



SIMONA CERRATO | 14 APRIL 2023

SCIENTIFIC COMMUNICATION TECHNIQUES: HOW TO BRING MATH TO SCHOOLS

WHAT IS SCHOOL?







INFORMAL LEARNING

Formal and informal learning

Formal	Informal
Guided by the teacher	Guided by the learners
Dependent on the type of school and class	Diverse and various environments
Programmed and structured	Occasional and unpredictable
Compulsory	Free
Progressive	Non linear
Based in verbalization and acquisition of a vocabulary	Based on experiences, hands-on, laboratories
Few unexpected results	Many unexpected results
Social aspects not crucial	Social aspects crucial
Time not chosen by the learners	Time chosen by the learners
Evaluated and certified	Not evaluated nor certified

OPEN SCHOOLING

<https://www.youtube.com/watch?v=MVchWdJAIAE>

**CONTAMINATION
BETWEEN FORMAL AND
INFORMAL LEARNING**



>6 years old

XSMALL





6-8 year old
8-12 year old

SMALL



HOW TO PREPARE TO MEET CHILDREN

- Is the topic you want to talk about interesting?
- What stories do they like best?
- What concepts are difficult for them to understand?
- How would it be easier for them to understand?
- What words need to be explained?
- What questions do they ask?
- What would they like to know more about?



12-14 year old

MEDIUM





>14 year old

LARGE



**HOW TO MANAGE THE GROUP
AND RUN THE ACTIVITY**



ICE BREAKING

the game of the stick
the game of the keys
which object are you
the game of the names





VOLUNTEERS

whose birthday is the day/
month of the talk?

who arrives from the
farthest place?

whose name starts with
an "S"?

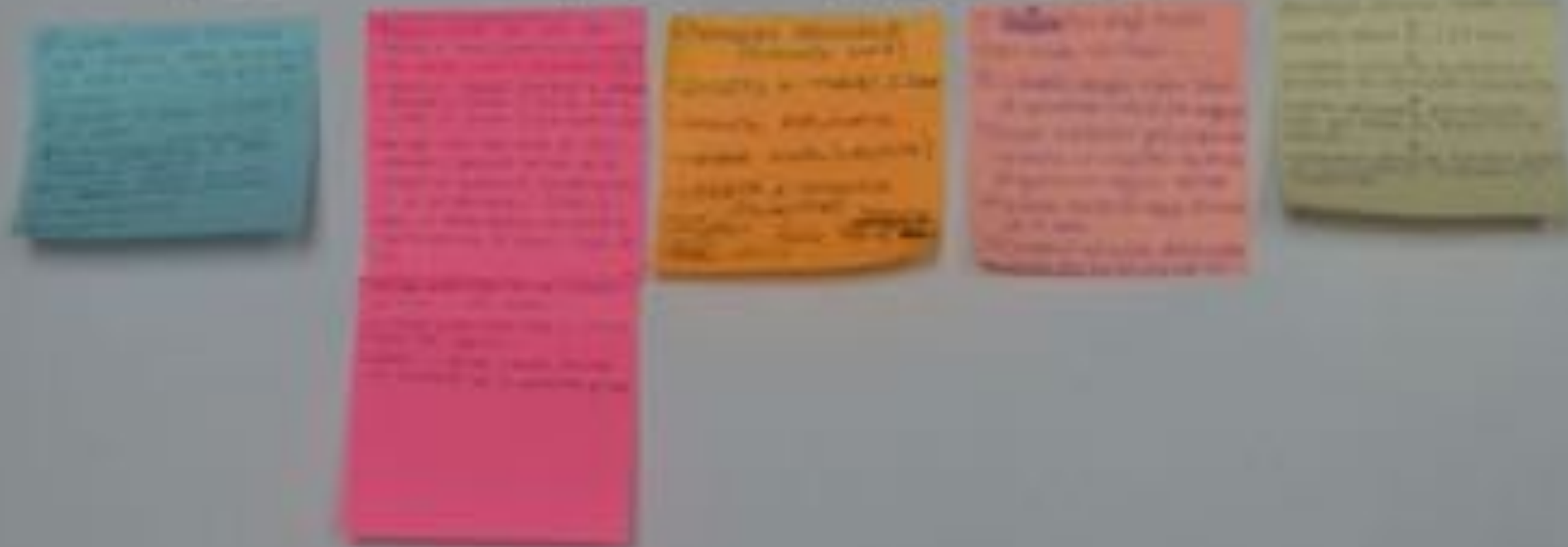
who is wearing a red t-
shirt?



