



SIMONA CERRATO | 5 NOVEMBER 2021

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**



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?



1° TURNO - DISCUSSION GAME - HPV

- 1) Rendere obbligatoria la vaccinazione per HPV...**
- 2) Rendere obbligatoria la presenza di educatori nelle scuole...**
- 3) Diminuire la campagna di sensibilizzazione...**
- 4) Rendere obbligatoria la ricerca scientifica...**
- 5) Lasciare il vaccino per HPV facoltativo...**

2° TURNO - ALCOL -

- 1) CREARE TESSERA PERSONALE PER ACQUISTO MAX AL GIORNO CHE TENGA CONTO DELL'ETA' DEL POSSESSORE**
- 2) VIETARE OGGI AL MINORI DI 21 ANNI**
- 3) DIMINUIRE L'ACQUISTO DI ALCOL ATTRAVERSO I MEDIA**
- 4) VIETARE NELLE SUEDE DI VENDERE ALCOL**
- 5) PARTIZIONISMO**

GROUP SPLITTING

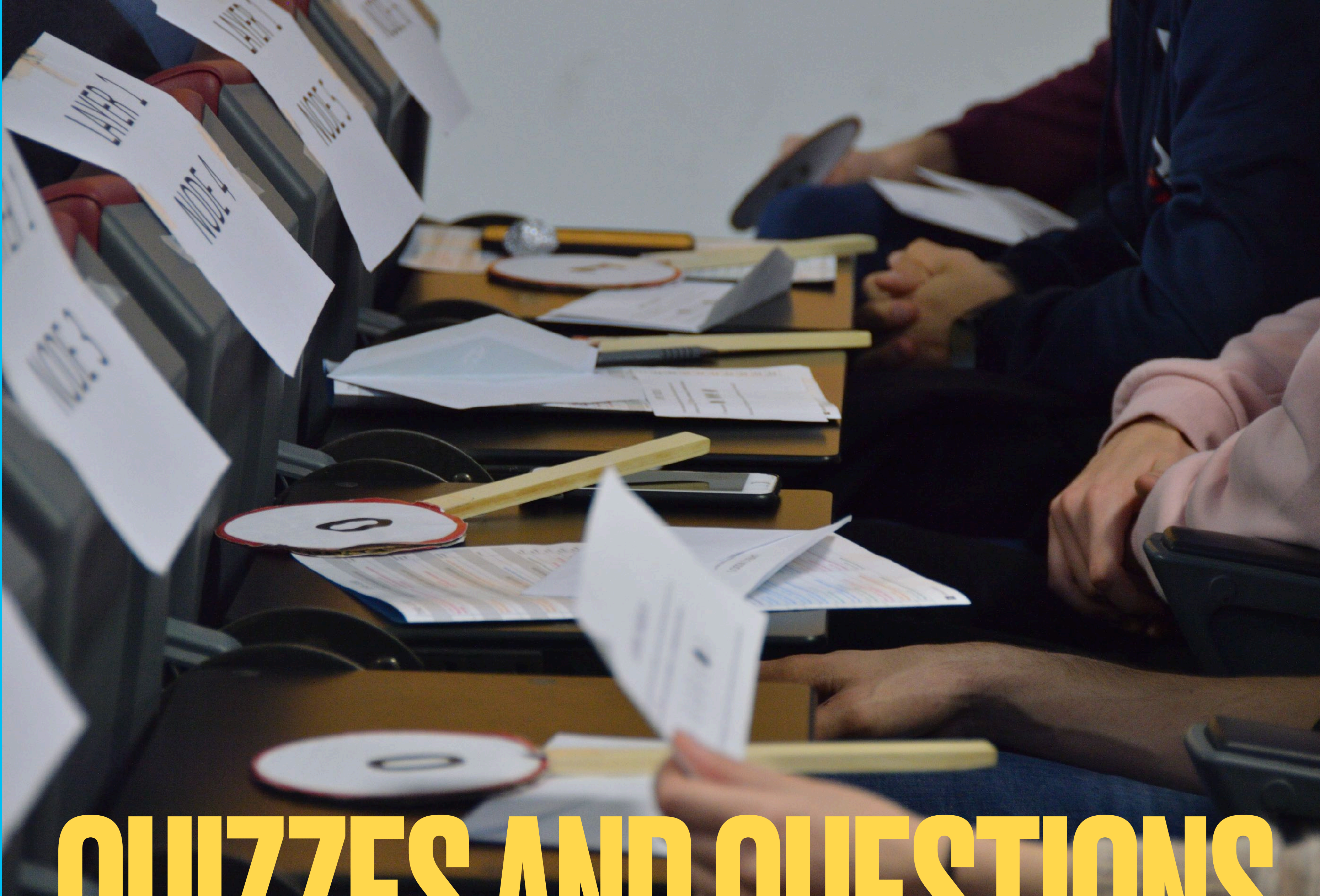
do you like most dogs or cats?

