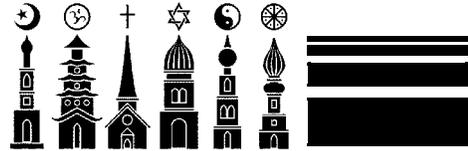
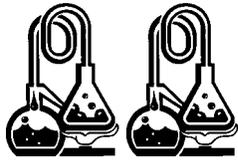


# SCIENCE



# Faith

## Technology

“Technology . . . has impoverished the world . . . [and] become the most powerful agent of historical entropy. . . . It imposes uniformity without furthering unity. It levels the differences between distinctive national cultures and styles, but it fails to eradicate the rivalries and hatreds between peoples and states. After turning rivals into identical twins, it purveys the very same weapons to both . . . the danger of technology lies not in the death-dealing power of many of its inventions but in the fact that it constitutes a grave threat to the very essence of the historical process. By doing away with the diversity of societies and cultures, it does away with history itself.”

—Octavio Paz, 1974

## Discussion Questions:

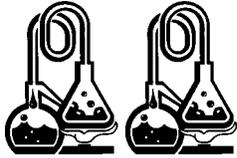
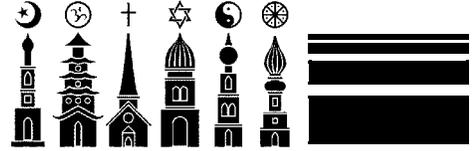
1. Do you *basically* agree or disagree with Paz’ assessment?
2. Give one example that would tend to indicate that Paz’ concern is worthy of consideration.
3. Can you think of a way(s) in which technology has been beneficial to religion in general or for the advancement or encouragement of personal spirituality?
4. For the following items, reach a consensus with your group as to whether science and technology *should* or *should not* pursue:

YES NO

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Extend human lifespan to the biological limit   |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Make possible by gene manipulation the makeup and characteristics of unborn children    |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Clone human organs for future possible transplant or cures                              |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Clone a human being   |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Create a class of people by gene manipulation   |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Find the final solution to poverty and hunger   |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. Engineer societies to realize peace at the expense of individualism and personal rights |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Realize space travel within our solar system  |

**Luddite** (lud’it) *n.* [said to be after a Ned Lud, feeble-minded man who smashed two frames belonging to a Leicestershire employer (c. 1779)] any of a group of workers in England (1811-1816) who smashed new labor-saving textile machinery in protest against reduced wages and unemployment. Contemp.: refers to individual or groups who take an extreme anti-technological stance in values or lifestyle.

