

WONDERING IN LEARNING

SITUATIONAL INQUIRY in K-5 Classrooms

Theory of Action:

*If we provide time in classrooms for content-informed **situational inquiry**, then students will engage in collaborative questioning, problem finding, and discussion.*

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Introduction

Education systems around the world have implemented a reward system that lauds students for the accuracy and frequency of *answering* questions. The mantra, “Let’s teach our students to become problem-solvers” remains the attractive and well-intentioned centerpiece of new-age pedagogies.

However, we approach this from a different angle. Through the lens of 21st-century skills such as problem-finding, we feel an urgency in equipping students to be successful members of society through *asking* questions before learning to answer them. Acting upon this urgency, we researched and developed a protocol that rewards questioning and wonder, coined **Situational Inquiry**.

As a protocol, **Situational Inquiry** intends to accomplish three goals:

- Continuously spiral learning exposing students to new topics and connecting old topics.
- Enhance the ability of question-asking and problem-solving in young students.
- Develop discussion skills that encompass both listening and speaking.

Research

INQUIRY-BASED LEARNING

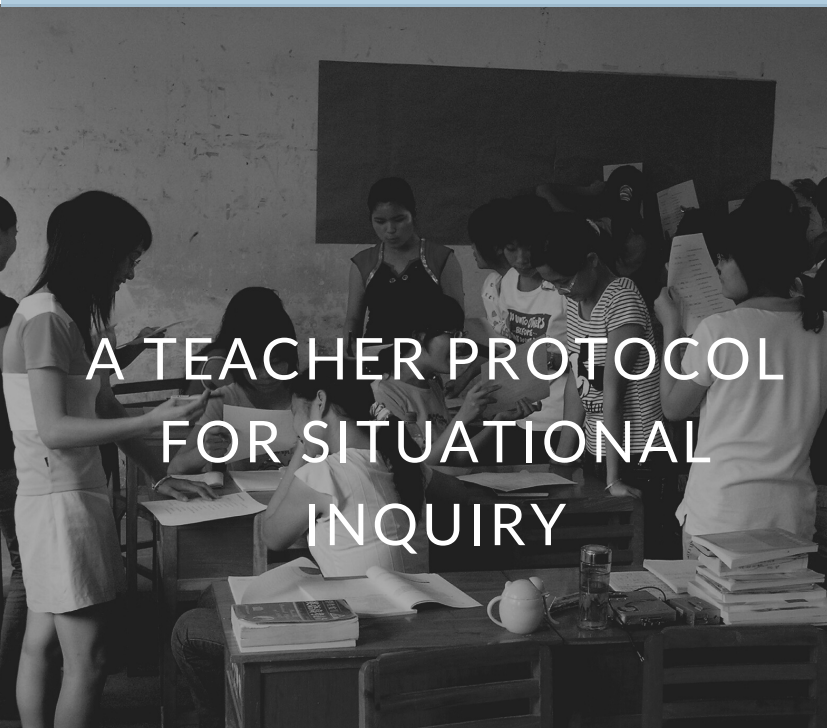
Taking "inquiry" as a landing point, we found concepts that lie adjacent to our conceptualization of situational inquiry. The inquiry-based model of learning challenges the more traditional learning model and its roots in behaviorism by incorporating ideas of constructivism and learning under investigation [1]. Carol Collier Kuhlthau, describes the importance of "Inquiry as a Way of Learning" where the concept of inquiry learning is to consider a "question or a problem that prompts extensive investigation on the part of the student" [2]. However, inquiry learning is not "a singular construct but rather a range of approaches that form a continuum" [3]. Rather, the idea of constructing a situation that demands students to start the process of investigation by first identifying and then questioning what is wrong, problematic, or puzzling in that specific situation, is the beginning of such investigation.

One potent example of inquiry-based learning is River City, an NSF-funded, technology-based curriculum now functioning at scale in middle school classrooms [4]. River City focuses on the front end of inquiry: how does one identify a problem, turn the problem into a question, and generate a hypothesis? The curriculum attempts to foster curiosity and help students use inquiry in productive ways.