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



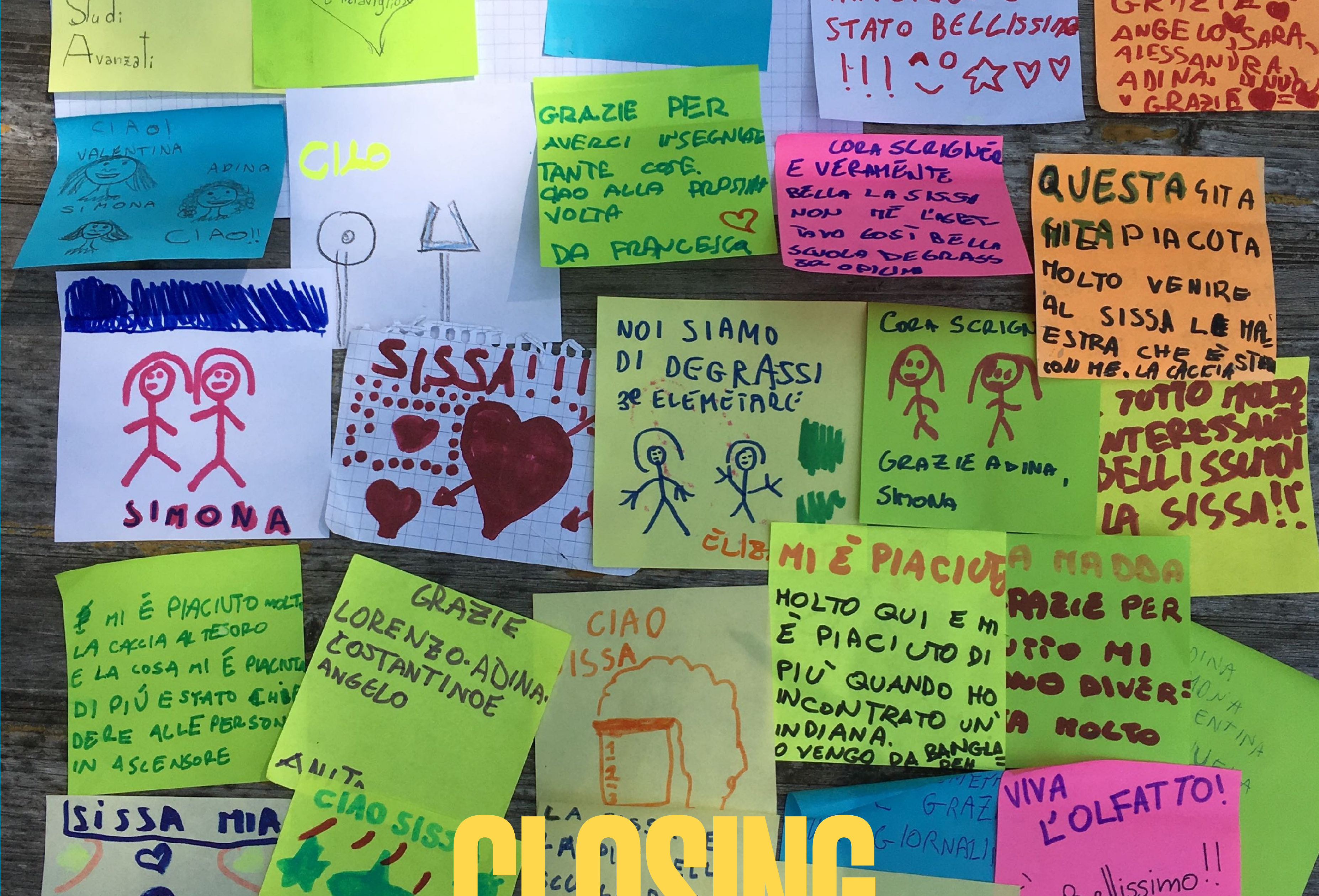


SILENCE

magic word

calling the silence





take home message
sticky notes or drawings
short evaluation

CLOSING



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 |