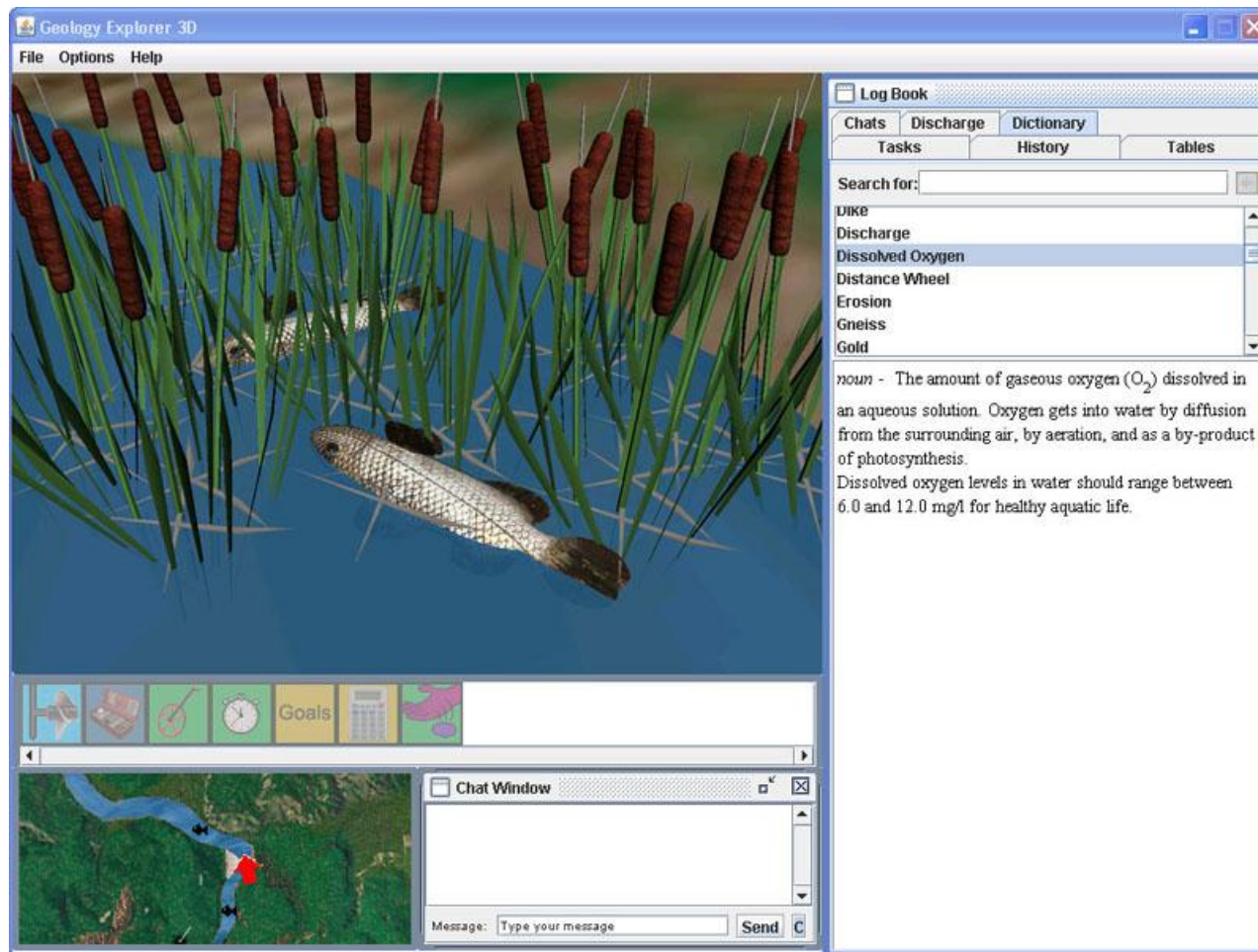


An environmental geology game for discovery-oriented science and mathematics education