1º TURNO - DISCUSSION GAME - HPV



2º TURNO - ALCOHOL -



GROUP SPLITTING

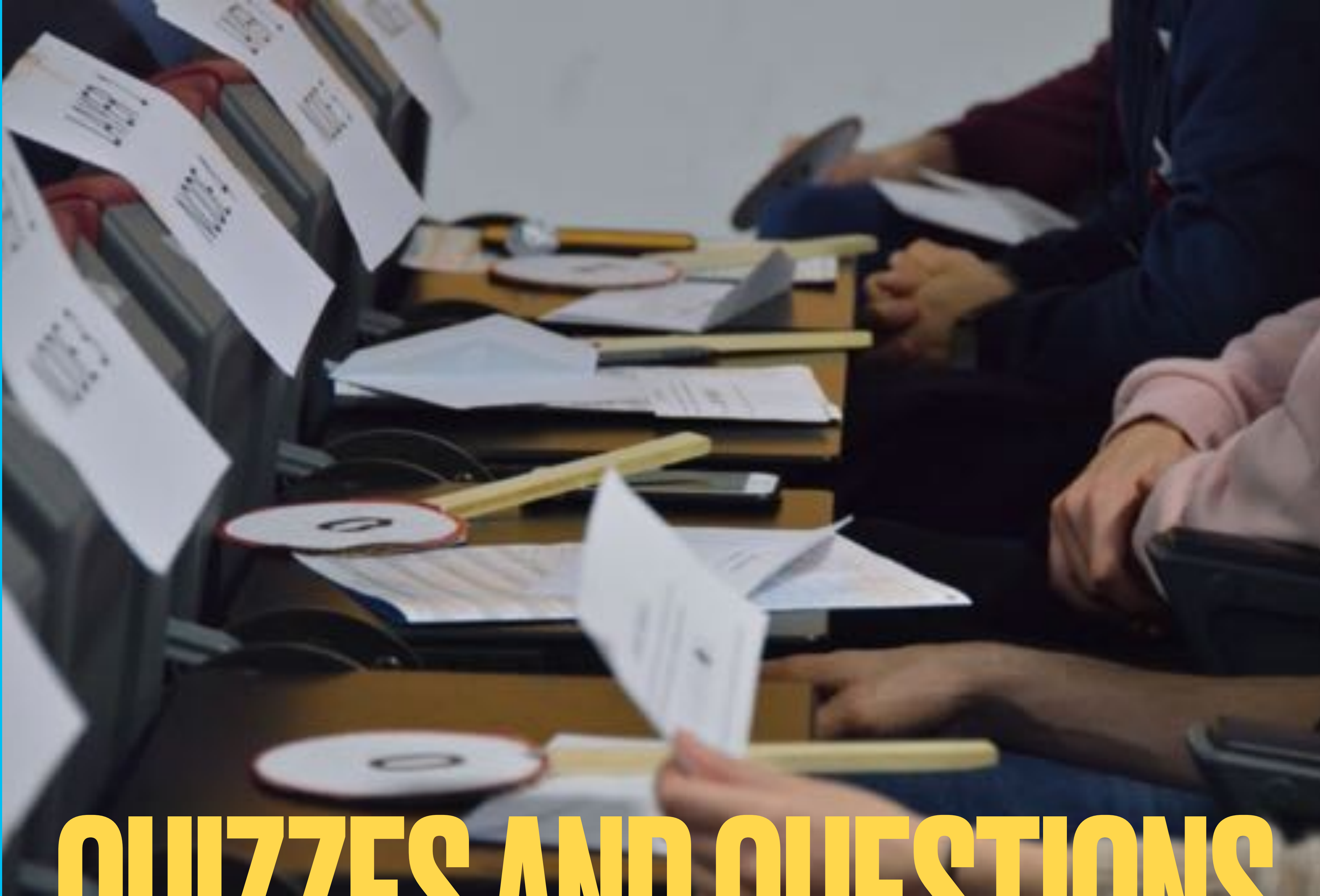
do you like most dogs or cats?

who likes spicy food?

what's your favourite colour among green, red, blue?

who is born on day 1-10 / 11-20 / 21-31 day of the month?





questions in the hat

mentimeter, slido,
quizziz, etc.

