

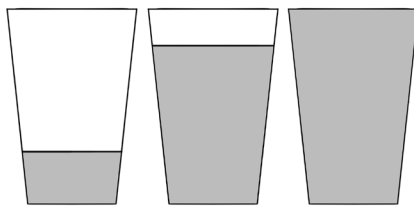
Decode A Song

This activity was created by Brenna and Shannon

Let's play a song with glasses of water! Adding water will change the vibration of the glass and create different pitches, so you hear the notes of a song. Pitch describes how high or low a sound is. This depends on the frequency of the sound waves. If the frequency of vibration is higher, we say that the sound has a high pitch - think of a flute for example! If the sound has a very low pitch, like a tuba, it has a much lower frequency.

Try filling glasses of water to the levels indicated for each song. Then, follow the song "code" from top to bottom, tapping the glass with a metal utensil to play each note.

Here Comes the Sun (by The Beatles):



2/3 full

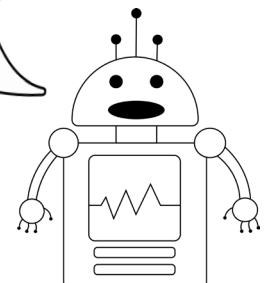
3/4 full

full

1	0	0	Here
0	1	0	comes
1	0	0	the
0	0	1	sun
1	0	0	doo
0	0	1	doo
0	1	0	doo
1	0	0	doo
1	0	0	Here
0	1	0	comes
1	0	0	the
0	0	1	sun
0	0	1	and
0	1	0	I
0	0	1	say
1	0	0	It's
0	1	0	al-
0	0	1	right

NOTE: the measurements for each water level aren't exact! You can add more water to make the glass a lower pitch or use less water to make it a higher pitch. This will help you adjust the sounds and make the song more accurate.

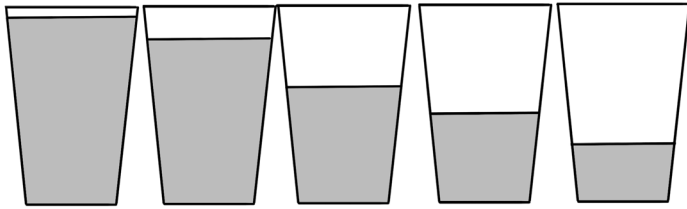
The songs are written out in **binary**, which is how computers understand information! "1" is for yes/true/on, and "0" is for no/false/off. The lines of binary 1's and 0's match up with the glasses and tell you when to hit each one. I recommend gently tapping the side of the glasses with a metal fork or spoon to play the notes.



Date: _____

Name: _____

Under the Sea (from Disney's The Little Mermaid):



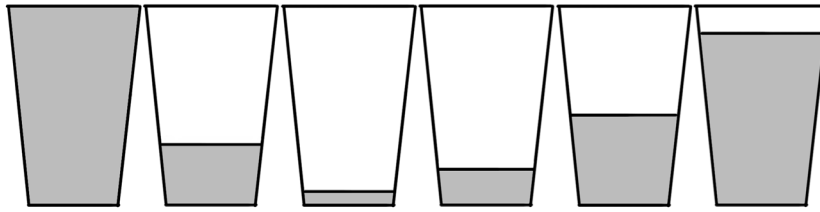
almost full almost almost full 2/3 full between 1/3 and 2/3 full 1/3 full

0	0	0	0	1	Un-
0	0	0	1	0	der
0	0	1	0	0	the
0	1	0	0	0	sea,
0	0	0	0	1	un-
0	0	0	1	0	der
0	0	1	0	0	the
0	0	0	1	0	sea!
0	0	0	0	1	Dar-
0	0	0	1	0	ling
0	0	1	0	0	it's
0	1	0	0	0	bet-
1	0	0	0	0	ter
0	0	0	0	1	down
0	0	0	1	0	where
0	0	1	0	0	it's
0	1	0	0	0	wet-
1	0	0	0	0	ter,
0	0	0	0	1	take
0	0	0	1	0	it
0	0	1	0	0	from
0	0	0	0	1	me!

Date: _____

Name: _____

Twinkle Twinkle Little Star:



full 1/4 full almost empty 1/8 full 1/3 full almost full

1	0	0	0	0	0	Twinkle
1	0	0	0	0	0	kle
0	1	0	0	0	0	twinkle
0	1	0	0	0	0	kle
0	0	1	0	0	0	little
0	0	1	0	0	0	tle
0	1	0	0	0	0	star
0	0	0	1	0	0	How
0	0	0	1	0	0	I
0	0	0	0	1	0	wonder
0	0	0	0	1	0	der
0	0	0	0	0	1	what
0	0	0	0	0	1	you
1	0	0	0	0	0	are.
0	1	0	0	0	0	Up
0	1	0	0	0	0	a-
0	0	0	1	0	0	bove
0	0	0	1	0	0	the
0	0	0	0	1	0	world
0	0	0	0	1	0	so
0	0	0	0	0	1	high,
0	1	0	0	0	0	like
0	1	0	0	0	0	a
0	0	1	0	0	0	dia-
0	0	1	0	0	0	mond
0	0	0	0	1	0	in
0	0	0	0	1	0	the
0	0	0	0	0	1	sky