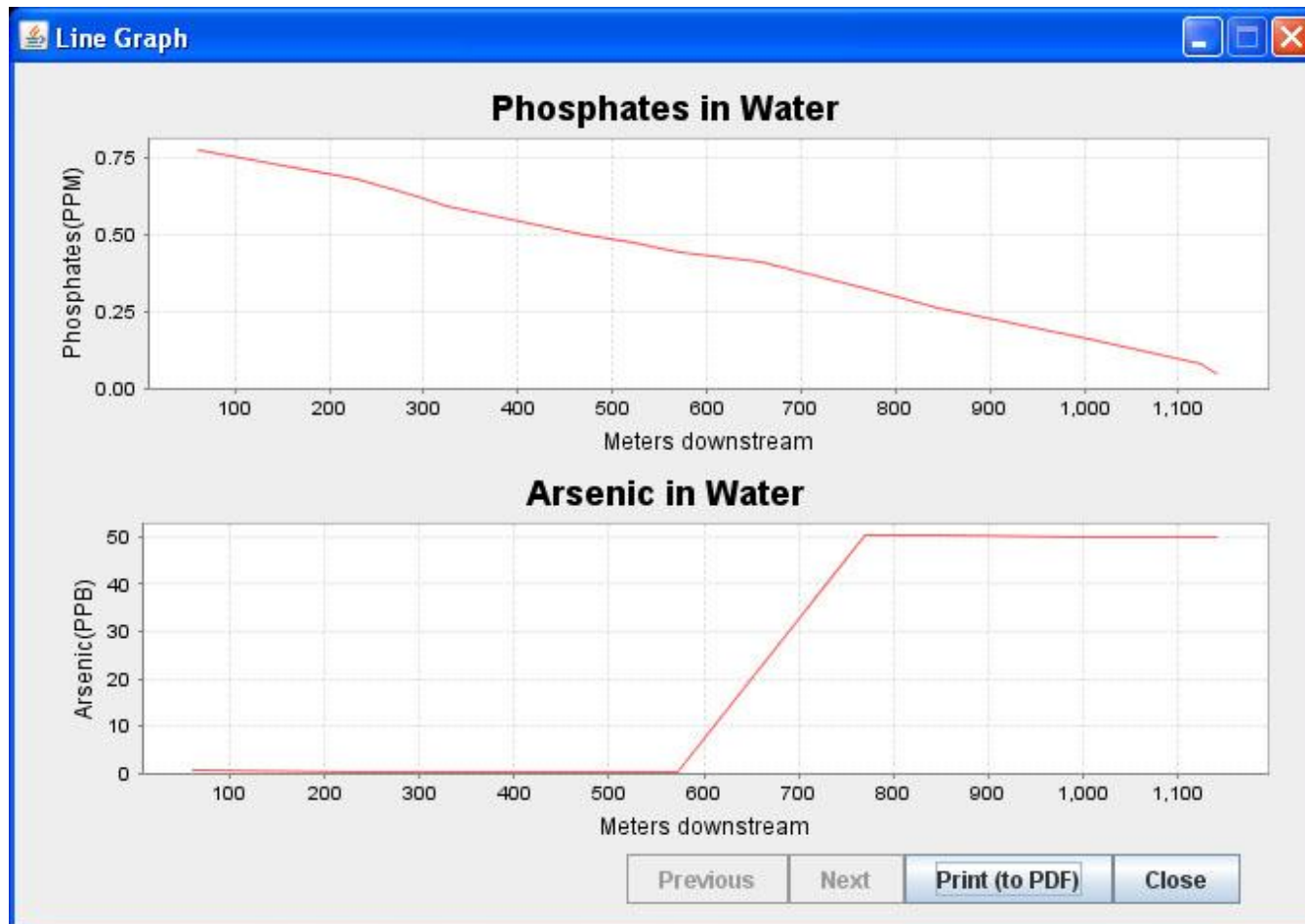
... a multi-user online educational game focused on earth and environmental science, experimentally validated to demonstrate learning gains in science and mathematics.

The screenshot shows the eGEO application window. The main 3D view displays a river flowing through a green landscape with trees. A small figure is visible on the opposite bank. A red vertical line is in the water. Below the main view is a toolbar with icons for a calculator, a map, and a chat window. The 'Log Book' panel on the right has tabs for Chats, Discharge, Dictionary, Tasks, History, and Tables. The 'Tables' tab is active, showing a table of water quality data. Below the table are fields for Sum and Mean, and a calculator interface.

