Do Faith and Science Conflict?
Quick Stop Lesson Plan

FASTly
FAITH & SCIENCE TEACHING

The teachFASTly.com resources are not intended as a complete curriculum. The activities are designed to be woven into your existing teaching. This Quick Stop Lesson Plan is therefore not a single lesson plan, but rather a quick way of exploring the themes of an activity map. It includes one Discover activity, one Delve activity, and one Debrief activity. Together, these may take more than a class period, and you may want to add other activities between them. For more information visit www.teachfastly.com.

Do Faith and Science Conflict?

How does one respond FASTly when science and faith seem to disagree? When we encounter points at which faith and science seem to be making conflicting claims about the world, it can seem as if a stark choice is required: either abandon faith as old-fashioned and embrace science, or affirm faith in the face of apparent evidence and practice suspicion towards science. In reality the choices available are more nuanced and more complex. This activity map aims to help students see this relationship in a new way to consider why it may not be necessary to choose between faith and science, and to realize and understand that the connection between the two is not as simple as it is sometimes made to seem.

This activity map engages students in exploring an alternative approach to the warfare model and explores the need to practice courage and patience in challenging three common misunderstandings: 1) that science and faith are inherently in conflict and offer contradictory accounts of reality, 2) that science and faith disagree in predictable ways where science is based on empirical evidence and faith is based on opinion, and 3) that the relationship between science and faith is a zero-sum game, meaning that to the degree one is correct, the other must be incorrect.

It is recommended that work on this topic be coordinated between science and Bible teachers, and that good communication with parents be practiced.

This Quick Stop Lesson Plan on **Do Faith and Science Conflict?** contains the following activities and attachments from www.teachfastly.com, which are combined for your ease of use in a downloadable ZIP file:

DISCOVER Activity: Faith and Science at War?

Activity Attachment

- *Faith and Science at War PowerPoint*

DELVE Activity: Not Just Warfare

Activity Attachment

- *Not Just Warfare Handout*
- *Not Just Warfare PowerPoint*

DEBRIEF Activity: Reaching Out

No Activity Attachments Required.

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DISCOVER

Activity: Faith and Science at War?

Time: 15 Minutes

In Brief

This brief activity presents students with the question of how complicated the relationship is between science and faith and establishes the position that a simple conflict model does not describe the relationship well. Students are introduced to some contrasting ways of seeing the relationship between faith and science as a first step towards exploring the subject in more depth.

Goals

Students will understand there are alternatives to a warfare model of science and faith, and that such a model is not well supported by history.

Thinking Ahead

The notion that science and religion have long been at war (sometimes called the "conflict thesis") is an idea popularized in the 19th century. It is still assumed by many to be correct. Two books published in the late 1800s did much to promote the idea: John William Draper's *History of the Conflict between Religion and Science* (1874) and Andrew Dickson White's *A History of the Warfare of Science with Theology in Christendom* (1898). Since that time, however, most historians have come to see the warfare model as, at best, simplistic. In contrast, the relationship between science and faith is understood to be more varied and complex, as in John Hedley Brooke's *Science and Religion: Some Historical Perspectives* (1991). This activity introduces the idea that the interaction of science and faith is more complex than a conflict model suggests.

The goal of this brief activity is for students to recognize the conflict thesis and realize its limits. The conversation about how science and faith interact is more complicated than they might have expected. Note that the goal is to engage students in reflection, not just to tell them better answers. Teaching practices that simply declare correct answers have the potential to undermine the focus of the activity which is designed to help students understand the complex relationship between science and religion.

Preparing the Activity

You will need the **Faith and Science at War PowerPoint**.

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Teaching the Activity
Display the first slide of **Faith and Science at War PowerPoint** which presents five sentences about the relationship between science and faith. Ask students individually and silently to choose a word to complete each sentence. They do not need to share their choices at this point. The goal is for students to establish their own assumptions authentic to themselves.

- It is *always/often/sometimes/never* necessary to choose between faith and science.
- What Christians believe and what scientists believe are *always/often/sometimes/never* in conflict.
- When a conflict between faith and science arises, it is *always/often/sometimes/never* necessary to make a clear choice for one and against the other.
- If faith and science have conflicting claims, I think *faith/science* is usually right and *faith/science* will generally turn out to be mistaken.
- It is *impossible/hard/easy* to be both a faithful Christian and a good scientist.

Ask students to consider: what do your answers tell you about what you assume concerning the relationship between faith and science?

