What is Inquiry Learning?

GK-12 Workshop
2008
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Why Inquiry?

- Apply concepts
- Get students to engage in h.e.t.
- Learning thru experience
- Engaging students
- Make it memorable
- Fun!
- Build confidence
- Includes different learning styles
- Independent acting ad thinking
- Collaborative work
- Teamwork
Six characteristics of Guided Inquiry:

1. Students learn by being actively engaged and reflecting on that experience
2. Students learn by building on what they already know
3. Students develop higher order thinking through guidance at critical points in the learning process
4. Students’ development occurs in a sequence of stages
5. Students have different ways of learning
6. Students learn through social interaction with others

Compare to...

Carol C. Kuhlthau and Dr. Ross Todd, CISSL
Cognitive Principles

1. The constructivism principle
2. The context principle
3. The change principle
4. The individuality principle
5. The social learning principle


Levels of Inquiry

<table>
<thead>
<tr>
<th>Pose the Question</th>
<th>Teacher</th>
<th>Teacher</th>
<th>Teacher</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning the Procedure</td>
<td>Teacher</td>
<td>Teacher</td>
<td>Students</td>
<td>Students</td>
</tr>
<tr>
<td>Formulating the Results</td>
<td>Teacher</td>
<td>Students</td>
<td>Students</td>
<td>Students</td>
</tr>
</tbody>
</table>

Scaffolding:
- Base knowledge
- Groups
- Amount of help teacher provides: 

\[ \begin{array}{c|c|c|c|c} 
\hline
& \text{Teacher} & \text{Teacher} & \text{Teacher} & \text{Student} \\
\hline
\text{Handout} & \text{Groups} & \text{Groups} & \text{Groups} & \text{Groups} \\
\hline
\end{array} \]
5E Method

- Engage
- Explore
- Explain
- Elaborate
- Evaluate

Bybee, et al.

Engage:

The teacher determines the topic of inquiry and provides a discrepant event or focus question or problem to engage student interest and curiosity.

Jorgenson, Cleveland, Vanosdall - Doing Good Science...
Explore

The students, with their teacher as a guide and co-investigator, begin to explore the problem or question.

Explain

They make further observations and attempt to explain the phenomena they observe.
Elaborate

The teacher then challenges students to *elaborate* on their understandings by linking observations to prior knowledge and by applying the concepts and skills in new situations.

Evaluate

Finally, the teacher encourages students to *evaluate* their understandings and abilities, and the teacher *evaluates*, or assesses, the areas of strength and weakness exposed by student performance in the activity.