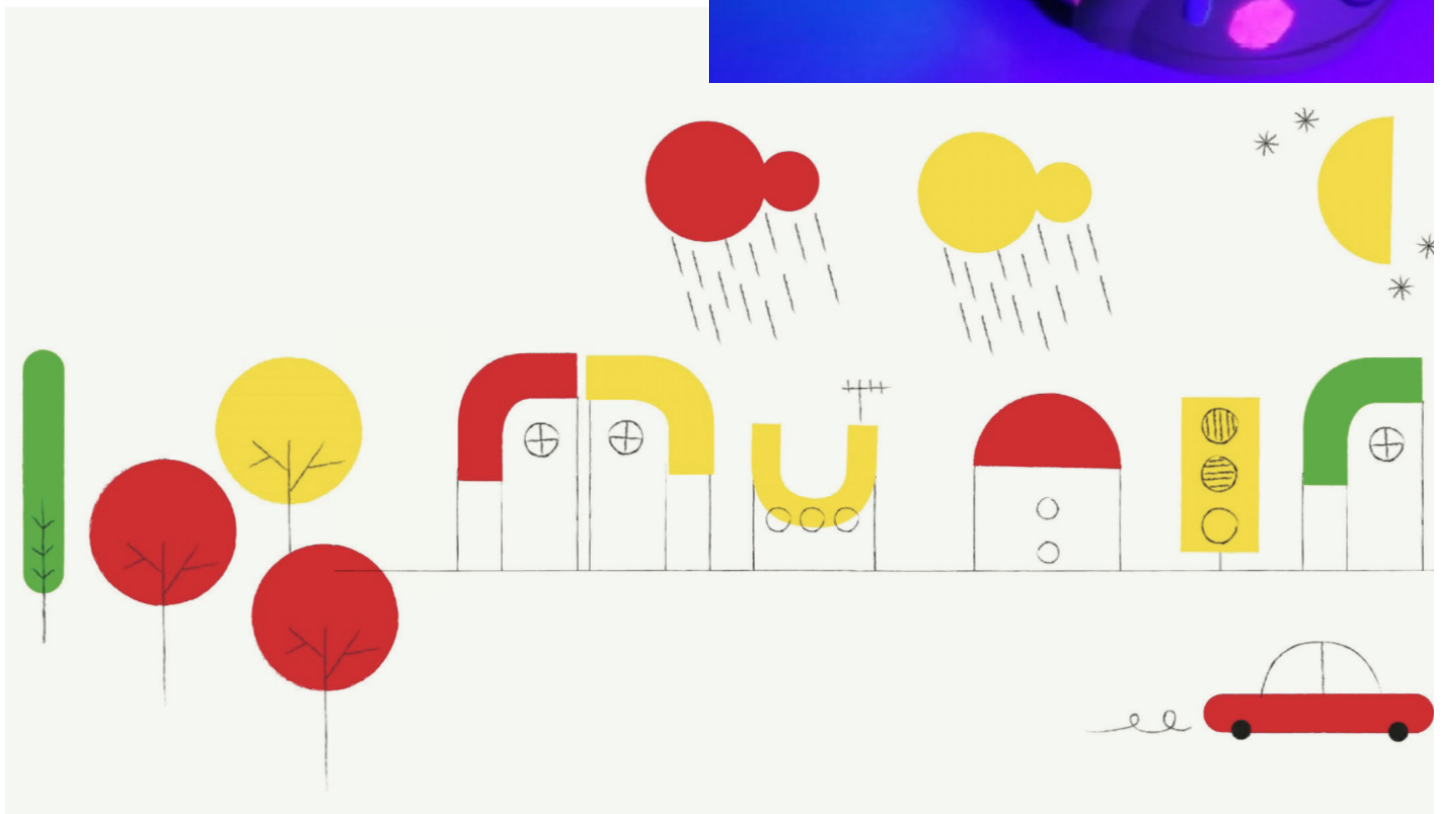# The Art of Geometry

The Art of Geometry

An idea from:

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Age: 3-4 years

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Keywords: #numeracy #art #immersiveenvironments #blacklight

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Key question: *Can geometry be introduced as a form of expression?*

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General objectives:

- Enhancing the child's creative and expressive abilities;
- Introducing geometry in a playful way;
- Creating continuity between the child's experience at school and in the family;
- Involve families in the construction of an educational pathway through the use of simple and playful apps.

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Time: 5 activities with the children of about 40 minutes each for a total of about 4 hours.