SITUATIONAL INQUIRY

In our concept of **Situational Inquiry**, we rely on students' knowledge to elicit inquiry, providing them with situations that spark wonder and curiosity. Each situation will connect known and unknown topics, creating a moment of formative assessment for teachers and a challenge for students.

PRODUCT



This activity is designed to be used as a reflection of previous learning, accordingly, it should be used during a reflection or discussion block of class.

Students will draw on previous learning based on the implemented curriculum of the day to identify new ideas, find problems, and discuss.

The photos included in this lesson range from simple to complex. Teachers guide students through the first set of photos, modeling and eliciting discussion. As students become more comfortable, teachers can take a step back and allow students to lead the discussion.

[1] Khalaf, B. K., & Zin, Z. B. M. (2018). Traditional and Inquiry-Based Learning Pedagogy: A Systematic Critical Review. *International Journal of Instruction*, 11(4), 545–564.

[2] Kuhlthau, C. C. (2010). Guided Inquiry: School Libraries in the 21st Century. *School Libraries Worldwide*, 16(1), 1–12.

[3] Banchi, H., & Bell, R. (2008). The Many Levels of Inquiry. *Science and Children*, 46(2), 26–29.

[4] The River City Project. (n.d.). Retrieved from <http://muve.gse.harvard.edu/rivercityproject/>.

Context:

We aim to promote collaborative questioning, problem finding, and discussion in students by having groups of students engage in "situational inquiry" as an extended construct of inquiry-based learning that sparks [wonder](#). This activity is designed to be used as a reflection of previous learning, accordingly, it should be used during a reflection or discussion block of class.

Students will draw on previous learning about _____ to identify new ideas, find problems, and discuss. The photos included in this lesson range from simple to complex.



Teachers guide students through the first set of photos, modeling and eliciting discussion. As students become more comfortable, teachers can take a step back and allow students to lead the discussion.

Method:

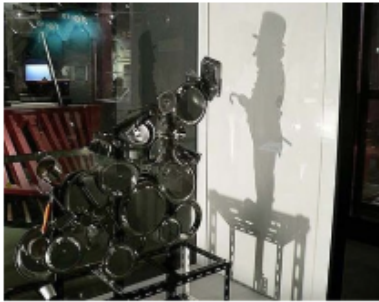
Before beginning:

- Tell students that you will be showing them some pictures to help discuss what they have learned about _____
- Tell students that you are looking for them to come up with as many ideas or questions that they can come up with.
- Tell students that you will be timing them to see how quickly they can work together. (Teachers can introduce any type of "constraint" they think will be most compelling to students).
- Split students into partners, triads, small groups, or keep students in the whole group (teacher discretion).

Stage One (simple):

Materials	Teacher Actions	Student Actions
	<ul style="list-style-type: none"> - This portion is teacher-led, use this space to plan questions for each photo. 	<ul style="list-style-type: none"> - Record expected behaviors here.
		

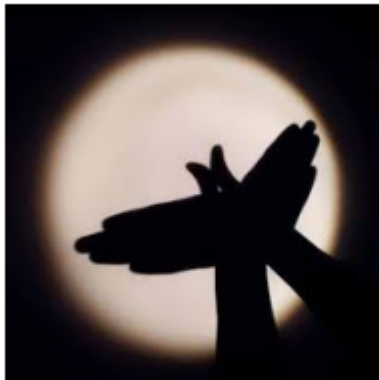
Stage Two (intermediate):



- This portion should be student-led, take the space here to plan your timing, questions, and instructions.

- What should students be doing? What norms should they be following? What questions are they asking?

Stage 3 (complex):



- Will this be teacher-led or student-led? How can students record ideas?

- How will students react if they find it frustrating? What questions can they ask? How will they show productive struggle?

Feel free to record the conversation, this sheet is included if you want to take notes.

Teacher Noticings:			
Questions:	Ideas:	Problems:	Other:

Student Noticings:		
I think:	I see:	I wonder: