Defined Academy

LAUNCHPAD ACTIVITY
Guiding Student Inquiry

OVERVIEW OF THE TEACHING PRACTICE

Inquiry-based learning experiences, where students ask questions and seek answers, are dynamic. Instead of sitting passively, absorbing knowledge delivered by a teacher, students are actively engaged. Inquiry is an effective practice both in traditional classrooms and in project-based learning, where it plays a key role.

Asking and investigating their own questions is motivating for students. It makes them feel more in charge of their own learning. An inquiry process is also useful for problem-solving, an important skill in school and in careers.

A helpful tool for problem-solving and for guiding student inquiry is the "Know/Need to Know list." You might be familiar with the "KWL" chart, a similar note-taking tool to record what students *know* about a topic, what they *wonder* about, and what they have *learned*.

On the Know/Need to Know list, students record what they know about a topic, problem, or challenge. This activates their prior knowledge, which supports the thinking and learning process. Then, students list questions they need to know the answer to in order to solve the problem or meet the challenge. As these questions are investigated and answered, students add more and deeper questions to their list.

The inquiry process reflects one of the most important features of PBL: the project creates an *authentic* need to know important content and skills. Students are motivated to learn not just to get a good grade, but because they want to solve an engaging real-world problem or find answers to questions about topics that are meaningful to them.

EXPLANATION OF THE ACTIVITY

TITLE: Know/Need to Know List
GRADES: K-12
TIME: 10-20 minutes

PURPOSE: To launch inquiry by asking students to generate questions that will be used to guide and contextualize their learning.

OVERVIEW

This activity facilitates the process of launching inquiry by asking students to categorize what they currently know about the challenge and what they need to know in order to solve the problem.

STEPS

1. Decide on the context or topic that students will generate questions about. If you're doing a project, this would be the driving question or challenge statement. If you're

2023 Defined, LLC

launching a lesson or unit, make sure it's a topic that requires and provokes students to "go deep" into it.

2. Ask students to create an individual space for note taking, and draw a line down the middle. One side should be labeled "Know" and the other "Need to Know." Also create a class note taking space; this could be a chart at the front of the room, or a document projected on a screen.

3. Share the topic, problem, or question with students. Ask if there are any clarifying questions, to be sure students understand it.

4. Ask students to start generating a list of everything they know about the challenge. They should record this on the "know" side of their document. For example, in a lesson on chemical reactions in bath bombs, students might say they know that:
    - When a solid and liquid are combined a gas is released.
    - The water changes color.
    - I use bath bombs to make my bath more pleasant.

5. Next, challenge students to create a list of everything they need to know. This should be recorded on the "need to know" side of the document. In the same bath bomb example, students could list questions such as:
    - What type of gas is formed?
    - What's in the bath bomb?
    - What's in the water?
    - Does the temperature of the water change the gas?
6. Have students pair with another student or a small group and compare their lists.

7. Facilitate a class discussion in which they share from their lists. As students share, add their thoughts to the class "Know/Need to Know" list.

NOTES

- Plan to model some examples the first time you facilitate this activity. Students might also benefit from being challenged to create a specific number ("at least 5 of each")
- Scaffold this process: allow individual think time, a brief pair time, and then facilitate the whole class discussion.
- For primary students, you may not want to make this a writing activity. Ask them to discuss their questions in a think-pair-share activity, and scribe their questions in one central location. Display the chart in a prominent place in the classroom.
- This is a living document. You will come back to this over time to add to it. If your lists are incomplete at first, plan to come back and generate more questions later.

2023 Defined, LLC