

FIELD GUIDE: EXPLORATION 6

BUBBLE GEOMETRY



PLAY | GUIDE | DISCOVER

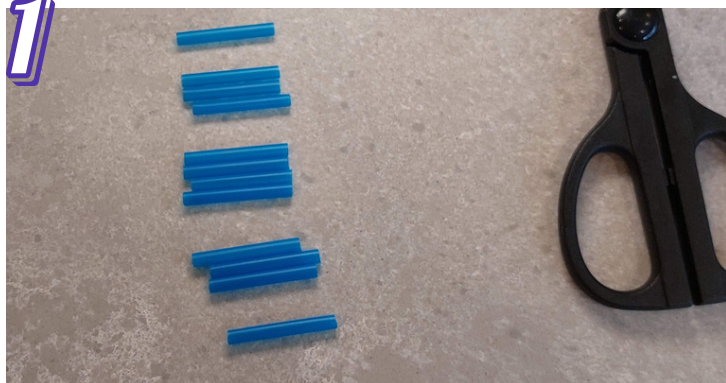
THEME: THE SCIENCE OF MINIMAL SURFACES & SURFACE TENSION

DIFFICULTY: 2/5 | TIME: 15 MINUTES

SUPPLY LIST:

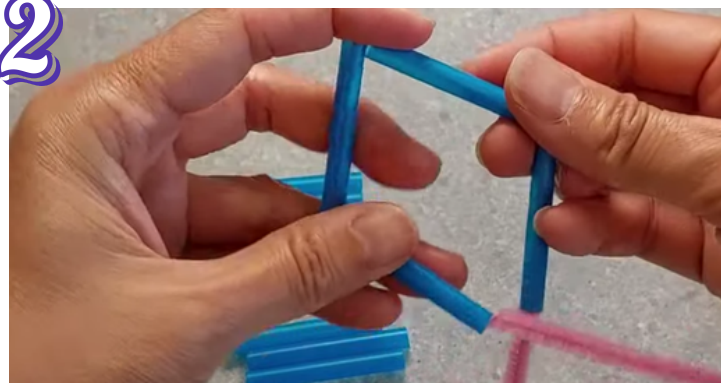
4-5 PLASTIC STRAWS | 4-5 PIPE CLEANERS | BUBBLE MIX | SCISSORS

1



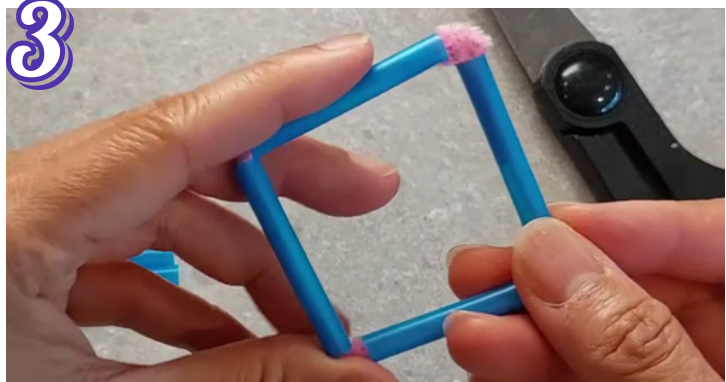
CUT YOUR STRAWS INTO 12 EQUAL PIECES

2



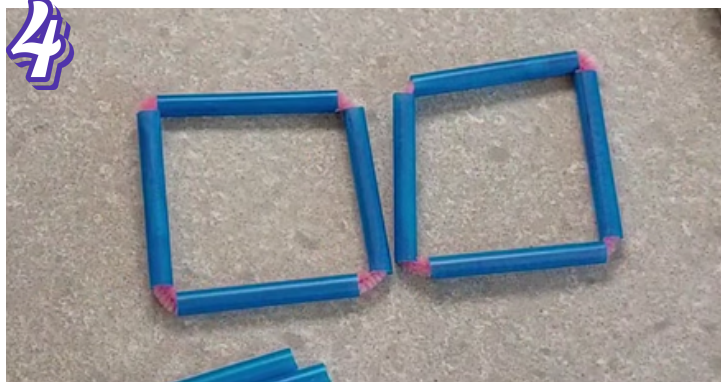
THREAD 4 PIECES ONTO A PIPE CLEANER AND BEND THE CORNERS TO MAKE A SQUARE. LEAVE AROUND 2CM OF PIPE CLEANER ON EACH END AND TRIM THE REST

