

Grade Level Content Expectations For Inquiry Project

How to teach the Inquiry process- grades 5-8th Inquiry, Research, and Analysis – *critically examine evidence, thoughtfully consider conflicting claims, and carefully weigh facts and hypotheses.*

P2.1 Understand the scientific method of inquiry to investigate social scientific and historical problems.

P2.2 Read and interpret data in tables and graphs.

P2.3 Know how to find and organize information from a variety of sources, analyze, interpret, support interpretations with evidence, critically evaluate, and present the information orally and in writing; report investigation results effectively.

P2.4 Use multiple perspectives and resources to identify and analyze issues appropriate to the social studies discipline being studied.

P2.5 Use deductive and inductive problem-solving skills as appropriate to the problem being studied.

Lesson Title: Brainstorming: What would you like to find out?

Grade Level: 5th grade

Date: Monday April 27th, 2009

Time: Two 30 minute sessions

Grade Level Content Expectations

P2.1 Understand the scientific method of inquiry to investigate social scientific and historical problems.

Objectives:

Session 1: Students will be able to propose ideas on what subjects to research.

Session 2: Students will be able to create and administer a survey.

Materials

KWL Chart

Blank Survey

Anticipatory Setting:

Through the years, students have written a few research papers but have not learned the adequate structure of thoroughly researching a topic. Students have ideas about research, but are not confident.

Attention getter

For the next week, we are going to be learning about how to successfully research a topic. In this process, we are going to figure out what we want to research, hypothesize, collect data, analyze the data, and then draw conclusions from the data.

Introduction (28 minutes)

Session 1: Introduce the concept of a research paper and all of the parts in putting together adequate research, separating truth from fiction, using prior knowledge, etc. Ask students: to think of research papers they have written, if the research was difficult, what problems they faced, what was easy about writing the paper, etc. Ask students what they want to know about each student in the classroom. Introduce the KWL chart at this time. Possible suggestions: how many siblings, how many pets, favorite subject... Example: What we know column- Some students are only children, some students will not own pets, all students should have at least one favorite subject in school. Fill out 'what we want to know'.

Checking for understanding (2 minutes)

Question: What are the five processes of research?

Independent Practice (25 minutes)

Session 2: After students have come to a conclusion about what they want to learn about their classmates the day or session before, they will take the pre-made surveys and begin to survey each student in the class. One group will take one question and assign recorders of data and interviewers of data. After data has been collected, students must keep their data for the next day.

An alternative to this process could be to use butcher paper to make large surveys that can be hung in different parts of the room. Students can walk over and sign their name underneath their opinion/answer –or- students write their own opinion/answer next to their name in list form.

Closure/ Assessment. (5 minutes)

Closure should include a raise of hands to see how many groups have finished interviewing each student in the class. Students will be assessed by observation of attentiveness, collaboration, group work, and participation.

Lesson Title: Sorting data

Grade Level: 5th grade

Date: Tuesday April 28th, 2009

Time: 55 minutes

Grade Level Content Expectations

P2.2 Read and interpret data in tables and graphs.

Objectives:

Students will be able to create tables, graphs, and/or charts from their collected data.

Materials

KWL chart

Butcher paper or access to a computer with Microsoft Excel.

Markers

Anticipatory Setting:

Students have already taken surveys about what they want to learn about their classmates. They will be given the idea that they will be sorting their data in this lesson. Students will have knowledge on how to construct and read bar graph and pie charts.

Attention getter (5 minutes)

Students will see that their individual surveys might be hard to read if given to someone that does not know what the survey was about. Tell students that they will be graphing their data. Ask students if graphing a lot of data makes data easier or harder to compare data.

Introduction (15 minutes)

Review the concepts of bar and pie graphs. If computers are available, a tutorial on how to create pie charts and bar graphs should be administered through using Microsoft Excel.

If computers are not available, students will be given a sheet of butcher paper to create their bar graphs/pie charts by hand with markers. There will be one group per question asked on the survey (this will vary). Each group will decide between creating a bar graph or pie chart, but everyone must partake in creating the graph.

Checking for understanding (5 minutes)

Questions: For a bar graph, what measurement should be counted on the x and y axis? What are the parts to add to a pie chart? What do all graphs need to have? How will you be able to find the data percentages?

Independent Practice (25 minutes)

Students will get into groups and create a pie or bar graph on either Microsoft Excel or on a large piece of butcher paper. If students are using Microsoft Excel, students should print out their bar graph/pie chart to share to the class.

Closure/ Assessment (5 minutes)

Students will be assessed by sharing to the class what type of graph they decided to make, why, and what was the greatest and least pieces of data were and why they think that the data turned out that way.

As a group, we will update our KWL chart.

Lesson Title: Going in depth- Why this data came to be.

Grade Level: 5th grade

Date: Wednesday April 29th, 2009

Time: 45 minutes

Grade Level Content Expectations

P2.3 Know how to find and organize information from a variety of sources, analyze, interpret, support interpretations with evidence, critically evaluate, and present the information orally and in writing;

report investigation results effectively.

P2.4 Use multiple perspectives and resources to identify and analyze issues appropriate to the social studies discipline being studied.

Objectives:

Students will be able to analyze data from graphs, charts and or tables.