# SCIENCE



# & Faith

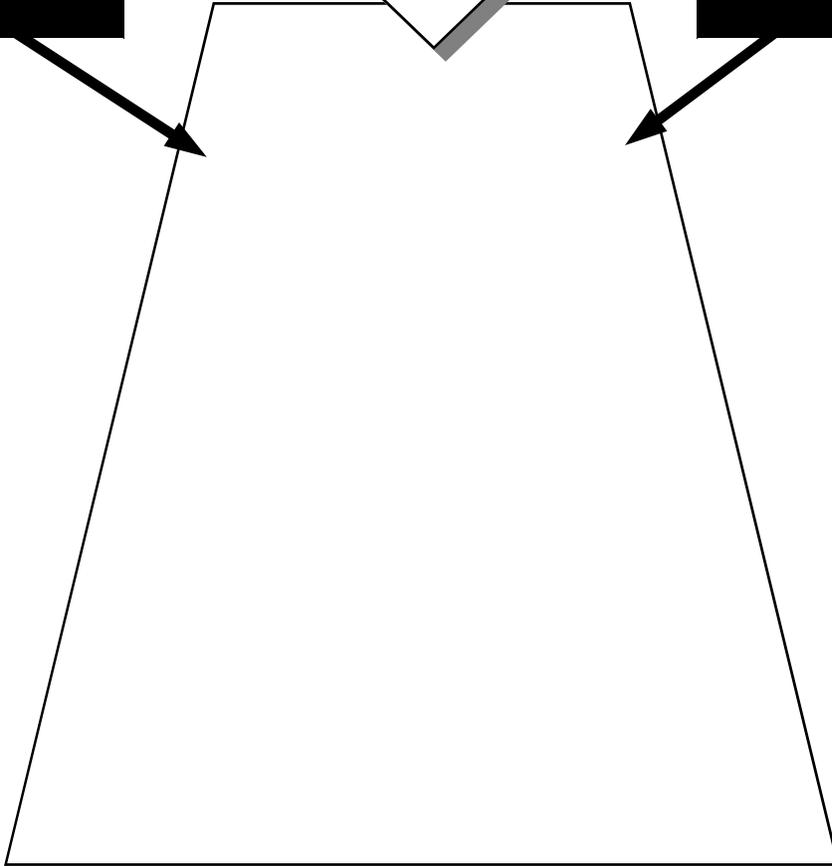
## Science

Facts  
Certainty  
Closed systems  
Knowing  
Pure/Hard  
disciplines  
Forces, principles,  
Laws  
Things/Objects

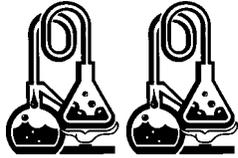
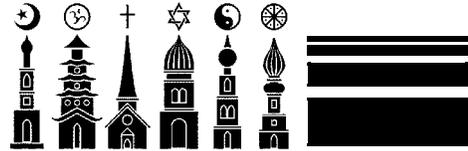
## Faith

Truths  
Belief  
Open systems  
Ambiguity  
Soft disciplines  
Spirits,  
principalities,  
Grace  
People/Ideas

*Shared  
concerns  
and  
Questions*



# SCIENCE



# & Faith

## COURSE NOTES

### SESSION 1:

**FOUNDATIONS:** *Whys and Wherefores: issues and questions*

- Article on Sabbath Law and Technology
- Gospel story of Thomas.

Many of the 17th century's first Fellows of the Royal Society in England were Puritans. They gave us the procedure we know as the "scientific method":

1. The universe is rational.
2. The universe is accessible to us.
3. The universe has contingency.
4. There is such a thing as objective reality.
5. There is unity to the universe.

### SESSION 2:

**BIOLOGY:** *Ontogeny Recapitulates Phylogeny or, The Gene Pool Could Use A Little Chlorine*

### SESSION 3:

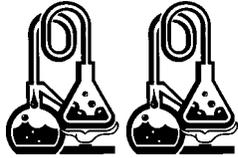
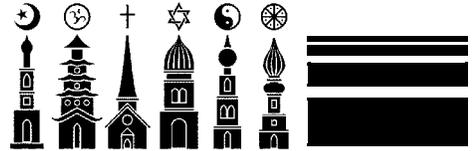
**PHYSICS:** *It's not just for nerds anymore*

*"Kick at the rock, Sam Johnson, break your bones,  
But cloudy, cloudy is the stuff of stones."*

—Richars Wilbur, *Epistemology*

- Video: Mindwalk clip on atomic structure and nature of light.

# SCIENCE



# & Faith

**SESSION 4:**

**TECHNOLOGY:** *When we can create whatever we can imagine*

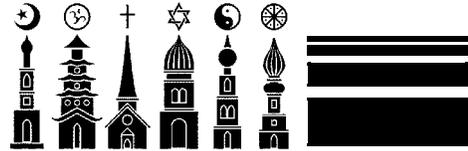
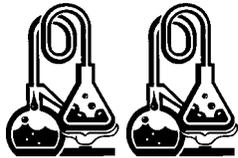
**SESSION 5:**

**ASTRONOMY:** *Big bangs, black holes, and our place in the cosmos, are we still the center of the universe?*

**SESSION 6:**

**ASTRONOMY:** The Ascent of the Saints, or “Because the truth is out there.” (X-Files)

# SCIENCE



# Faith

1. Take a trip on the Explorers Class time machine and go back 15 years. Where were you? What were you doing? Identify five common things in your life today that you could not have imagined back then.

