

“What are the Odds?” (Make a Wager)

Spring > Games > Math (MS.sp.games.math.WhatAreTheOdds)

Season & Location:

Spring; most of the lesson plan materials are usable in a regular classroom setting; however, “taking it outside” is nearly always going to make it more interesting. The games themselves can be played inside, outside, around a campfire, etc. Hosting a visitor from the Chinook Winds Casino would likely happen in the classroom – but could also involve taking the class to the Casino. (The casino tie-in could be conducted as part of a visit to the arcade – a “reward” trip.)

Partnerships/Community Connections:

Tribe’s culture department (for historical information and samples related to gambling – specifically, the stick game. Chinook Winds Casino personnel/operations people – folks able and qualified to speak with a bunch of kids about

Standards* Focus:

Math:

Statistics and Probability (8.SP)

J. Investigate patterns of association in bivariate data.

8.SP.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.

8.SP.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.

8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.

**“Second Language” standards are addressed by default – consult state scoring guide.*

Additional Standards:

Social Studies:

Economics/Financial Literacy (7th)

7.21. Explain the function of imports and exports in the economy.

7.23. Explain the function of profit in the economy.

Social Science Analysis (8th)

8.26. Examine a controversial event, issue, or problem from more than one perspective.

8.27. Examine the various characteristics, causes, and effects of an event, issue, or problem.

8.28. Investigate a response or solution to an issue or problem and support or oppose, using

research.

Cultural Knowledge:

Fun
Communication
Government
Tools and Technology
Belief/World View
Medium of Exchange
Arts and Aesthetics

Vocabulary (Gambling):

Game (Stick game)	na'-le
Gamble	na'-le
Song (Gamble song)	na'-le shvn
Money (traditional shell money)	ts'vt

Vocabulary (Mathematics):

Add (put together)	ch'aa-ta
Subtract (take away/remove)	duu
Multiply (Put together 'this many' times)	tvn
Divide (break apart)	lhchan-t'a
Equals (same as)	lhee-wi

Phrases:

I am gambling	na'sh-le
We two are gambling	naa-ch'it-le
We are gambling	naa-ch'aa-ghit-le
You are gambling	naa-ch'in-le
You all are gambling	naa-ch'u'-le
He is gambling	na'-le

They are gambling	xee-na'-le
I gambled	na'-sii-le
We two gambled	naa-sit-le
We gambled	naa-saa-ghit-le
You gambled	naa-sin-le
You all gambled	naa-su'-le
He gambled	na's-le
They gambled	naa-ghas-le
I am singing	dvsh-yvn
We are singing	daa-ghit-yvn
You are singing	daa~yvn
You all are singing	du'-yvn
He/she/it is singing	dee-yvn
They are singing	xwii-dee-yvn
I sang	dghvsht'-yvn
They sang	xwii-dghest'-yvn
You sang	dghan-yvn
You all sang	dghu'-yvn
He/she/it sang	dghest'-yvn

Grammar & Language Concepts:

Written and oral Dee Ni;

Simple to complex Dee Ni sentences, as necessary to create a gamble song;

Aspects of time (future, present, and past tenses);

Prior/Concurrent Lesson Plan Materials:

Lessons should incorporate any prior lessons that teach about gambling and traditional games (can include lessons about cultures other than Siletz); also, lessons that teach about the role of gambling and wealth in establishing power in traditional Siletz society.

ALSO -

Mathematics lessons that use Dee Ni words and terminology to describe the basic facts of mathematics (See above...)

Lesson Objectives – After completion, students/instructors will be able to:

Compare and contrast modern gaming with the tradition of gambling,
(Analyze issues associated with tribal casinos... optional),
Use probability and statistics to predict outcomes when playing games,
Understand role of wealth and wagering in traditional Siletz society,
Create a gamble song, and sing it.
Understand the basic differences between a gamble song and other Dee Ni songs,
Create a stick game of their own,
Recognize that gender roles influenced who played certain games,

Lesson Procedures:

Class hosts representatives/employees from the Chinook Winds Casino to learn about casino operations and employment,
Students learn about the historical connection between traditional forms of gambling and modern casinos,
Students use stick game to generate statistics, which are used to generate appropriate word problems and formulas,
Students use skewers to make a stick game deck and other playing pieces

Assessment:

Public Speaking Scoring Guide
Dee NI project scoring rubric,
Quiz, Oral and written test, and puzzles

Materials & Supplies:

Traditional gambling items – dentalium shell strands, gamble drum, example Stick Game.
Recording of a gambling song.
Materials necessary to make a stick game,