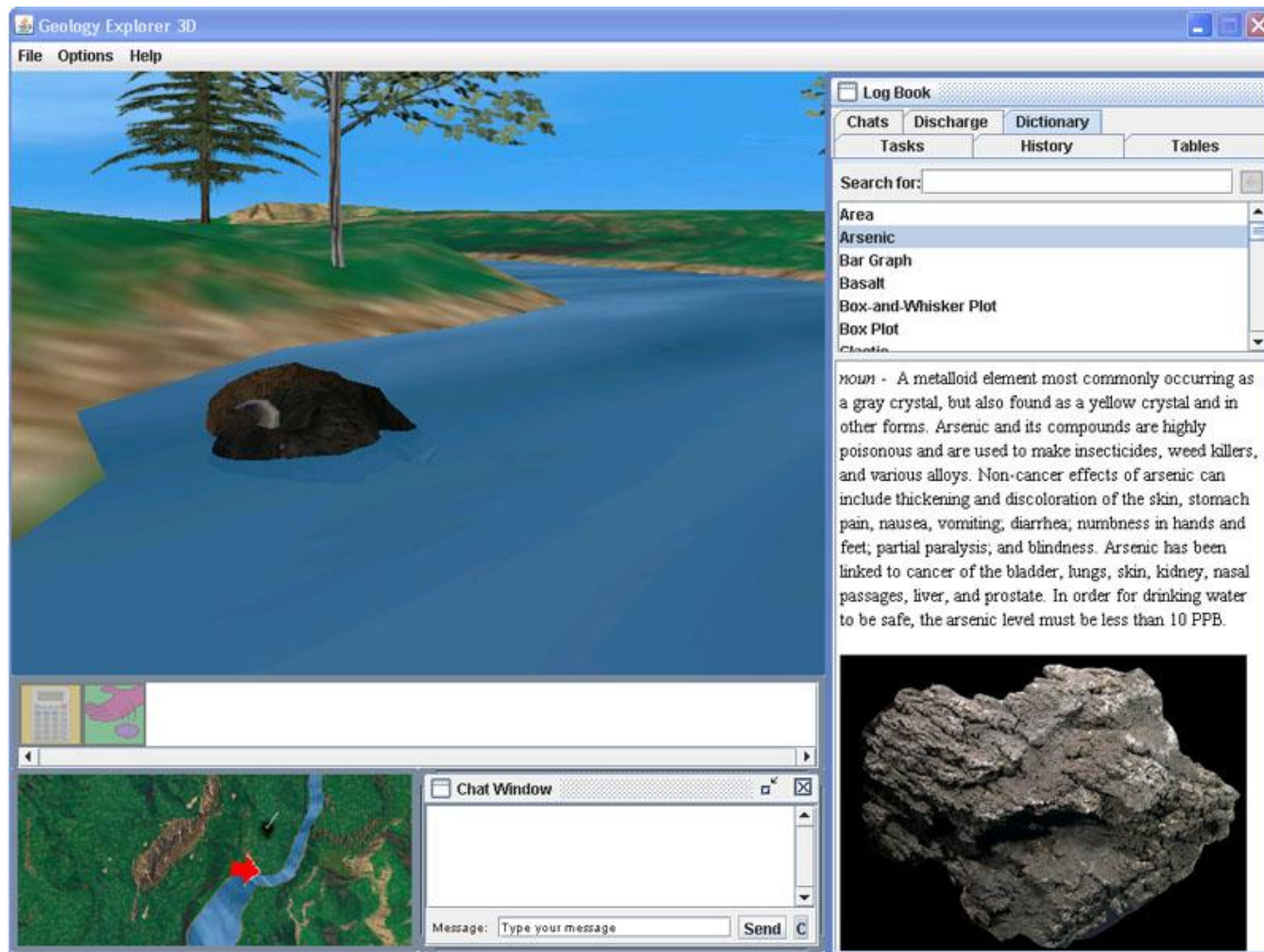
Phosphates	Units	Arsenic	Units	Temperature
0.77	PPM	0.57	PPB	15.97
0.68	PPM	0.48	PPB	15.88
0.62	PPM	0.42	PPB	15.82
0.59	PPM	0.39	PPB	15.79
0.5	PPM			
0.47	PPM			
0.44	PPM	0.24	PPB	15.64
0.41	PPM			
0.32	PPM	50.12	PPB	15.52
0.26	PPM	50.06	PPB	15.46
0.17	PPM	49.97	PPB	15.37
0.08	PPM	49.88	PPB	15.28
0.05	PPM	49.85	PPB	15.25

Sum: 0
Mean: ?

0
7 8 9 C
4 5 6 +
1 2 3 -
0 . X
= /



Students analyze the data using line graphs and pinpoint the location of a toxic level of arsenic in the river on their navigational map. Students then answer a series of formative assessment questions related to the task.



A dead animal found in a small lake. What's happening? Is its death an effect of environmental change or does its death affect the environment?



Students playing eGEO in a High School computer lab