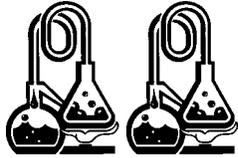
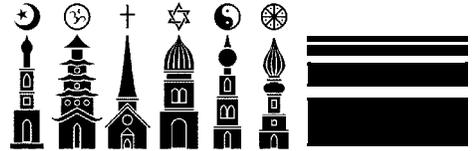


2. Einstein said, *“Imagination is more important than knowledge.”* Let your imagination loose and contemplate on what our children will be dealing with in the realms of science and faith in the following areas:

	Science	Faith
Family		
Health & health care		
Vocation & leisure		

3. With your group, decide on what you think is the most troublesome issue in dealing with the matter of the relationship between science and faith.

# SCIENCE



# & Faith

## COSMOLOGY

*A man said to the universe:*

*"Sir, I exist!"*

*"However," replied the universe,*

*"The fact has not created in me*

*"A sense of obligation."*

—Stephen Crane

When I heard the learned astronomer,

When the proofs, the figures, were ranged in columns before me,

When I was shown the charts and diagrams, to add, divide, and  
measure them,

When I sitting heard the astronomer where he lectured with much  
applause in the lecture-room,

How soon unaccountable I became tired and sick,

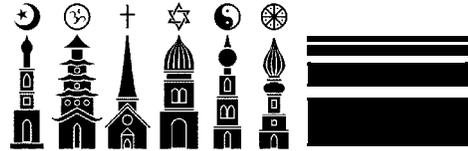
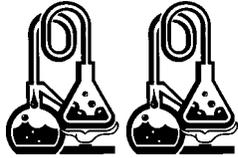
Till rising and gliding out I wandered off by myself,

In the mystical moist night air, and from time to time,

Looked up in perfect silence at the stars.

—Walt Whitman

# SCIENCE



# Faith

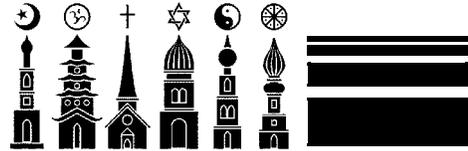
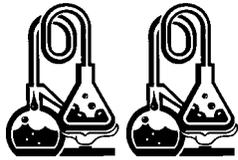
## “The Mysterious Man of the Shroud,”

CBS Video. © 1997 Landeau Entertainment. Distributed by 20th Century Fox. \*

1. What is your initial response after viewing this video?
2. Some are convinced of the Shroud’s genuineness, that is, it not only is not a forgery in any way, but is the actual burial shroud of Jesus of Nazareth. If science could prove as much, what implications for the Christian faith would that hold? For *your* faith?
3. Some argue that even if the shroud were the actual burial shroud of Jesus of Nazareth, it would not change anything. Do you agree or disagree? Explain.
4. At what point do the “facts” of science intrude on the “truth” of faith? Is there a dividing line between “fact” and “faith”; “evidence” and “belief” over which neither camp can cross?

\*Note: VBC holds a license from The Motion Picture Licensing Corporation (MPLC) which allows us to use this video in a public performance.

# SCIENCE



# Faith

from *Mere Christianity*, by C.S. Lewis

**E**ver since men were able to think, they have been wondering what this universe really is and how it came to be there. And, very roughly, two views have been held. First, there is what is called the materialist view. People who take that view think that matter and space just happen to exist, and always have existed, nobody knows why; and that the matter, behaving in certain fixed ways, has just happened, by a sort of fluke, to produce creatures like ourselves who are able to think. By one chance in a thousand something hit our sun and made it produce the planets; and by another thousandth chance the chemicals necessary for life, and the right temperature, occurred on one of these planets, and so some of the matter on this earth came alive; and then, by a very long series of chances, the living creatures developed into things like us. The other view is the religious view. According to it, what is behind the universe is more like a mind than it is like anything else we know. That is to say, it is conscious, and has purposes, and prefers one thing to another. And on this view it made the universe, partly for purposes we do not know, but partly, at any rate, in order to produce creatures like itself—I mean, like itself to the extent of having minds. Please do not think that one of these views was held a long time ago and that the other has gradually taken its place. Wherever there have been thinking men both views turn up. And note this too. You cannot find out which view is the right one by science in the ordinary sense. Science works by experiments. It watches how things behave. Every scientific statement in

