



**ARE YOU SLEEPING?**  
by  
**Debbie Trafton O'Neal**

"Frere Jacques" is a well-known song, probably one of the first "rounds" we all learned. If they don't know it, teach your children to sing the song in both English and French. Discuss briefly the life of a monk whose day is marked by monastery bells. Once they can sing the song they can play it!

To transition to this activity, tell your students that they are now going to learn not only the words, but also the music to this song.

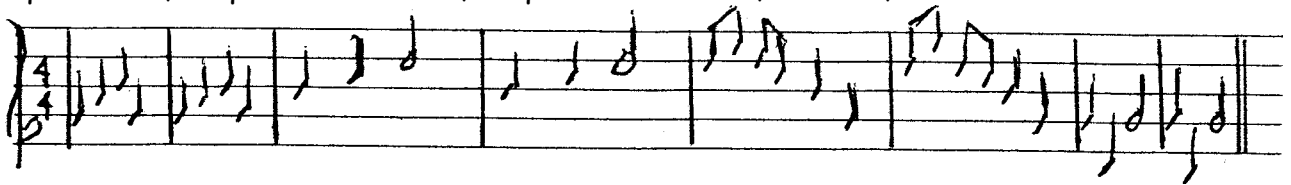
**MATERIALS:** Three sets of Palm Pipes (See directions for making on attached sheet.) per class of 20 - 30. Music sheets for songs (Copy and enlarge words and notation below.).

**ACTIVITY:** Following the directions on the attached sheet; make enough Palm Pipes sets to have one pipe per child. You will probably need a minimum of 3 sets (each set has two octaves). Distribute the pipes to your students and allow them to experiment with making tones. Follow the directions under "How to Play". Have each pipe played separately. Draw the students to the conclusion that the longer or shorter the pipe, the higher or lower the sound; measure each pipe and compare/contrast. Now it's time to play a simple piece; you may wish to have only the needed notes/pipes in the students' hands. Distribute copies of the music to "Frere Jacques". Conduct the "Orchestra", giving them a down beat. Allow them to play through the song several times. Have fun. You may wish to have the children trade instruments and play it again. More adept/older groups could play it as a round. If desired, talk about the relative value of the notes: whole note, half note quarter note, eighth note.

G	A	B	G	G	A	B	G		
Fre	-	Jac	-	ques,	Fre	-	Jac	-	ques,
B	C	D		B	C	D			

Dor - mez vous?      Dor -mez vous!  
 D E D C B G    D E D C B G  
 Son - nez la ma - tl - na, Son- nez la ma - tl - na,  
 G D G      G D G  
 Ding! Dang! Dong!      Ding! Dang! Dong!

#2: For older students, teach this tune with new lyrics as a mnemonic for the quadratic equation. "Negative b, Negative b, Plus or minus the square root, Plus or minus the square root, b squared minus 4ac, b squared minus 4ac, Over 2a, Over 2a"



Negative b, Negative b, +or - the square root, +or - the square root, b squared minus 4ac, b squared minus 4ac, Over 2a, Over 2a.

**STANDARDS:**

**BSL:** 1.1, 1.3, 1.7, 1.9, 1.12, 3.1, 3.2, 3.3, 4.2, 6.1, 6.2, 6.3, 9.9, 11.2, 11.4, 12.3, 12.5

**NCTM:** 4e, 10a, 10b, 12a, 13a

**SCS:** A1, B1, E2, H2, H5

Frere Jacques. Illus. by Isobel Bushell. NY: HarperCollins. c1994.

ISBN#069.-00574:6 A board book version of the favorite song, with words in both English and French.

O'Neal, Debbie Trafton. Are You Sleeping? Illus. by Benrei Huang.

Minneapolis, MN: Augsburg Fortress, c2003. ISBN#0-8066-4351-X A picture book version of the song [Note also included is a religiously-toned second verse]

## Directions for Making Palm Pipes

Reference Chart for making pipes:

<u>Note</u>	<u>Length (cm)</u>	<u>Frequency (hertz)</u>
F	23.6	349
G	21.0	392
A	18.75	440
B flat	17.5	446
C	15.8	523
D	14.0	587
E	12.5	659
F	11.8	698
G	10.5	748
A	9.4	880
B flat	9.2	892
C	7.9	1046
D	7.0	1174
E	6.25	1318
F	5.9	1397

Outside diameter: 2 cm PVC pipe

Inside diameter: 1.5 cm PVC pipe

Directions: Cut PVC pipe to specifications listed above. Mark each pipe with letter of note with permanent marker. Try to have a different color marker for each note. Assign a different note to each students. Two or more students will have the same note. Have students with the same note stand together. The teacher or a student can be the conductor. Each note is created by hitting the pipe firmly against the palm of the hand.