

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.

Faith and the Nature of Science

It's the start of the school year. How will you introduce the nature of science while cultivating the culture and values of your classroom? What will you implicitly teach students through how you shape your practices? What do you emphasize, omit, or gloss over in the examples you use or in the questions you make central or squeeze to the margins? How will you set the tone for the course?

This activity map is intended to supplement your regular resources for teaching the nature of science. It expands the conversation to include the relationship of science to faith. As we teach about the nature of science, it is possible to unwittingly reinforce various "isms" - naturalism, scientism, reductionism - that can keep students from seeing constructive connections between faith and science. This may weaken their relationship to their faith or their interest in science. How might we teach the nature of science FASTly, preserving room for both science and faith?

This activity map offers fresh ways of approaching faith and science by helping students see the topic anew and move beyond dated, simplistic faith-versus-science categories. It does not replace standard textbook information on the nature of science, but offers ways of engaging students with faith and science questions. It is designed for a science classroom, but some activities could also be explored in the Bible classroom. Learning deepens when collaboration between departments is possible.

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 **Faith and the Nature of Science** 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: The Good Books

Activity Attachment

- *The Good Books PowerPoint*

DELVE Activity: Here Kitty, Kitty

Activity Attachment

- *Here Kitty, Kitty PowerPoint*

DEBRIEF Activity: Through Different Eyes

Activity Attachment

- *See Through Different Eyes PowerPoint*

DISCOVER

Activity: The Good Books

Time: 10 Minutes

In Brief

This short activity is designed for the first day of the semester and aims to grab students' attention and unearth some of their assumptions about science and faith. It uses first-day administrative tasks such as seating charts and passing out books as part of the learning experience. Teaching FASTly encourages students to reflect on how they see the science-faith relationship.

Goals

Students will articulate what they have heard from others about the relationship between faith and science.

Thinking Ahead

In preparation, for this activity think about how you would answer the following questions:

- How do the Bible and a science textbook describe the world differently?
- Do they make rival claims about the same subject matter, forcing us to choose between them?
- Do they look at the same things from different angles, viewing the world in relation to God or simply regarding its physical makeup?
- Do they address different matters entirely, so that they are not really in the same conversation?
- What has shaped your views, and how might your own position affect your participation in class discussion?

It is not necessary for you to have fully resolved these questions before teaching the activity, but thinking them through will help you to connect with students' learning and identify your own biases as you encounter their responses. Some students will immediately think about controversial issues, such as creation versus evolution, whenever science and the Bible are mentioned together. In preparing for this discussion, consider how to point students to broader questions of the nature of science.

Preparing the Activity

You will need: science textbooks and Bibles, or presentation slides. Optional: name cards, water bottles, and student journals.

Place a science textbook and a Bible on each desk. Alternatively project an image of a Bible alongside a science textbook. This image is available in the **Good Books PowerPoint**.

Optional: make name cards and put a bottle of water at each desk to create the atmosphere of a conference conversation. Set out the name cards before class to control the seating plan, or provide blank cards for students to complete as they choose where to sit. Consider how the desks help set the tone for the discussion. For example, a horseshoe shape for the desks may reinforce a seminar feel. How you shape the learning environment will frame how students see and engage with the activity.

Consider having students keep a reflective journal throughout the semester or the year in which they explore big questions about faith and science. Begin the journal with this activity.

Teaching the Activity

Tell students that you did not place the two books side by side to imply that the books are equal or identical, but to help students begin to think about how they are different and how they relate to one another. Ask students to spend five minutes silently writing in response to the following question:

*“What ideas have you heard about how these two books relate to each other?
What do you think the most common views are about what each book tells us
about God, about the world, and about ourselves?”*

This activity aims only to get reflection started. The questions focus on what students have heard to allow them to raise ideas without being put on the spot. These questions also allow you to get a sense of awareness of your students. At this point in the semester, accept all student ideas without looking for “correct” answers. Remember that answers to these questions are disputed inside as well as outside the church. Let students know that as you go forward there will be opportunity to examine these views more deeply. Sitting within the circle with the students, rather than standing at the front, helps elicit discussion and reduce a focus on right answers.

DELVE

Activity: Here Kitty, Kitty

Time: 20-30 Minutes

In Brief

This activity prompts students to think about how different disciplines and different questions help us see the world in different ways. It explores how scientific and non-scientific ways of seeing may be parts of a complex whole, rather than at odds with one another.

Goals

Students will understand that different disciplines use different questions to examine the same world in different ways, and that these perspectives may be complementary. Students will understand that faith-informed ways of seeing the world are not limited to theology.

Thinking Ahead

Thinking about your own preferences and biases will help you to prepare for the discussion in this activity. Do you have a strong affinity for, or aversion to, poetry? Do you have a preference for clean, orderly facts, or a bent towards big picture thinking? Consider how to shape your teaching practice to avoid having your comments or tone imply that your own most comfortable ways of seeing are the only valid ones. Give thought to how you will communicate that natural science is both a valuable and a partial way of seeing the world. Teaching FASTly involves honoring the place of both science and faith. Consider your own answers to the questions in the activity so that you can prime the conversation in case students get stuck. As you consider the different disciplinary perspectives, note that the theologian is not the only one who may be working from a faith perspective; there are Christian thinkers in all disciplines.