Next display the first quotation from Thomas Henry Huxley:

> *Extinguished theologians lie about the cradle of every science as the strangled snakes beside that of Hercules; and history records that whenever science and orthodoxy have been fairly opposed, the latter has been forced to retire from the lists, bleeding and crushed if not annihilated; scotched, if not slain.*
>
> —Thomas Henry Huxley (1825-1895)

Ask students to articulate the relationship that is assumed here between theology and science. Draw out that Huxley portrays them as involved in a battle, and that he thinks the winner is always science. Point out the violent language and reveal the warfare picture at this point. The relationship is imagined as a fight to the death. Note that Huxley here focuses on theologians, rather than faith in general. Mention that this was a view made popular in the 19th century that continues to influence popular views of faith and science. Mention also that present-day historians of science do not regard a simple conflict account of the history of faith and science as accurate, noting that conflicts have been the exception rather than the rule, and that religion has often supported science or peacefully coexisted with it. Note the useful summary here (https://en.wikipedia.org/wiki/Conflict_thesis).

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Then display the next slide that shows a quotation from Francis Collins, the geneticist behind the Human Genome Project, from an interview in 2015:

> *I am privileged to be somebody who tries to understand nature using the tools of science. But it is also clear that there are some really important questions that science cannot really answer, such as: "Why is there something instead of nothing? Why are we here?" In those domains I have found that faith provides a better path to answers. I find it oddly anachronistic that in today's culture there seems to be a widespread presumption that scientific and spiritual views are incompatible. Science and faith can actually be mutually enriching and complementary once their proper domains are understood and respected.*
>
> —(http://news.nationalgeographic.com/2015/03/150319-three-questions-francis-collins-nih-science/)

Ask students how this quotation portrays the relationship between science and faith differently. What is Francis Collins' metaphor for the relationship? Collins offers the metaphor of a map with different paths and domains. Point out again that while it is still popular to present science and faith as at war, many current scholars see such a view as much too simple and most scientists (http://onlinelibrary.wiley.com/doi/10.1111/j.1468-5906.2009.01447.x/abstract) do not accept the view that religion and science are inherently in conflict. Let the students know they are going to explore this topic further in the activities that follow, and give them a few moments to reflect individually on this question:

- When you think of the relationship between science and religion, what images shape your thinking? Is it warfare, different paths, or something else?

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DELVE

Activity: Not Just Warfare

Time: 30 Minutes

In Brief

This activity provides a hands-on way of getting students to engage with the difficulties of a simplistic faith-versus-science view. It engages them in classifying claims about the world in increasingly complex ways in order to help them see the limitations of a simple two-view account of the world.

Goals

Students will understand that the relationship between faith and science is more complex than two sides.

Thinking Ahead

Students will attempt to categorize various statements as areas of agreement or disagreement between science and faith. This is not easy to do and forces students to interact with some ways in which the science-faith relationship is more complex than mere conflict. The frustrations involved in this process may support the reality of complexity better than simply being told. Students should be helped to see that:

- Science and faith may disagree about some things but not most things.
- Scientists and believers disagree among themselves, and there is not unanimous agreement on either side.
- Scientists and believers may be one and the same person.
- The views of both scientists and believers change over time. For example, the dispute over geocentrism, addressed in more detail in later FASTly activities, can be mentioned here because there was a time when both scientists and believers were geocentrists, and also a time when the views of both shifted and the position was denied by both scientists and believers.
- It is often not clear what "science" and "faith" mean. For instance, do we mean individual people who are scientists or individual *people* who are believers? Do we mean the *official views* of particular churches and which churches or organizations? Do we mean a body of universally accepted *conclusions*, or do we mean different ways of *seeking truth*?

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It's very important to think about how to frame the last part of the activity. Since the activity aims to have students experience growing frustration with a simple two-category model, and to see how complex the issues can get, the activity risks leading them to a point of giving up the entire effort to understand complexity. Emphasize that the point is not that it's all too complex to sort out, but that patience, humility, and courage, and a larger community of thinkers are needed to persevere with important questions and to attend carefully enough to arrive at good answers. Incendiary stances and witty one-liners will not get the job done. Teaching FASTly values thinking about the connections between truth, virtue, and community.

Preparing the Activity
Make enough copies of the Agreement-Disagreement Statements from the **Not Just Warfare Handout** for each group of 2-3 students to have one. Cut each statement apart and place the statements in envelopes so that each group gets an envelope with one full set of the statements. You will also need **Not Just Warfare PowerPoint**.

Teaching the Activity
Have students form groups of two or three. Give each group an envelope containing the agreement-disagreement statements. Tell students that they are going to sort the statements using a variety of criteria.

First, ask students to take a sheet of paper, draw a vertical line down the middle, and use it to sort the statements into those about which science and faith disagree and those about which science and faith agree. For this and subsequent steps you can display the visual templates in **Not just Warfare PowerPoint** to give students a guide. Give them a few minutes to complete this.

Ask:

- How much agreement or disagreement do you see?
- Does this work as a way of sorting the information? Do you think it gives us an adequate picture of faith and science? What does it not show?

