



THE UNIVERSITY OF ARIZONA
COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES

Center for Middle Eastern Studies

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Assignment Description (For Teachers) – Grade 4

Title: Celebrating the Persian New Year with Math

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Purpose/Connection to the Curriculum: This lesson is designed to meet specific math and social studies standards through a discussion of an upbeat holiday. No Ruz, (also spelled Nowrooz and other variations), the Persian New Year, is an important holiday, celebrated on the first day of spring in more than 8 countries in Western and Central Asia. It is the most important holiday in Iran, a secular holiday originating in ancient, pre-Islamic (Zoroastrian) times. Students learn about the holiday while developing/practicing 4th grade math skills.

Overview: The lesson consists of a story about an Iranian-American boy visiting a relative in Iran during the No Ruz (Persian New Year) holiday. The story is illustrated with powerpoint pictures. In order for the story to progress – and for New Year preparations to be successful, students must help by solving practical mathematical problems. Extension activities will ask students to compare/contrast the holiday with our holidays of Christmas and Easter (although the Persian New Year has no religious significance).

Grade Level: 4th grade

Time: several class periods (depending on how much time a teacher wants to devote to math explanations and class participation in exercises)

Objectives:

1. to practice 4th grade math skills in the form of an extended story, presenting a series of story problems
2. to increase students' understanding of Middle Eastern/Central Asian culture by exploring a very popular secular holiday: Persian New Year

Targeted Skills - Based on Arizona State Standards:

4th Grade Math Standards:

4.OA.A.3. Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity.

4.NBT.B.4. Fluently add and subtract multi-digit whole numbers using the standard algorithm.

4.NBT.B.6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

4.NF.B.4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

4.NF.C.6. Use decimal notation for fractions with denominators 10 or 100.

4.MD.A.1. Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.

4.MD.A.2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

4.MD.A.3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

4th Grade Social Studies – Geography Strand:

Concept 1: The World in Spatial Terms

PO 2. Interpret political and physical maps.

PO 6. Locate physical and human features using maps, illustrations, images, or globes:

Concept 4: Human Systems

PO 6. Describe elements of culture in areas studied.

Suggested Procedures

1. Before doing the lesson, read over the brief (1 ½ page) overview of the holiday. It is a background so that if the kids have questions, you can answer them more effectively.

2. For the lesson: Use the powerpoint story like illustrations to a book. (Your “script” is the written part.) Read the story aloud to the class, stopping to do the various math problems – or waiting for them to do the calculation in their heads – as appropriate.

3. Required materials:

- a way to project the illustrations
- paper and pencils for each student
- a board to solve problems as a group
- blank paper and crayons or markers to make a graph
- a yard stick showing inches/feet and metric measurements
- a globe – if you have one – to show students where Iran is with respect to the U.S. and illustrate why daytime in Iran is nighttime in Arizona – and vice versa

Extension Activities

1. In early to mid-March, begin growing the greenery that is the centerpiece of the No Ruz table. All you need is some lentils purchased from the local supermarket (enough so that each student can have a handful or two), small paper plates, paper towels, a spray bottle (one that has never had chemicals in it), and brightly colored ribbon. The kids spread lentils so that they form a thick layer across the paper plate. Cover with a very damp paper towel. Each day, probably in the morning and the afternoon, spray the paper towel (replacing it with a new one if it starts looking really yellowed), so that it stays wet. Within a few days, you will see the lentils begin to sprout. Within a week or two, the plants should have grown tall enough that you have to remove the paper towel. Continue to spray/water them frequently. When the plants are so tall that they are starting to fall over (which will happen surprisingly quickly – a week or two at most), tie a brightly colored ribbon around the grouping to provide support – and color. Now your *sabzi* should look like the ones in the pictures of No Ruz!

2. Do some of the activities in: *Happy Nowruz: Cooking with Children to Celebrate the Persian New Year* by Najmieh Batmanglij.

3. As a class, create a chart comparing No Ruz with the holidays of Christmas and Easter as practiced in the U.S.

Similarities to Christmas: a 2-week school holiday with adults getting a shorter time off; gift-giving especially to children; a happy time of celebration

Similarities to Easter: symbolism of colored eggs, chicks, and other symbols of renewed life; timing around the beginning of spring; a happy time of celebration

Differences from both holidays: No Ruz has no religious meaning for most celebrants today while Christmas and Easter *do*.

4. Have children learn more about the countries/people who celebrate No Ruz: Iran, Afghanistan, Tajikistan, Uzbekistan, Azerbaijan, Turkmenistan, Kazakhstan, and Kyrgyzstan, the Kurdish minority of Iraq and Turkey, the Zoroastrian religious minority of India and Pakistan.