Students will be able to interview at least one student to gain information on a specific subject.

Materials

KWL charts

Sheets of paper

Clipboards and sheets of paper/notebook

Anticipatory Setting:

Students have already brainstormed information, gathered student information by performing surveys and created bar graphs/pie charts to display their data.

Attention getter (1 minute)

Now that the students have gathered the information to find out how much of each data is in each category, they're going to find out why.

Introduction (10 minutes)

Engage students in wanting to find out why certain students responded to the survey the way they did. For example, student group 1 has the assigned question "What is your favorite school subject?" Their graph displays that "English" is the subject that is a favorite among the classroom. Two students from that group will interview at least one student who answered "English" as their favorite subject to find out why they chose that subject. They can only interview the students that are the interviewees in the other groups.

Checking for understanding (4 minutes)

Make sure to ask students if they understand the directions given- ask students to repeat them back to see if they have comprehended and to make sure that you have not given them mixed information. Remind students to record their interview.

Independent Practice (25 minutes)

In groups, students will designate who will be the interviewers and who will be the interviewees. Before the students break off and start interviewing, students will have five minutes to brain storm questions to ask the interviewees. Students will be able to give their interviews and need to make sure they record as much information as possible, even if they need to write word for word. This may be unlikely, but, if there are not any interviewees that answered, for example, "English" as their favorite subject, students are able to ask the interviewees in their group, or wait until an interviewer from another group is finished with their interview.

Closure/ Assessment. (5 minutes)

As soon as it looks like the class is finished with their interviews, have the students come together as a class and they will share their findings. They will designate one person from their group to give a summary of what they found out about their subject. As a group, finish KWL chart.

Students will be assessed by how well they follow directions and how well they recorded their interview. Students are encouraged to interview more than one student.

Lesson Title: Brainstorming: What would you like to find out?

Grade Level: 5th grade

Date: Thursday April 30th, 2009

Time: Two 1 hour sessions

Grade Level Content Expectations

P2.5 Use deductive and inductive problem-solving skills as appropriate to the problem being studied.

Objectives:

Students will be able to make conclusions from the data received.

Students will determine if a source is primary or secondary

Materials

Chalkboard/Overhead

Access to a library and/or computer lab.

Anticipatory Setting:

Students have brain stormed what they wanted to know about the class, gathered information through surveys, and interviewed students in the classroom to answer to why certain students feel the way they do. They have learned how to research.

Attention getter (5 minutes)

Tell students that they are coming to the conclusion of their research project. Now that they know the research process, they need to learn the difference between primary and secondary sources.

Introduction (20 minutes)

After the quick share from the day prior, the students will get together in their groups again. As a class, the teacher will record findings on an overhead/blackboard. Once all groups have given their information, they will be given information on primary and secondary sources. From this information, students can believe the information they gathered was correct. This will give an opportunity to share the “differences between primary and secondary sources” worksheet. Explain to students what the term bias means. Also, remind students that secondary sources can be useful when writing papers.

Checking for understanding (5 minutes)

Questions to ask:

What is the difference between a secondary and primary source?

What is a survey considered? Interview? Website? Textbook?

What does bias mean?

Independent Practice (30 minutes)

Depending on time constraints, this independent activity should run for approximately two lesson periods. This will give students enough time to check out a book from the library and also research a website on the internet. Groups or pairs will work on the “Primary and Secondary Source” worksheets. You may give students a list of important people to research (the list might come from the next time period you will be learning about in your unit). Students must pick one primary and one secondary source to use. This will include something found off of the internet & a book. You can give them the hint that unless the book is an autobiography, it is a secondary source.

Closure/ Assessment. (10 minutes)

At the end of how ever long it takes the assignment to be completed, students should turn in their worksheets to be assessed. A group discussion could be administered for a closure activity. Questions to ask the students: How did it make you feel to know that your textbook is a secondary source? Should we believe that secondary sources are less viable than primary sources? Why? What are some things to look for when trying to distinguish if a website has viable information?

Primary Document Analysis Worksheet

Name: _____ Date: _____

A primary source provides a firsthand account of events recorded during or shortly after the events described occurred. Primary sources can include newspaper articles, government documents, diaries, photographs, and maps.

Instructions: Examine your primary document. Remember to consider all aspects of the document, including the motivations of the author and the historical context in which it was created.

What kind of document is it? (diary, newspaper, letter, eyewitness testimonies, official reports, home videos, or speeches etc.)

Who created it? What do we know about the author?

When was it created?

Where was it created?

Why do you think it was created?

Does the document's author show bias at any point? Where? Cite specific passages.

Secondary Source Analysis Worksheet

Name: _____ Date: _____

A secondary source of information is one that was created later by someone who did not experience first-hand or participate in the events. (ie. textbooks, essays, scholarly articles, biographies, or encyclopedias)

Instructions: As you read your document, remember that secondary sources do not just present facts – they provide an *interpretation* of events. Look for the ways that the author presents his or her interpretation.

What is the title of the document?

Who is the author?

Who is the author's intended audience?

What topic is the author addressing in this work?

What is the author's argument (or thesis) about this topic? Provide evidence from the text.

What evidence is provided to support this argument? List specific examples.