

“Every 21st century skills implementation requires the development of core academic subject knowledge and understanding among all students. Those who can think critically and communicate effectively must build on a base of core academic subject knowledge.

Within the context of core knowledge instruction, students must also learn the essential skills for success in today’s world, such as critical thinking, problem solving, communication and collaboration.” \*

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### CRITICAL THINKING AND PROBLEM SOLVING

- Reason Effectively
  - Use various types of reasoning (inductive, deductive, etc.) as appropriate to the situation
- Use Systems Thinking
  - Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems
- Make Judgments and Decisions
  - Effectively analyze and evaluate evidence, arguments, claims and beliefs
  - Analyze and evaluate major alternative points of view
  - Synthesize and make connections between information and arguments
  - Interpret information and draw conclusions based on the best analysis
  - Reflect critically on learning experiences and processes
- Solve Problems
  - Solve different kinds of non-familiar problems in both conventional and innovative ways
  - Identify and ask significant questions that clarify various points of view and lead to better solutions

### INFORMATION LITERACY

- Access and Evaluate Information
  - Access information efficiently (time) and effectively (sources)
  - Evaluate information critically and competently
- Use and Manage Information
  - Use information accurately and creatively for the issue or problem at hand
  - Manage the flow of information from a wide variety of sources
  - Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information

### MEDIA LITERACY

- Analyze Media
  - Understand both how and why media messages are constructed, and for what purposes
  - Examine how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors
  - Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media
- Create Media Products
  - Understand and utilize the most appropriate media creation tools, characteristics and conventions
  - Understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments

Sample Lesson Plan for Evaluating Evidence  
Based on Taking a Stand and [SB-25](#) by Clif Morton

### Should Telephone Polls Be Used as Facts?

**Background Information:** At a recent state senate hearing regarding the use of 'Indian' mascots, logos and nicknames, an opinion poll was cited as evidence that the mascots, logos and nicknames should stay in schools. The poll was the National Annenberg Election Survey conducted by telephone in the continental United States from October 7, 2003, to September 20, 2004.

More than 65,000 people were asked if they objected to the Washington D.C. professional football team nickname, the "Redskins." In order to determine what the opinion of American Indians was, the 65,000 respondents were asked to self-identify if they were "Native Americans." The results indicated that 700 of the 768 self-identified Native Americans said it didn't bother them.

**Preliminary Activity:** After giving students the background information, break them into small groups and have them brainstorm and record any and all ideas that would help determine whether or not the telephone poll was accurate. Give them only 5-10 minutes as this is only a preliminary activity. Have each group offer one or more ideas that can be recorded as a class list.

**More Background Information:** At this point share with students the two basic principles of public opinion polling:

- 1) Probability sampling-assumes that a randomly selected, small percentage of a population can accurately represent the opinions of an entire population;
- 2) Equal probability of selection-assumes that every member of a population has an equal probability of being selected in a sample  
Second Small Group Activity:
  - a) Have each group test the class ideas against these two principles (especially focusing on the second one). They should list any possible modifications to the ideas. Again, only a very few minutes will be needed.

**Teacher Directed Discussion:** Take inventory of the student ideas and see if their ideas include the following:

- 1) Any American who is born in the United States can self-identify themselves as a "Native American." The fact that this was allowable in the phone survey without regard to the authenticity of the claims made by those taking the survey violates the second principle.
- 2) To have an equal probability of being selected all members of a group must have a phone. At the time of the survey, more than 30% of American Indian families living on and off reservations did not have phones (Federal Communications Commission data from May of 2003).
- 3) Bring out the idea that only land lines are called in this kind of phone poll. All cell phone users who don't have land lines are excluded. The teacher can ask how this might skew the results.
- 4) The teacher might also ask whether people might respond differently if they are asked whether they think something is morally right rather than if they are "bothered" by it. And, if the principle of non-interference with others is practiced in a culture, is a person from that culture likely to be as bothered by what someone outside their culture does? What can be speculated about how this can influence survey results?

**Follow-up Activities:** Have students research and report to class:

- 1) The term “redskin” from the perspective of different tribal nations in the United States
- 2) Information about similar polls such as the Peter Harris Research Group Poll for *Sports Illustrated* (2002), comparing the methodology and the result
- 3) The common characteristics of valid research (use of control groups, replication, peer reviewed, etc.)

*\*The Partnership for 21<sup>st</sup> Century Skills, Framework Definitions, 21st Century Skills. December 1, 2009. Available at [http://www.21stcenturyskills.org/documents/P21\\_Framework\\_Definitions.pdf](http://www.21stcenturyskills.org/documents/P21_Framework_Definitions.pdf). Accessed January 28, 2010*