big quiz as a whole
activity

QUIZZES AND QUESTIONS





treasure hunt

small gadgets to feel a
connection

GAMES AND INTERACTIONS



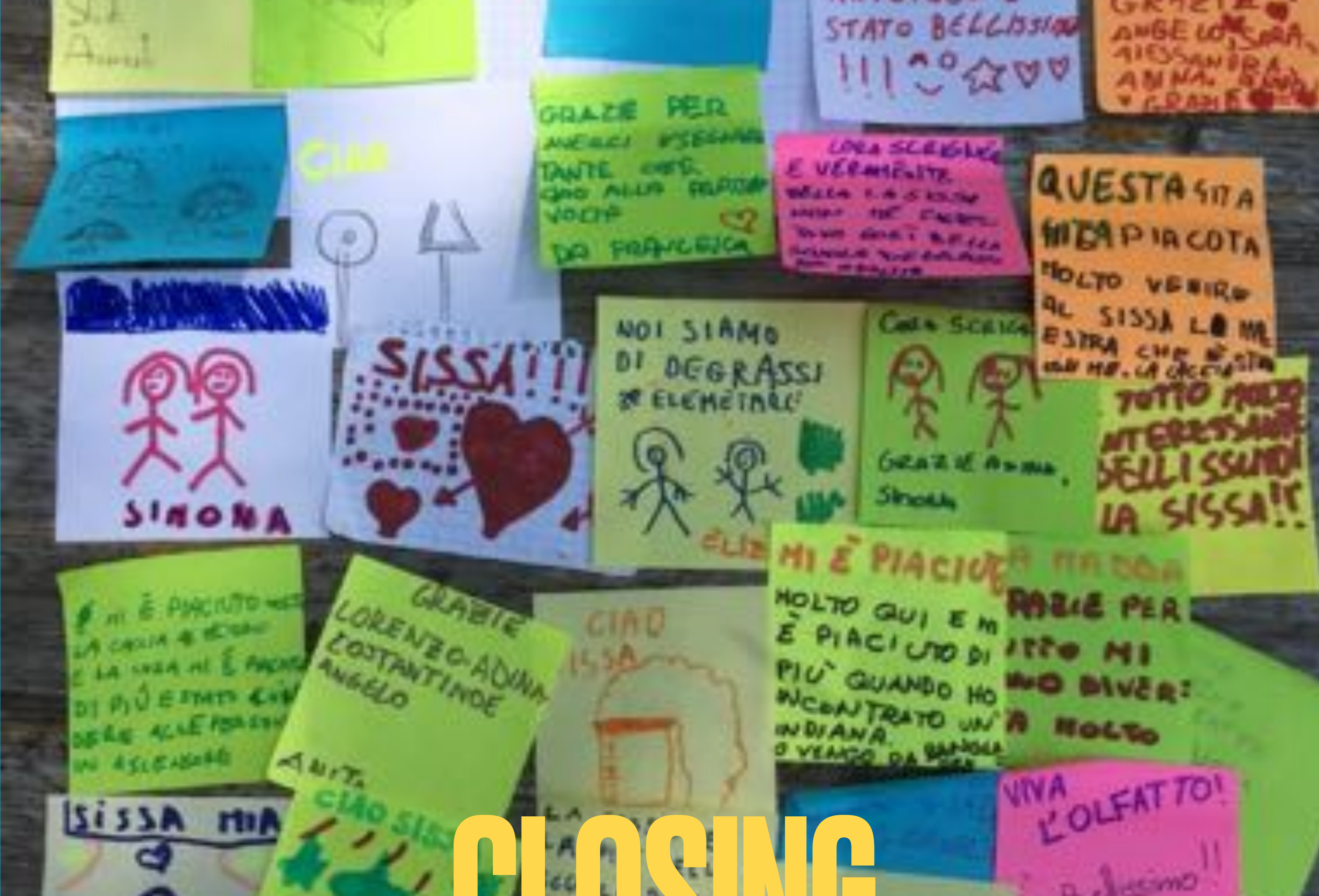


SILENCE

magic word

calling the silence





take home message
sticky notes or drawings
short evaluation

CLOSING



Maths in schools: some examples

Who	Title	Link
Francesca Arici	Reti e ponti	https://youtu.be/awa9zQIJ3mc
Francesca Arici	Api e mosaici	https://youtu.be/LLjwIPK3Vtk
Francesca Arici	50.000 modi di legarsi le scarpe	https://youtu.be/rcd0Vqxr9Jo
Matteo Casati	Codici segreti	https://youtu.be/olhuQrW7pNs
Matteo Casati	Non a caso ma a caos	https://youtu.be/ucTkt2OHJf0
Luca Heltai	Allenare micronuotatori	https://youtu.be/8szR0NW48ql
Lucia Tealdi	Stadi e bolle	https://youtu.be/kaX3w3vVa4Q
Lucia Tealdi	I cavoli e la matematica	https://youtu.be/AW8Cq5JYtHQ
Lucia Tealdi	La via più corta	https://youtu.be/-_zN5Q6V9A8