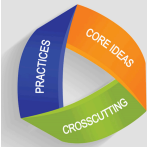


Knowledge Café and Harvest: An Application Tool

A Guided Thinking Exercise on the Bioscience and Islam Units



NGSS Instructional Outcomes

Next Generation Science Standards

Science and Engineering Practices

Engaging in Argument from Evidence: Evaluating evidence (Empirical, Rational, Revelatory) and constructing explanations (e.g., resolving conflicts between claims).



CCSS Instructional Outcomes

Common Core State Standards

CCSS.ELA-Literacy.RI.9–10.1 and RI.11–12.1: Citing strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, which is relevant to analyzing and discussing the Islamic and scientific narratives.

CCSS.ELA-Literacy.SL.9–10.1 and SL.11–12.1: Focusing on comprehension and collaboration, through initiating and participating effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners.

CCSS.ELA-Literacy.W.9–10.1 and W.11–12.1: Writing arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

Content Learning Outcomes:

- Apply epistemic concepts to revisit key ideas presented in all previous units/lessons.
- Focus on the reasoning/thinking process with a guided line of questioning.

Materials

- Epistemic Framework Worksheet

Instruction/ Teacher Facilitation

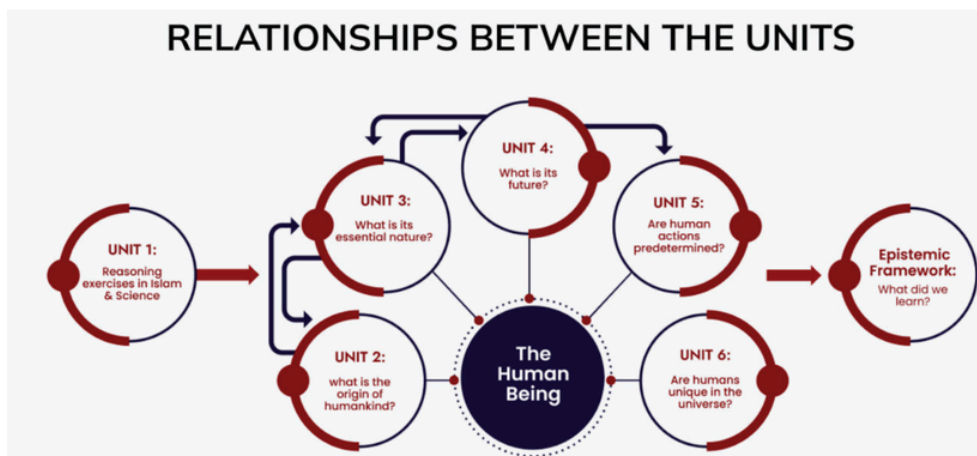
Begin by reviewing the 5 Big Questions that were the driving inquiry behind the course study. For each one, ask students to recall what was covered in each Unit to answer these questions.

5 Big Questions about the Human Being

1. **What is the origin of humankind?** Islamic narrative of creation versus evolution.
2. **What is the human's essential nature?** Islamic view of the soul and consciousness versus Neuroscience reductionism, Physicalism, and AI.
3. **What is the human's future?** Islamic view of the purpose of human beings, and treatment versus human enhancement and transhumanism.
4. **Are human actions pre-determined?** Islamic view of qadā/qadar and genetic determinism.
5. **Are humans unique in the universe?** Islamic view of human exceptionalism, particularly with the Prophet (pbuh) and extraterrestrial life; examining a case study to get a glimpse of ḥadīth study via the topic of ETI.

Go over the interrelatedness of each unit to all other units, allowing students to see the correlation between the units visibly.

Use the graphic organizer below:



Q&A

Epistemic Framework Worksheet

A Knowledge Café and Harvest:

- A knowledge café is where students will be discussing the knowledge shared in this course.
- Then we will harvest that knowledge, guided by the epistemological framework of the course, via a summarizing worksheet. This will then be discussed as a whole group so that learning points can be made clear to all students.
- This setup allows students to understand take-home points clearly, communicate that learning, and express their new found insights.

[Print out copies of the **Epistemic Framework Worksheet** (See p. 379) for each student and pass it out to them before giving instructions.]

Student Instructions: Each Unit has three claims/propositions that are made.

- Determine the source or the evidence of each claim: Empirical, Rational, or Revelatory.
- Specify what level of certainty that evidence is: *qaṭī* or *ẓannī*
- State if there is any conflict between the three claims:
 - If there is a conflict between the Islamic claim versus the scientific claim, state what that conflict is and explain what would resolve this conflict (if it can be resolved) OR
 - Do they overlap (i.e., there is no conflict).

Varied Application Methods

Use of this worksheet can be done in multiple ways. Based on students' needs and class structure, the teacher can decide what application works best and will be most effective.

> Unit Summary:

The worksheet can be used as a summary at the end of each unit, as a review for that unit. Therefore, each corresponding section is filled out at the end of each unit.

(10–15 min. per Unit)

(Ideal for classroom instruction.)

- Students are divided into groups and work on filling out the worksheet by consensus of the group (discussing and working out any disagreements).
Groups then share with the whole class what their consensus was.
The teacher will correct or reconcile any discrepancies in answers and answer remaining questions.



- This process would be repeated at the end of each consecutive unit.
- Students would need to keep this worksheet until the end of the course, add to it after each unit is covered, and turn it in after being fully completed.



Course Summary:

The worksheet can be used as a summary activity at the end of the course after *all* units are completed. This would help students recall what they learned in all units and serve as an overall summary, reviewing each unit's material and significant learning points.

(40–50 min.)

- Students are divided into groups and work on filling out the Worksheet by consensus of the group (discussing and working out any disagreements).
- Groups then share with the whole class what their consensus was.
- The teacher will correct or reconcile any discrepancies in answers and answer any remaining questions.



Course Assessment/Assignment:

The worksheet can be used as an assessment, either in class or take-home, or as a homework assignment.

(45 min: 1 hr. (divided))

- Students individually complete the worksheet and turn it in to the teacher.
- During the following class session, divide students into groups and discuss their answers. (Try to group students who have different answers so that those differences can be discussed and worked through until a consensus is reached.)
- As a class, go over the worksheet. The teacher will correct or reconcile any discrepancies in the answers and address any remaining questions.

