

## Filling Space

### Materials you will need:

- A large and empty mayonnaise jar or similar
- A handful of golf balls or small rubber balls
- Loads of little pebbles or rice
- A bucket of sand
- Two cups of water

### Steps:

1. Fill the large mayonnaise jar with the golf balls or rubber balls all the way to the top.

Ask this question: Is the mayonnaise jar full?

2. Fill the mayonnaise jar up with the little pebbles or rice and shake the jar lightly so that the pebbles roll into the open spaces between the balls.

Ask this question: Is the mayonnaise jar full?

3. Fill the mayonnaise jar up with the sand and shake the jar slightly so that the sand fills the empty spaces around the golf balls and pebbles/rice.

Ask this question: Is the mayonnaise jar full?

(The sand has filled up every bit of space left. You ask yourself: Has it?)

4. Now pour the water into the mayonnaise jar and watch as this liquid effectively fills the empty space between the sand.

Ask this question: Is the mayonnaise jar full?

Finally the empty mayonnaise jar has been filled completely.

This is the same thing that happens when you dissolve something. When sugar dissolves in water it fills in the gaps between the bits of water.

## Wordsearch - Filling Space

S P E D I P P E B B L E S P W A R C A P  
C O S G B U N T A E R H D K R H O R G H  
A L D A N P I O H F P L J S E T M U W A  
N E K I N O R S D T A W F O G K L B O P  
W T S O N D A J E P O R I D N T O B S M  
A I F W E I H U G L I M L K S U R E D B  
T S A H P T N E L H A G T H F A O R I K  
E R K E D Z P A M E R N L D T K O B W P  
R Q S N F V B H S R U F A S N E D A T E  
T E P R I F J A N A S U L P S D O L H A  
S A P L L J S T M H E J I M S O K L I O  
O N L O K E N G A S P A C E F N I O P E  
P I G H A R E E W R I G R A H O P F V N  
E R I W I N R Z L O K F A M J I G A J E  
D R A G L O P O N S I M K R A J I T R C  
N J F I L L A H V O W A D Z K P N Y D N  
I T A D N E R F S I K D F A L S E T F E  
O G H F A C W I R F R I C E N R G P L I  
N U A W I D E A F S R E W J K S O M A C  
S C I P E B D E L H M T S C I B T E G S

### Words to search for:

- \_\_\_ EMPTY
- \_\_\_ FILL
- \_\_\_ GOLF BALL
- \_\_\_ JAR
- \_\_\_ PEBBLES
- \_\_\_ RICE
- \_\_\_ RUBBER BALL
- \_\_\_ SAND
- \_\_\_ SCIENCE
- \_\_\_ SPACE
- \_\_\_ WATER