Allow discussion. Avoid discussion of whether the statements are true. Instead focus on the way of classifying and whether it works. Highlight the point that there are many issues on which people of faith disagree among themselves, and also there are matters on which scientists do not agree. "Faith" and "Science" are not monolithic blocks to be pitted against one another. Therefore, ask the students to try again. Now ask the students to take a sheet of paper and draw both a vertical line and a horizontal line to divide the paper into fourths.

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Display the second slide, and have them sort the statements four ways:

- Faith and science disagree
- Faith and science agree
- People of faith have varying views
- Scientists have varying views

Ask how this exercise went. Did it work better? Does it now give us a clear picture? Is there anything that is still difficult or not represented clearly? Allow discussion and check, for instance, where students placed "prayer can help sick people to heal," an issue scientists are still not unanimous about because different studies arrive at different conclusions. Next introduce an additional idea: does the chart we have made give any sense of how things change over time? For instance, was there a time when both believers and scientists disagreed about whether the sun went around the earth or the earth around the sun? (Yes, during the time of Galileo). So do the statements remain forever in the same category?

Ask students to have another go at the process. Have them take a sheet of paper and divide the area into eight spaces. Display the third slide and have them re-classify the statements using the following categories:

- Faith and science disagree
- Faith and science agree
- People of faith have varying views
- Scientists have varying views
- Faith and science once disagreed but views have changed
- Faith and science once agreed but views have changed
- People of faith once had the same view but now have varying views
- People of faith once had varying views but now have the same view

Students may notice that this is still an incomplete set of categories. For instance, it does not explore whether consensus among scientists has changed, and so the chart may need to expand even more. The students may notice that the exercise is becoming more confusing, and even a little ridiculous. It will be unclear where to put each statement, and one statement may belong in multiple places. Allow discussion of how this step of the activity went. Ask if there are still things missing. For instance, does the map imply that believers and scientists are two distinct sets of people? How could we represent the fact that many scientists *are themselves believers*, so that people of faith and scientists are often the same people?

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Ask students why the interaction between faith and science is so difficult to categorize neatly. Ask why it is tempting to settle for simple pairs of categories—like faith versus reason or the Bible versus science—to explain the relationship. Do our verbal practices meaning the way we talk about faith and science—contrasting "believers" and "scientists"—paint a true picture? Why is it easier to paint the conflict and choose one side rather than to articulate a more nuanced understanding of how complex the relationship can be? Why do we gravitate to simple slogans more easily than to careful reflection? What fears and prejudices might make the simple view more tempting? And what virtues—patience, humility, and/or courage—might be needed to stay engaged in a more complex conversation?

Finally, return to the warfare metaphor and show the final slide. Give students a few minutes to journal on the question:

- What are a few of the problems with using a warfare metaphor to picture how science and faith relate to one another?

You will be able to use this piece of writing to check each student's understanding of this topic.

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DEBRIEF

Activity: Reaching Out

Time: 20 Minutes + Homework

In Brief

This activity invites students to personalize what they have learned about the relationship between faith and science, and to do so in a way that focuses not just on their own questions and feelings, but also uses their learning to care for others.

Goals

Students will articulate a personal response to the material studies. They will reveal their growing understanding that science and faith questions are complex, and also that they are equipped to care for others with differing perspectives.

Thinking Ahead

Teaching FASTly recognizes that for young people, and many adults, the struggle to understand apparent conflicts between faith and science is not an abstract philosophical matter, but a personal and existential issue that impacts what is held dear and affects key relationships. This activity gives students space to respond to what has been discussed, and invites them to think not just about their own struggles, but also about how they can be sensitive to the needs of others. It makes space for considering the practical and relational consequences of ideas. Discussions of faith and science are sometimes conducted as pitched battles with the goal of beating down opponents. Approaching these discussions FASTly will involve not just knowing how to answer objections, but placing the whole discussion in the context of love of neighbor and compassion for others. This activity invites students to see that truth and virtue may be connected.

Preparing the Activity

No special resources are needed. Consider, however, how you can establish a supportive and reflective environment for this task, for instance by supplying quiet music while students write.

Teaching the Activity

Ask students to discuss with a partner what current questions they can think of that make people feel as if they have to make a difficult choice between their faith and scientific claims.

Once they have made a brief list, ask them to discuss how, based on what they have learned in these activities, they would respond to someone who was struggling with

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one of these questions? Ask students to think not just about how they might help answer the person's questions, but about how they could show care and humility in the way they communicate.

Finally, either in class or for homework, ask each student to write a letter to a friend struggling to process a particular faith-science conflict. As the students compose the letter they should consider the questions below as guidelines assuring their understanding of the issues and their compassion for the person to whom they are writing.

- Does the letter show understanding of the complexity of faith-science interactions studied during this activity map?
- Does the letter appropriately communicate care and humility?
- Does the letter show a good understanding of what is at stake in the particular faith-science question addressed?
- Does the letter avoid an all-or-nothing warfare approach and also avoid suggesting that the questions or true answers do not really matter?

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