3



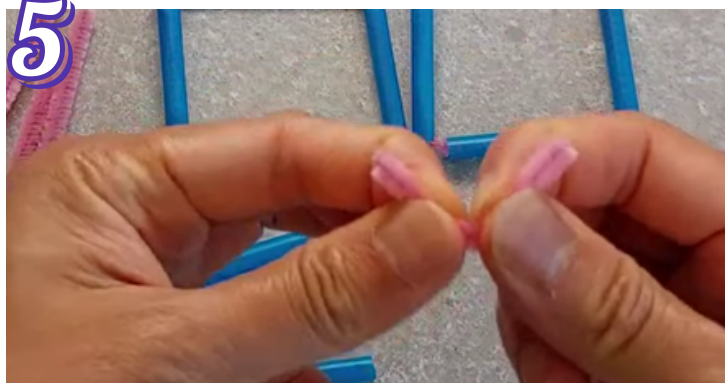
TUCK THE PIPE CLEANER ENDS INTO THE END STRAW PIECES

4



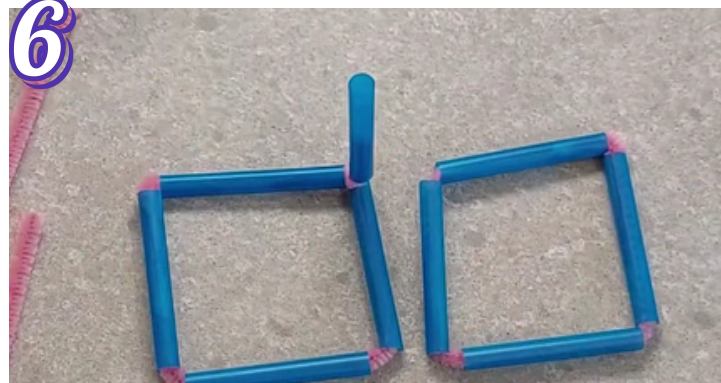
REPEAT TO MAKE A SECOND SQUARE

5

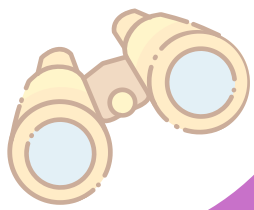


CUT SOME SHORT PIECES OF PIPE CLEANER AND BEND INTO AN 'L' SHAPE

6



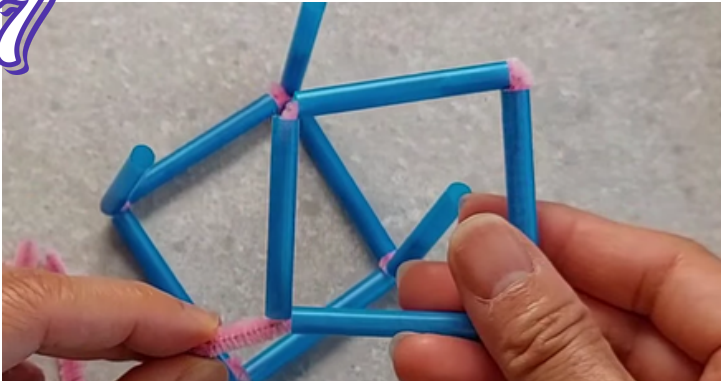
CONNECT A PIECE OF STRAW ONTO A CORNER OF THE SQUARE BUT POINTING UPWARDS. REPEAT FOR THE OTHER 3 CORNERS



THEME: THE SCIENCE OF MINIMAL SURFACES & SURFACE TENSION

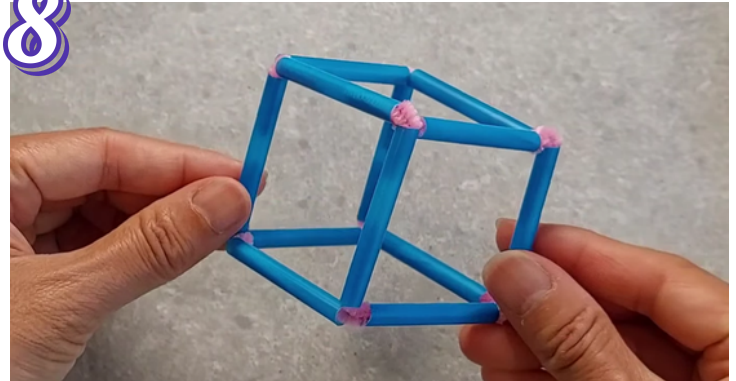
DIFFICULTY: 2/5 | TIME: 15 MINUTES

7



USING 4 MORE SHORT PIECES OF PIPE CLEANER BENT INTO AN 'L' SHAPE, CONNECT EACH CORNER OF THE 2ND SQUARE TO THE STRAWS POINTING UPWARDS TO MAKE A CUBE

8



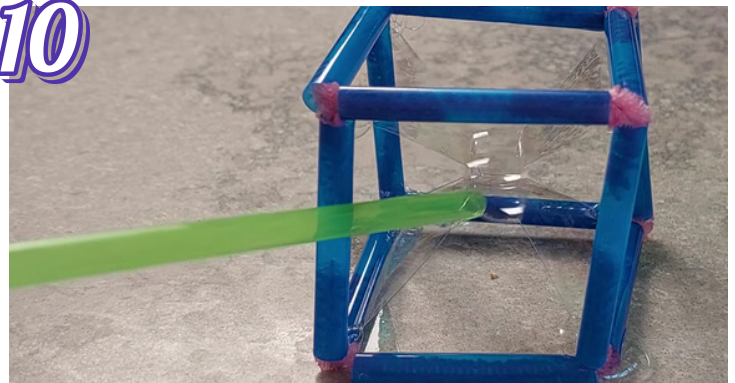
YOUR 3D BUBBLE WAND!