Preparing the Activity

You will need: a kitten or the slide showing a kitten provided in the **Here Kitty, Kitty PowerPoint** to focus attention. Almost any kind of example, living or otherwise, can be substituted in this activity; the kitten is just one example. Choose something that will engage your students' attention and care, and lend vividness to the discussion. Check whether you need permission to bring a live animal to class.

Teaching the Activity

Present the kitten or substitute to the class, and ask them: **What do you see?**

Depending on time available, select from the following questions. Include some questions from each cluster and move through the clusters in order.

Cluster 1: Disciplines Seeing Differently

- Looking at this same kitten...
- ...what does a painter see?
- ...what does a poet see?
- ...what does a theologian see?
- ...what does a pet store owner see?
- ...what does a chemist see?
- ...what does a biologist see?
- ...what does a physicist see?
- What questions would each of these people ask about the kitten?
- What tools would each use to see the kitten more fully?
- Is the theologian the only one who might be seeing with the eyes of faith?

Cluster 2: Partial Perspectives and the Whole

- Is it appropriate to see all of these different perspectives as showing us truth about the world?
- Does any one way of seeing offer the whole truth about the kitten?
- What can each perspective see that the others might miss?
- What would be lost if we adopted only one of these ways of seeing and did away with the others?

Cluster 3: Knowledge and Virtue

- As we gain knowledge of the world within a particular discipline, how might we be tempted to be prideful and look down on others?
- How could our knowledge foster humility?
- How do you respond to someone who seems proud of their favored way of seeing, and thinks it is the most valuable?

- Which of these ways of seeing can be expressions of care for, or appreciation of, the kitten?
- How can learning science deepen our care for the world?

Either as a whole class discussion, or with students first discussing briefly in pairs, draw the activity to a close by reviewing:

- How can different disciplines help us see different aspects of what is there?
- How is science an important part of the whole, but only a part?
- How does a larger community of inquirers let us see more of the world?
- How can humility allow us to appreciate the value of different perspectives?

At the end of the discussion ask students to journal about what science can and cannot help us see as we look at the world. What does this mean for how science and faith fit together? Remind students of this discussion later in the semester.

DEBRIEF

Activity: Through Different Eyes

Time: 20 Minutes

In Brief

This activity provides a way of reviewing themes from earlier activities of this map and allows students to reflect on their own assumptions about the value of scientific and non-scientific perspectives. It asks students to articulate their understanding of the nature of science and how it differs from, and relates to, other disciplines.

Goals

Students will reflect on the differences between and contributions of scientific and non-scientific perspectives on the world.

Students will understand that faith-informed ways of seeing the world are not limited to theology.

Thinking Ahead

This activity invites students to see how scientific and non-scientific ways of seeing the world reveal different facets of what we see without each canceling out the other. This is an important aspect of thinking about the relationship between faith and science, which is the goal of teaching FASTly.

Think about how to engage students in the discussion without either over- or under- promoting the importance of the scientific perspective. Consider how to guide the discussion if some students are dismissive of particular perspectives. Consider how this activity allows students whose first love is outside the natural sciences to see their own perspectives valued and to see how scientific perspectives add to their understanding. Reflecting through your practice on how science relates to other ways of knowing communicates that such questions matter.

Preparing the Activity

You will need: presentation slides showing famous figures and a natural scene. These images are available in the **Through Different Eyes PowerPoint**.

Teaching the Activity

Show images of a physicist or a chemist, a biologist, an agricultural engineer, and a poet. The slide in the **Through Different Eyes PowerPoint** shows Marie Curie, Carl Linnaeus, an agricultural engineer, and Maya Angelou. Ask students to explain what each does, noting the distinction between the two scientists, the person involved in technology, and the artist. Be sure to communicate equal respect for each vocation.

Next show a picture of a beautiful natural scene also provided in the **Through Different Eyes PowerPoint**, or you can choose your own. Ask students to imagine each of the four famous people looking at the scene through the eyes of their chosen discipline.

- How would each go about expressing what is important about this scene?
- Why would each pick out the aspects they do?

Note that the point is not that beauty belongs to the humanities and facts to the sciences. Consider how the work of each discipline might be framed or motivated by aspects of the beauty and wonder of the scene, as well as how the discipline teaches us something distinctive about the scene.

After discussing the different perspectives, ask students to consider:

- Is one of the perspectives more “correct” than the others?
- If we ignored one or more of the perspectives, would we have more truth or less truth about what we are seeing? Would we have a richer understanding or a poorer one?
- Why might each perspective be important?
- If we add a theologian, would we only now have added a faith perspective, or could someone in each of the other categories be responding as a person of faith?

After interaction with the whole class, ask students to discuss in small groups:

- Which perspective is easiest for you to identify with?
- How might giving attention to the other perspectives help you grow?
- Could your response to perspectives that you find less appealing reflect pride or humility?

If you are using student journals, this would be a good topic for a reflective journal entry.