

I.N.S.I.T.E. Method

Throughout this lesson students will be involved in inquiry based learning and investigations. This problem-solving model helps the students work through investigations based on the principles of scientific inquiry called the I.N.S.I.T.E. method.

Identify the problem

Narrow the problem

State the hypothesis

Investigate and gather information

Test the hypothesis and record observations

Examine the results and write (communicate) conclusions

Identify the problem

The first step involves students identifying the problem that they will need to investigate or need to resolve.

Narrow the problem

The second step is for students to narrow the problem by asking such questions as what, when, why, where, and how.

State the hypothesis

The third step is to state the hypothesis, which involves the students making a scientific guess as to how they believe the problem will be solved.

Investigate and gather information

The fourth step includes students conducting a scientific investigation relating to the hypothesis. Students conduct research and gather information related to the problem and the questions they generated in the second step. When students have enough background information they then create an investigation plan that will test their hypothesis. This plan should take into account all possible variables and constants in order to carry out a fair test as well as a list of materials they will need.

Test the hypothesis and record observations

The fifth step is for the students to follow their investigation plans and carry out a fair test to confirm the validity of their hypothesis. As students test their hypothesis they record their observations, by using charts, graphs, learning logs, or science journals.

Examine the results and write (communicate) conclusions

The sixth step consists of students examining their test results and then writing a conclusion that outlines what they learned in the investigation and testing of their hypothesis. It is important that students be given an opportunity to examine their results to determine if their hypothesis was valid before writing their conclusion. If students do not have a valid hypothesis they will have to gain different results. They may consider developing a new hypothesis or creating a new plan to test their hypothesis to accomplish this. As well, students will have to examine what worked and why, what needs further research, and investigation. However, if students have a valid hypothesis they need to state the solution to the problem in their conclusions and outline why it was a solution.

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