9



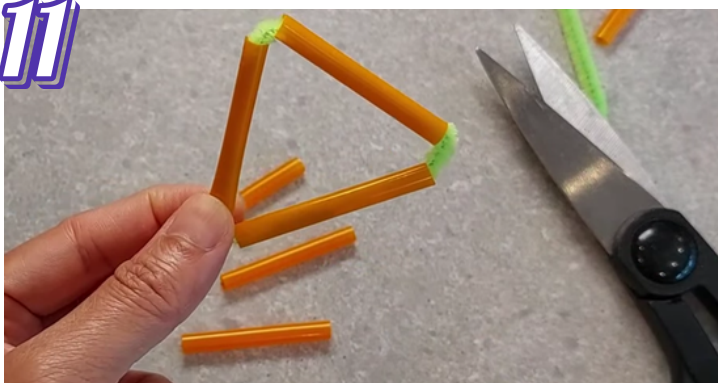
DIP THE WHOLE CUBE CAREFULLY INTO BUBBLE MIXTURE

10



DIP A NEW STRAW INTO SOME BUBBLE MIX - PUSH INTO THE CUBE AND BLOW GENTLY!

11

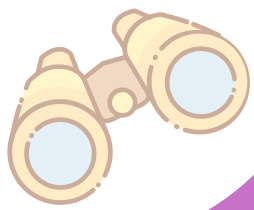


TO MAKE THE TRIANGLE - USE 3 PIECES OF STRAW FOR THE BASE

12



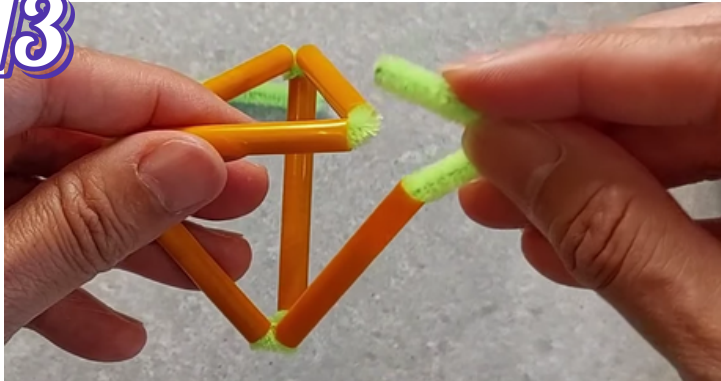
USE 3 SMALL PIECES OF PIPE CLEANER AND CONNECT 3 VERTICAL PIECES OF STRAW AT EACH CORNER



THEME: THE SCIENCE OF MINIMAL SURFACES & SURFACE TENSION

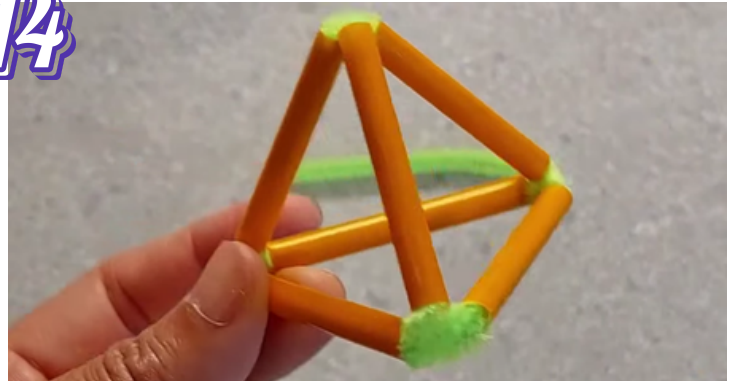
DIFFICULTY: 2/5 | TIME: 15 MINUTES

13



THEN USE 2 MORE PIECES OF PIPE CLEANER TO JOIN ALL 3 VERTICAL STRAWS IN ONE PLACE

14



YOUR 3D PYRAMID!

15



DIP THE WHOLE PYRAMID CAREFULLY INTO BUBBLE MIXTURE

16



DIP A NEW STRAW INTO SOME BUBBLE MIX - PUSH INTO THE PYRAMID AND BLOW GENTLY!

HAVING TROUBLE?

- BUBBLES POPPING INSTANTLY? ADD EXTRA SUGAR/GLYCERINE TO YOUR BUBBLE MIXTURE TO STRENGTHEN LIQUID BONDS.
- PLANES UNEVEN? ENSURE ALL STRAW SEGMENTS ARE CUT TO THE EXACT SAME LENGTH.
- MAKE SURE YOU ARE GENTLE WITH THE BUBBLE MIXTURE - FOAM IS THE ENEMY OF ALL BUBBLES!



STUCK? SCAN THIS CODE TO WATCH A DEMONSTRATION OF THIS EXPLORATION

FOR FREE BONUS ACTIVITIES PLUS OUR RECIPE FOR A SUPER STRONG BUBBLE MIX - SIGN UP HERE

