

Number Games

Summary

Students will play a variety of games to understand multiples and practice their multiplication skills.

Group Size

Individual

Materials

CDs--Math songs that teach skip counting and multiplication tables
Calculators (Overhead projector and overhead calculator if available)

- [Birthdate Game handout](#) (pdf)
- [I Spy handout](#) (pdf)
- [Hundreds charts](#) (pdf)

Additional Resources

CDs

- *Multiplication Unplugged*
, Sara Jordan; ISBN 1-895523-75-3
- *Skip Counting, Intelli-Tunes*
, by Ron Brown (Joyful Noise Publications, www.joyful-noise.com); Item TTM-103

Background for Teachers

Mathematics is especially useful for predictions. Multiples and other number patterns are all about prediction. Working with number patterns helps students develop their concept of functions in mathematics.

The very youngest children start simply by counting. Then they start counting in multiples—twos, fives, tens, etc. These number patterns give students a natural strategy to understand addition and multiplication. Students start by using patterns to find sums: $2 + 2 = 4$. As students get older they start using their knowledge of patterns to find products. When asked what 5×9 is, they will count by fives nine times. High school students can use their knowledge of number patterns to start to understand functions and other algebraic concepts.

Intended Learning Outcomes

3. Reason mathematically.

Instructional Procedures

Invitation to Learn

Play a skip counting song from the math songs CD. Let children discuss and demonstrate their favorite examples of skip counting.

Instructional Procedures

Ask students how learning the skip counting songs could help them learn their multiplication tables. Introduce the concept of multiples and explain that it is the same as skip counting. Reinforce their understanding of the connection between multiples and multiplication facts.

Calculator/Skip Counting Activity

Pass out hundreds chart and calculator for each student.

Use your overhead calculator to demonstrate.

Review how to skip count on a calculator (e.g., $5 + 5 = = =$, the calculator will count by

multiples).

Do familiar multiples such as twos, fives, tens where they will be able to easily recognize the patterns

Ask questions as students work with the calculators, such as

“What pattern do you see when _____?”

.....you skip count by 2s and start with 2? Why????

.....you skip count by 2s and start with 1?

.....you skip count by 5s and start with 3?

Skip-counting by what numbers will include 100 in the pattern?

Note: Always ask “why” to give the students a chance to understand and verbalize their understanding of what is happening on the calculator.

Explain that many people enjoy riddles, games, and other activities that require the recognition of number patterns to solve.

Birthdate Game

Play using *The Birthdate Game* handout.

I Spy

Play using the *I Spy* handout.

Extensions

Literature

Introduce students to stories/books about detectives and mysteries. *Two Minute Mysteries* and *Encyclopedia Brown* books by Donald Sobol work well for fourth graders.

Music

Use the Math Songs CDs and have children learn and sing the skip counting and multiplication table songs.

Family Connections

Give students copies of the *Birthdate Games* and *I Spy* handouts to take them home and share with their families.

Assessment Plan

Use informal quick response activities to assess students' understanding of multiples. For example, call out a number pattern and then call on a student to give you the next number. Formal assessments such as the 100 basic multiplication and 90 basic division facts tests are one way to show progress toward mastery of these skills. Students should be given adequate time to complete fact test with greater emphasis on accuracy versus speed. You can also assess student understanding of skip counting and multiples by assigning them to write sets of multiples (e.g., write the multiples of three from 3 to 36, etc.).

Authors

[Utah LessonPlans](#)