive.
- 3) Be able to respond to questions relating to scientific facts about marine organisms and their relationships with other organisms and their environment.
- 4) To be able to converse in class and out of class with friends and family and fellow classmates about the vast world under the sea.
- 5) To report and compare on different projects assigned in class.

III. Format and Procedures:

- Each class will start at 10:00am EST each Tuesday and Thursday for 16 classes in each semester for 8 weeks.
- The exception is for stated school closures on Othodox feast and fast days.
- Attendance will be taken and a student will only be marked as present if their video and audio functions are on and you can respond with the word, “present”. Unless you are taking a bathroom break, your camera must be on or you will be considered “absent” from the class.
- If a student is late signing into the class, and we have moved on to presentation material (videos and PowerPoint presentation), the student must wait until I can view the waiting room function and admit you to the class.
- The first part of the class is reserved for questions and answers about the previous class material.
- Participation will be factored into the grading for that week.
- Lecture will take up a majority of the class to include videos and powerpoint presentations provided to you as links under the resource section of your class page.
- Questions will be asked throughout the lecture to test your attention and comprehension of assigned material.
- Questions can be asked at anytimes, but your microphone must be off and use of the screen hand or your hand must be used to be called on. I may not see questions in the “chat” section and participation is important.
- Homework and test results will be discussed at the end of the class.
- Quizzes and tests will be given at the end of each discussion on a particular marine habitat. Some of the quizzes will be verbal by asking one question to each of the students. Or multiple questions asked in written format (usually 10 questions per test). If the assignment is a research question, results should be submitted prior to the start of the next class, unless stated.

IV. My Assumptions

The study of Marine Biology is a window into how God infuses His life giving presence in everything above and below the surface of the oceans. Understanding how the tectonic plates, located at the deepest parts of the oceans, has caused both the birth and death of entire land masses, over and over again for billions of years, allows us to move past man’s influence in “the cycle life”.. God’s influence by providing the awesome energy for life to thrive and replicate itself, from the time of creation, can be seen in full display under the dry, terrestrial land that makes up only 29% of the surface area of the plant. This does not include understanding the presents of life flourishing at every level and every depth of our vast oceans. To have students understand that the greatest source of life giving oxygen and food is from the oceans' relationship with the sun allows us to marvel at the grace God has provided to us to flourish on earth.

V. Course Requirements:

1. Prerequisites:

- a. Reading with comprehension sixth grade textbooks and the requirement to write a paragraph on assigned reading assignments.
- b. A willingness and ability to follow simple directions for home observation assignments
- c. Have the interest and attention span to fully participate in a 40 minute online class about biology
- d. Be able to navigate Edmodo files, download handouts and tests and know how to order papers for class review and answers sessions.

2. Required Text

Marine Biology, An introduction to Ocean Ecosystems, J. Weston Walch Publishing, Amy Sauter Hill, copyright 1995, 2002, Student Book
ISBN 0-8251-4323-3

3. Recommended text: (optional)

Marine Biology, An introduction to Ocean Ecosystems, J. Weston Walch Publishing, Amy Sauter Hill, copyright 2002, Lab Manual
· ISBN 0-8251-4401-9

VI. Expectations for Parents

- Set aside a calm, quiet, distraction-free space for your child(ren) to work every day.
- Ensure virtual learning equipment is available and charged.
- Establish routines and expectations and a basic schedule for completing classwork.
- Help students ‘own’ their learning.
- Check Edmodo for communications from teachers and help students print off resources that are provided.
- Stay abreast of teacher feedback in the form of grades or other messages.
- Proctor tests, quizzes, or other assessments as scheduled by the teacher. Parents ensure academic integrity because they are on the “live” side of the screen.
- Communicate with teachers regularly via email or Edmodo regarding any questions or issues that arise.

- If your child is having trouble completing work, email teachers to schedule a time for an online meeting.

VII. Grading Procedures

Grades will be weighted on the following scale:

(a) 100-90%

(b) 90-80%

(c) 80-70%

(d) 70-65%

(p) Class participation will make up 30% of the semester's final grade

(L) Assignments and tests submitted late will be accepted without penalty prior to the following class. Material submitted after a second class period will count only 50% (F)

VIII. Academic Integrity

Each student in this course is expected to abide by the Cornell University Code of Academic Integrity. Any work submitted by a student in this course for academic credit will be the student's own work.

You are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students. One great way to assess what you know is to teach the idea to a peer! You may also work together on problem sets and give "consulting" help to or receive "consulting" help from your peers. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in any form (e.g. email, Word doc, Box file, Google sheet, or a hard copy). Assignments that have been previously submitted in another course may not be submitted for this course.

Should copying occur, both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment. Penalty for violation of this Code can also be extended to include failure of the course and University disciplinary action.

During examinations, you must do your own work. Talking or discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam and may lead to failure of the course and University disciplinary action.

IX. Tentative Course Schedule

The below are the examples of the first 6 (six) classes we are going to cover this year. We will have 2 orientation classes followed by 16 classes. As you can see that “Sea and Ocean Habitats” have a Review and reading assignment for the Tuesday class and a Lab or home experiment required on the Thursday

Topics	Readings to be discussed	Assignment
Orientation: 08/16/22	Edmodo	Look over Syllabus
2nd Orientation: 08/18/22	Textbook	Marine Biology Chapters
The Sea and Ocean Habitats	Textbook 08/23/22	assigned text and attachment
The Sea and Ocean Habitats	Textbook 08/25/22	Review PowerPoint
The Sea and Ocean Forces	Textbook and links 08/30/22	Home experiments
First look at Coral	Textbook and links 09/01/22	Draw and label a Coral