the long run, however complicated it looks, really means something like, "I pointed the telescope to such and such a part of the sky at 2:20 A.M. on January 16th and Saw so-and-so," or, "I put some of this stuff in a pot and heated it to such-and-such a temperature and it did so-and-so." Do not think I am Saying anything against science: I am only Saying what its job is. And the more scientific a man is, the more (I believe) he would agree with me that this is the job of science -and a very useful and necessary job it is too. But why anything comes to be there at all, and whether there is anything behind the things science observes—something of a different kind—this is not a scientific question. If there is "Something Behind," then either it will have to remain altogether unknown to men or else make itself known in some different way. The statement that there is any such thing, and the statement that there is no such thing, are neither of them statements that science can make. And real scientists do not usually make





Tony Campolo, *How to Rescue the Earth, Without Worshipping Nature*, (Thomas Nelson, 1992, pp.78 - 89)

"Most people will give me some grace when I claim that animals have feelings and that God, in His infinite knowledge of all things, is able to empathize with them when they suffer, But when I refer to plants and soil as having feelings, I am stretching folks way beyond what their imaginations can readily handle. But nature does have some kind of capacity to 'feel,' even if its feelings are totally other than anything we can understand.

"...I am saying that there is something volitional and spontaneous about nature that is capable of reaching out to God. There is something inherent in creation that is capable of glorifying and worshipping God. 'The heavens declare the glory of God; and the firmament shows His handiwork.' (Psalm 19:1)

"According to those who understand this rather involved theory of quantum physics [Heisenberg's Theory of Indeterminacy], even the world of molecules and atoms may not be quite as mechanical as we have previously thought. Scientists now are telling us that there may be a volitional quality to atoms ... what [they] are discovering suggests that, even at the most rudimentary level of the physical universe, there is something that has a trace of the volitional and is capable of responding to the Spirit of God.

"Teilhard [de Chardin] found a basis for claiming that spiritual forces are at work in the most basic elements of the physical universe. In his books [he] brought together in a unified worldview the findings of the laws of physical sciences, discoveries of anthropology, theories about the history and destiny of the cosmos, and biblical teachings. According to Teilhard, **love** formed the universe, and love is even now working through all of nature to create the kingdom of God. The universe has a purpose. **Love** is that presence that gives coherence to things and creates order out of chaos. (cf Colossians 1:16,17 and John 1:3,4)

"Out of the physical universe, says Teilhard, emerges the biosphere. Love brings together the inanimate and through it generates the organic. Life is also created by love -by the God who is Love. Life

comes together under the creative influence of love and, in time, gives birth to the peculiar intelligence that is evident in the human race. [He] calls this the noosphere. With love, the latest creation of God's love—humanity—can live in harmony with the rest of nature. But.. the human race can live counter to God. Because we in the noosphere have minds and will that can deliberately direct what goes on in the biosphere, it is within our power to disrupt the unity and balance that the God of love has established. It is this sinful potentiality that has been the basis of the ecological disaster that now confronts us. We who were given the capacity to express love in creation and to participate with God in maintaining His universe have **disobeyed our calling.**

[ Campolo points out that de Chardin flatly rejects the theories of evolution defined by Charles Darwin and Herbert Spencer and the philosophy of Friederich Nietzsche as well as the economics of Milton Keynes which extol conflict, competition, survival of fittest and laissez-faire capitalism as the natural law' or virtue of the universe.]

"What is basically going on out there in nature, according to Teilhard, is not so much a testimony to destructive competition as it is an expression of God's love cooperation, rather than competition, is the basis of emerging life and biological progress. Through the development of harmonious relationships, rather than power-play conflicts, gains are made both on the biophysical level and on the societal level. Cooperation rather than competition is what makes things better in this world. [He] claims that the driving force that encourages cooperative relationships between species is none other than the love of God.

If the shalom of God and the peacable kingdom of Isaiah 11 are to become real, then new ways of thinking must be established."

Biblio: Margaret J. Wheatley, *Leadership as?ld the New Science - Leaning about Organzation from an Orderly Universe*, Berrett-Koehler Publishers, Inc., 1993