

# Math and Music

## Summary

Supplemental activities to be used throughout an addition and subtraction unit.

## Main Core Tie

Mathematics Grade 1

[Strand: OPERATIONS AND ALGEBRAIC THINKING \(1.OA\) Standard 1.OA.5](#)

## Additional Core Ties

Mathematics Grade 1

[Strand: OPERATIONS AND ALGEBRAIC THINKING \(1.OA\) Standard 1.OA.6](#)

Mathematics Grade 1

[Strand: OPERATIONS AND ALGEBRAIC THINKING \(1.OA\) Standard 1.OA.7](#)

## Materials

### Add Up the Beat

A drum or tambourine

Counters (any kind)

- [Two-Sided Counting Mat](#)

### Addition and Subtraction Musical Chairs

Music

- [Addition and Subtraction Sign](#)

Popsicle sticks

### Add Them Up

- *Addition Unplugged*

CD

- [Addition Word Cards](#)

Pocket chart

10 blank pocket chart word strips

- [Addition Word Match worksheet](#)

### Basic Facts to 6

- *Addition Unplugged*

CD

- [Addition Sentence Cards](#)

### Adding 0 or 1

- *Addition Unplugged*

CD

Counters (any kind)

Number Line

### Additional Resources

CD

- *Addition Unplugged*

, by Sara Jordan (1-800-567-7733, <http://www.sara-jordan.com>); Item #JMP112CDK; ISBN 1-895523-67-2

## Background for Teachers

All the activities in this lesson are addition and subtraction based. It is not designed to introduce addition and subtraction, rather, to supplement and enrich lessons already being taught. This lesson is not designed to be completed in one sitting. It may be done throughout an entire addition and subtraction unit. These activities may be used as starter activities when introducing new math concepts, particularly those that relate to addition and subtraction.

### Intended Learning Outcomes

6. Communicate clearly in oral, artistic, written, and nonverbal form.

### Instructional Procedures

#### Invitation to Learn

Use this invitation to review addition with doubles. Begin by clapping a set number of times and the students respond by clapping back the same number of times. The teacher and students then respond by saying the addition sentence for the double they just clapped. For example, the teacher begins by clapping four times, each time the teacher claps s/he counts, "One, two, three, four." The students respond by clapping four times and saying, "Five, six, seven, eight." The students and teacher then together say, "Four plus four is eight."

#### Instructional Procedures

##### Add Up the Beat

Students listen as the teacher taps a drum or tambourine 6 times.

Ask students how many times the teacher tapped (6 times). Have students place that many counters on the left side of the [\*Two-Sided Counting Mat\*](#).

Students listen as the teacher taps 3 more times, then place 3 counters on the right side of the *Two-Sided Counting Mat*.

Ask students to identify the addition sentence represented by their counters. Addition sentences may be recorded in math journals, on chart paper, or white boards.

Students clear their counting mats before repeating this activity with new number combinations.

This activity could be modified for subtraction sentences. The first number the teacher taps is the total amount of counters students use. The second number tapped is how many they subtract, minus, or take away. The answer is how many counters are left.

##### Addition and Subtraction Musical Chairs

Play musical chairs with a small group of students. Start out with the same number of chairs as students. Each student needs an [\*Addition and Subtraction Sign\*](#). This is made by taking a popsicle stick and gluing the addition sign on one side and the subtraction sign on the other side.

Place the chairs in a circle and have students walk around the circle while music is playing.

While the music is playing, the teacher removes one or two chairs.

When the music stops, have students quickly find a seat (if they can!). All students should hold their *Addition and Subtraction Sign* with the subtraction sign facing out, because the teacher took chairs away. As a class, students should then identify the subtraction sentence about the chairs. For example, if there were 7 chairs in the beginning and 2 were taken away, the subtraction sentence would be  $7 - 2 = 5$ . The teacher may select one student to record addition and subtraction sentences on chart paper, the overhead, or the chalk board.

Continue adding and subtracting chairs as the game is played. Write the corresponding number sentence after each time.

In this version of musical chairs, no one is "out" because sometimes chairs are added and sometimes they are taken away. Students who do not find a chair to sit on should remain standing outside the circle of chairs and use their *Addition and Subtraction Sign* like the other students.

