Workshop, Grades 2-3

Inquiry Process

The Inquiry Process provides a scientific framework for research, investigation, and exploration, and is driven by students' wonderings and conjectures. This cycle consists of recursive phases that guide the students through their research, with each phase repeated as many times as necessary. Each repetition of each phase will give rise to new questions and problems, helping students reevaluate and revise their conjectures, knowledge, needs, and plans.

Generating Questions or Problems

Effective research is guided by and focused on problems, rather than on topics.

Purposes

1. To identify a research question or problem.
2. To form research groups which will seek answers to the question or problem.

Students should

- Identify a question they wonder about or a problem they wish to understand.
- Form research groups with students who share their interests.

Making Conjectures

Conjectures will guide students' research, as students gather new information to test and revise their original conjectures.

Purposes

1. To form conjectures about a research problem or question.
2. To discuss conjectures with research groups.

Students should

- Think about possible answers to their research problems or questions and discuss these possibilities with classmates.
- Meet with their research groups to discuss and record their conjectures.

Identifying Needs and Making Plans

Thinking carefully about resources and knowledge needs helps keep the research on track and focused.

Purposes

1. To identify research needs.
2. To formulate research plans.
3. To develop a calendar.

Students should

- Identify their knowledge needs based on their conjectures.
- Meet with their research groups to determine which resources to consult and to make individual job assignments.
- With the class, develop a calendar to provide a timeline for completing the phases.

Collecting Information

Purpose

Using reliable sources and gathering relevant data will provide the most useful information about a topic.

1. To collect information and data from various resources.

Students should

- Use various resources to gather data and information.
- Take notes and organize gathered data.

Revising Conjectures

Discussion, ongoing feedback, and constructive criticism are important in all phases of the research but especially in the revising of problems and conjectures.

Purposes

1. To evaluate problem in light of information.
2. To evaluate conjecture in light of information.
3. To discuss and incorporate feedback.

Students should

- Discuss problem and new information learned from their research.
- Discuss their conjectures with new knowledge in mind and revise their conjectures as needed.

Presenting Findings

Presenting their feelings will allow students to share what they have learned in their investigation.

Purpose

1. To informally and formally present findings.

Students should

- Meet periodically with teachers, classmates, and research groups to present their findings and, on the basis of these findings, revise their problems and conjectures.

Asking New Questions

With each refinement of the problem and the conjecture, research needs change.

Purposes

1. To discuss what they have learned.
2. To identify new questions or anything else they want to learn.

Students should

- Discuss any new questions they have.
- Meet with research groups to determine how they will find the answers to their questions.

The inquiry process is cyclical and, thus, essentially endless. Each new set of findings produces new problems, questions, and conjectures, which lead, in turn, to new cycles of research.