

Learning Activity Template

Title: Investigating Native American Cultures through math games

Curriculum Social Studies/ Math

Grade-Level Span: 4-6

PURPOSE:

The learner will analyze Native American cultures by investigating math games of the various cultures. While completing this unit, students will:

- gain respect for differences in cultures,
- be active questioners and critical thinkers while investigating math problems posed by playing the math games,
- use mental math to estimate and anticipate outcomes,
- learn about and appreciate the contributions of various cultures of today's world of mathematics.
- begin to construct an intuitive understanding of probability.

DESCRIPTION:

Students will learn to play math games of various Native American cultures as they learn about the history of these cultures through literature and various technologies.

ACTIVITIES	CURRICULUM STANDARDS	NETS PERFORMANCE INDICATORS
Math game: Picaria (Pueblo Indians of New Mexico)	1A, 4A	2
Math game: Game of Dish (Seneca of New York; Passamaquoddy of Maine; Cherokee of Oklahoma, and the Yokut of California)	1A, 4A	2
Math game: Awithlakhannai (Zuni children of New Mexico)	1A, 4A	2
Game of Sticks (Played by Native American women in what is now California. Similar games played in Canada, Mexico, and other parts of North America)	1A, 4A	2
Literature: <u>Do You Wanna Bet? Your Chance to Find Out About Probability</u> (Game of Sticks)	1A	1,3,4
Literature: <u>The Eleventh Hour: A Curious Mystery</u> book on tape	1A	1,3,4
Invite resource person to speak about the topic of Native American games and culture.	1A	2
The students hold a Native American math game festival which includes Native dress, foods, music, and games they learned to play.	1A, 4B, 4C	4
Multicultural Education Awareness Quiz	I-K,	1,2,3,4,6

TOOLS AND RESOURCES:

(List all Web sites, specific software and hardware, and other needs.)

Math Around the World 1995 Regents University of California

Math Games and Activities from Around the World by Claudia Zaslavsky, 1998 Chicago Review Press.

The Eleventh Hour: A Curious Mystery by Graeme Base, 1989 Harry N. Abrams, NY.

Do You Wanna Bet? Your Chance to Find Out About Probability by Jean Cushman, 1991 Clarion Books/Houghton Mifflin, NY

www.edchange.org/multicultural/quiz/quiz.html

CD player/CD's

Computers with Internet access

ASSESSMENT:

(How will you assess the students' learning? If you have a rubric, record it here. Be as specific as possible.)

Observation

Participation in math game activities

Self assessment (KWL)

Ability to teach the games they learned to others attending the festival

CREDITS (INCLUDING CONTACT INFORMATION):

(Record the names and e-mail addresses, if possible, of those who contributed to the development of this learning activity.)

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COMMENTS:

(Have you taught this learning activity before? What are the great ah ha's/experiences you had?)

no