##### Add Them Up

Start this activity by teaching students the song, "Add Them Up," from the *Addition Unplugged* CD.

While you are teaching students this song, discuss the math terms used. The first term is add. Ask students to tell you what add or addition means.

Record their responses on the board, overhead, or chart paper. Following the discussion on add, place the add word card in a pocket chart. The second math term is answer. Again, ask students to tell you what an answer is. Record their responses on the board, overhead, or chart paper. Following the discussion, place the answer word card in the pocket chart. Continue the same pattern with the following math terms found in the song: sum, addend, and total. After all the words have been introduced, sing the song again. Using the same pattern as above, introduce the following addition terms that are not used in the song: and, plus, is, equals, and same as.

Have students participate in a group pocket chart activity. Write ten different addition sentences on ten blank pocket chart work strips. Write the addition sentences using numbers and symbols ( $3 + 7 = 10$ ). Place the addition sentence in the pocket chart, and give a student one of the [addition word cards](#). The student must place the addition word card under the appropriate place on the addition sentence. For example, if the addition sentence is  $4 + 2 = 6$ , and the student had the word card *addend*. The student should place the word card under the 4 or 2. Continue with the rest of the number sentences and word cards.

Following the pocket chart activity, students complete the [Addition Word Match](#) worksheet independently. For this, students cut apart the addition words and paste them under the appropriate place on the addition sentences.

#### Basic Facts to 6

Before singing this song, students should be introduced to the concept of the order property of addition, where the order of the addends can be reversed.

After students are familiar with the concept, sing the song, "Basic Facts to 6," from the *Addition Unplugged* CD.

To sing the song, divide the class into two groups. Choose a volunteer from each group to place the appropriate *Addition Sentence Cards* on a pocket chart as the class is singing the song. ( [Addition Sentence Cards -- Group A & B](#) may be used in various combinations to introduce students to the order property of addition.)

During each chorus, two new volunteers may be selected.

#### Adding 0 or 1

This song helps students understand the value of zero in addition.

For this song, students should be seated at their desks with one counter (any kind) and the [Number Line](#).

Sing the song, "Adding 0 or 1" from the *Addition Unplugged* CD. As students are singing the song, have them move their counters on their number line according to the words of the song. Help students see that when a zero is added, the number stays the same. This song could also be done on the floor and students could use their fingers to illustrate the math problems.

#### Extensions

Many of these activities may be integrated into other curriculum areas. Writing about each activity is a great way to extend these activities to a higher level of thinking. Students could write a story using number sentences. For example, "There were children playing at the park. Three children were playing on the swings and seven children were playing on the jungle gym. All ten children were having a wonderful time!"

Modify activities that use addition to use subtraction. These activities may be done in small groups or used as activities for center time.

For students with special needs, make sure that the words to the music are written clearly and

are visible at all times. Illustrations may need to be included with the words for ELL students or others with special needs. For some activities, students with special needs may need to be paired up with another student or adult for assistance.

#### Family Connections

For *Add Up the Beat*, students could take the place of the teacher while family members act as the students and model the addition problems using cereal, beans, or macaroni.

- *Addition and Subtraction Musical Chairs*

may also be played with family members. One player would act as the leader and run the music, move the chairs, and write the addition or subtraction sentence. Players rotate so that all family members have a turn to be the leader.

#### Assessment Plan

The best way for teachers to assess the following activities is through observation. Teachers observe the way students work with manipulatives, participate in the activities, and sing the songs.

Use the worksheets that accompany the activities as a means to assess student's understanding. Students record their understanding in journals or orally explain the math concepts to the teacher.

#### Bibliography

##### Research Basis

Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. Basic Books, New York. Howard Gardner suggests that intelligence is not unitary. There are several ways to be smart. He identified eight intelligences: Verbal/Linguistic, Bodily/Kinesthetic, Logical/Mathematical, Naturalist, Visual/Spatial, Interpersonal, Intrapersonal, and Musical/Rhythmic. Students who are "music smart" like to hum, sing, enjoy listening to music, and learn through lyrics and music.

Kestrom, J.M. (1998). The Untrapped Power of Music: It's Role in the Curriculum and It's Effect on Academic Achievement. *NASSP Bulletin*, 82(597), 34-43.

Music instruction is a powerful tool that can be used to help promote academic achievement.

#### Authors

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