



HOLY SPIRIT

PREPARATORY SCHOOL

9th Grade Biology

Summer Assignments

Academic Year - 2022-2023

Course Information

Department: STEM

Class Description: Biology introduces the principles and concepts related to living organisms. Here we will learn how the beauty and truth of the Catholic Faith relates to the natural world. The course will cover the basic chemistry of life, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Laboratory exercises are used to reinforce lecture topics and include microscope techniques. Upon completion, students will be able to demonstrate both an understanding of life at the molecular and cellular levels, and an appreciation for the order of God's Creation.

Textbook or Materials Required (Picture of book included):

Miller and Levine, *Biology*
ISBN 10: 0328925128

Contact cnannis@holyspiritprep.org for any questions



Summer Assignment

Learning objectives

- Explain the purpose of learning biology and the natural sciences as it pertains to an integrated life of faith

Estimate time of completion

- 0.5-1 hour

Details of Assignment

- Read the provided passage entitled *Meditation in a Toolshed* by C.S. Lewis. Annotate the passage and be prepared to discuss on the first day of school (Wednesday, August 17th).

Meditation in a Toolshed

C. S. Lewis

I was standing today in the dark toolshed. The sun was shining outside and through the crack at the top of the door there came a sunbeam. From where I stood that beam of light, with the specks of dust floating in it, was the most striking thing in the place. Everything else was almost pitchblack. I was seeing the beam, not seeing things by it.

Then I moved, so that the beam fell on my eyes. Instantly the whole previous picture vanished. I saw no toolshed, and (above all) no beam. Instead I saw, framed in the irregular cranny at the top of the door, green leaves moving on the branches of a tree outside and beyond that, 90 odd million miles away, the sun. Looking along the beam, and looking at the beam are very different experiences.

But this is only a very simple example of the difference between looking at and looking along. A young man meets a girl. The whole world looks different when he sees her. Her voice reminds him of something he has been trying to remember all his life, and ten minutes casual chat with her is more precious than all the favours that all other women in the world could grant. He is, as they say, "in love". Now comes a scientist and describes this young man's experience from the outside. For him it is all an affair of the young man's genes and a recognised biological stimulus. That is the difference between looking along the sexual impulse and looking at it.

When you have got into the habit of making this distinction you will find examples of it all day long. The mathematician sits thinking, and to him it seems that he is contemplating timeless and spaceless truths about quantity. But the cerebral physiologist, if he could look inside the mathematician's head, would find nothing timeless and spaceless there—only tiny movements in the grey matter. The savage dances in ecstasy at midnight before Nyonga and feels with every muscle that his dance is helping to bring the new green crops and the spring rain and the babies. The anthropologist, observing that savage, records that he is performing a fertility ritual of the type so-and-so. The girl cries over her broken doll and feels that she has lost a real friend; the psychologist says that her nascent maternal instinct has been temporarily lavished on a bit of shaped and coloured wax.

As soon as you have grasped this simple distinction, it raises a question. You get one experience of a thing when you look along it and another when you look at it. Which is the 'true' or 'valid' experience? Which tells you most about the thing? And you can hardly ask that question without noticing that for the last fifty years or so everyone has been taking the answer for granted. It has been assumed without discussion that if you want the true account of religion you must go, not to religious people, but to anthropologists; that if you want the true account of sexual love you must go, not to lovers, but to psychologists; that if you want to understand some 'ideology' (such as medieval chivalry or the nineteenth-century idea of a 'gentleman'), you must listen not to those who lived inside it, but to sociologists.

The people who look *at* things have had it all their own way; the people who look along things have simply been brow-beaten. It has even come to be taken for granted that the external account of a thing somehow refutes or 'debunks' the account given from inside. 'All these moral ideals which look so transcendental and beautiful from inside', says the wiseacre, 'are really only a mass of biological instincts and inherited taboos.' And no one plays the game the other way round by replying. 'If you will only step inside, the things that look to you like instincts and taboos will suddenly reveal their real and transcendental nature.'

That, in fact, is the whole basis of the specifically 'modern' type of thought. And is it not, you will ask, a very sensible basis? For, after all, we are often deceived by things from the inside. For example, the girl who looks so wonderful while we're in love, may really be a very plain, stupid, and disagreeable person. The savage's dance to Nyonga does not really cause the crops to grow. Having been so often deceived by looking along, are we not well advised to trust only to looking at?—in fact to discount all these inside experiences?

Well, no. There are two fatal objections to discounting them all. And the first is this. You discount them in order to think more accurately. But you can't think at all—and therefore, of course, can't think accurately—if you have nothing to think about. A physiologist, for example, can study pain and find out that it 'is' (whatever is means) such and such neural events. But the word pain would have no meaning for him unless he had 'been inside' by actually suffering. If he had never looked along pain he simply wouldn't know what he was looking at. The very subject for his inquiries from outside exists for him only because he has, at least once, been inside.

This case is not likely to occur, because every man has felt pain. But it is perfectly easy to go on all your life giving explanations of religion, love, morality, honour, and the like, without having been inside any of them. And if you do that, you are simply playing with counters. You go on explaining a thing without knowing what it is. That is why a great deal of contemporary thought is, strictly speaking, thought about nothing—all the apparatus of thought busily working in a vacuum.

The other objection is this: let us go back to the toolshed. I might have discounted what I saw when looking along the beam (i.e., the leaves moving and the sun) on the ground that it was 'really only a strip of dusty light in a dark shed'. That is, I might have set up as 'true' my 'side vision' of the beam. But then that side vision is itself an instance of the activity we call seeing. And this new instance could also be looked at from outside. I could allow a scientist to tell me that what seemed to be a beam of light in a shed was 'really only an agitation of my own optic nerves'. And that would be just as good (or as bad) a bit of debunking as the previous one. The picture of the beam in the toolshed would now have to be discounted just as the previous picture of the trees and the sun had been discounted. And then, where are you?

In other words, you can step outside one experience only by stepping inside another. Therefore, if all inside experiences are misleading, we are always misled. The cerebral

physiologist may say, if he chooses, that the mathematician's thought is 'only' tiny physical movements of the grey matter. But then what about the cerebral physiologist's own thought at that very moment? A second physiologist, looking at it, could pronounce it also to be only tiny physical movements in the first physiologist's skull. Where is the rot to end?

The answer is that we must never allow the rot to begin. We must, on pain of idiocy, deny from the very outset the idea that looking at is, by its own nature, intrinsically truer or better than looking along. One must look both along and at everything. In particular cases we shall find reason for regarding the one or the other vision as inferior. Thus the inside vision of rational thinking must be truer than the outside vision which sees only movements of the grey matter; for if the outside vision were the correct one all thought (including this thought itself) would be valueless, and this is self-contradictory. You cannot have a proof that no proofs matter. On the other hand, the inside vision of the savage's dance to Nyonga may be found deceptive because we find reason to believe that crops and babies are not really affected by it. In fact, we must take each case on its merits. But we must start with no prejudice for or against either kind of looking. We do not know in advance whether the lover or the psychologist is giving the more correct account of love, or whether both accounts are equally correct in different ways, or whether both are equally wrong. We just have to find out. But the period of brow-beating has got to end.

From God in the Dock: Essays on Theology and Ethics