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Materials

At school	At Home
- Picture book themed 'geometric shapes - Fluorescent paper - Projector - Adhesive paper tape (white and yellow) - Recovery/recycling material - Coloured cardboard sheets - Scissors - Wood's Lamp	- Phone/tablet - White A3 sheet - Magazines - scissors

Software/ Apps:

Oh! The magic drawing app	Jamboard	iMovie	Padlet
Objective: Creating landscapes of geometric shapes **Media:** Computer; smartphone; tablet **Link:** ANDROID, IOS	**Objective:** Collaborative virtual wall **Media:** Computer; smartphone; tablet **Link:** https://workspace.google.com/products/jamboard/ **Alternatives** Miro	**Objective:** Audio/video editing **Media:** Computer; smartphone; tablet **Link:** https://www.apple.com/it/imovie/ **Alternatives** VN, CapCut, InShot, windows photos tool	**Objective:** Virtual wall where images, videos, texts, drawings can be shared. **Media:** Computer; smartphone; tablet **Link:** www.padlet.com **Alternatives** VN, CapCut, InShot, windows photos tool

Short Presentation

Digit is a character who introduces children to the world of logic and mathematics through play. *Digit* introduces children to geometric shapes that become the basic elements for composing drawings and landscapes. At home, using the app Oh! created by the designers Louis Rigaud and Anouck Boisrobert, children continue the creative experience by using the geometric shapes to populate a cityscape of animals, characters and other interactive elements. Oh! will be used again at school to create a collective landscape.

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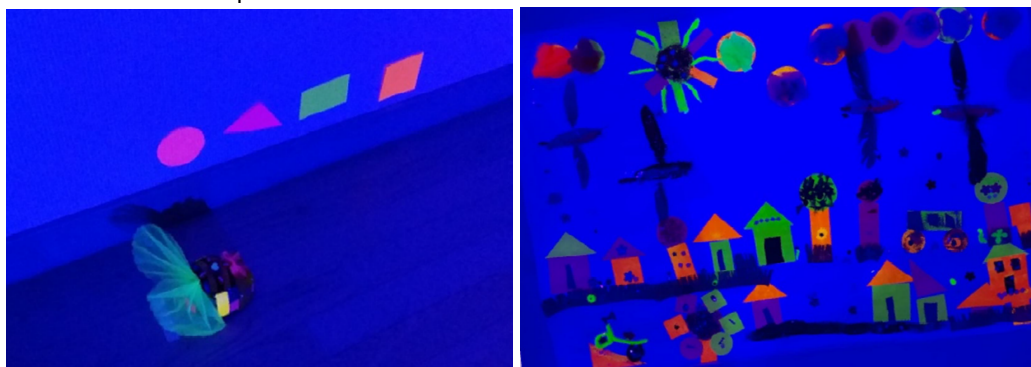# Step by Step

Step 1 --- *At school*	 Educators introduce the character of "Digit": a puppet disguised as a geometry superhero. Together with the children, Digit reads the illustrated book "Round and Round and Square" by Fredun Shapur (available in English, French, Italian) or any other illustrated book dedicated to geometric shapes.
	For distance learning educators produce and send a video where they introduce the character of Digit (one of the educators disguised as a geometry superhero or, alternatively, a puppet disguised as a geometry superhero) that reads the illustrated book "Round and Round and Square" by Fredun Shapur or any other illustrated book dedicated to geometric shapes.
Step 2 --- *At home*	The educators send a video in which Digit presents some geometric shapes (circle, rectangle, square, equilateral triangle) to the children and invite them on a photo safari. The children together with their families search for the geometric shapes around the house, take pictures of them and share them with the educators.

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Step 3 --- *At school*	The educators project the pictures submitted by the children and stimulate a discussion by asking questions about shapes, numbers, etc. Next, the children draw the shapes (also with the help of a stencil) on fluorescent paper and cut them out. In a darkened room, lit only with Wood's lamp, the children have fun playing with the shapes and Digit, freely composing (animals, landscapes, characters, etc.) with the fluorescent shapes on A3-sized sheets of white paper, adding also some fluorescent tempera to add details. **For distance learning** Families are invited to hunt for shapes in magazines, newspapers, flyers. Once the shapes have been found, they are cut out and used to play at composing animals or landscapes. Photos of the compositions are uploaded onto a padlet or sent to the educators.
Step 4 --- *At home*	Educators invite families to play with the OH! app and create their favourite cityscape. The app allows users to take a photo of the creation, which can then be sent to the educator.
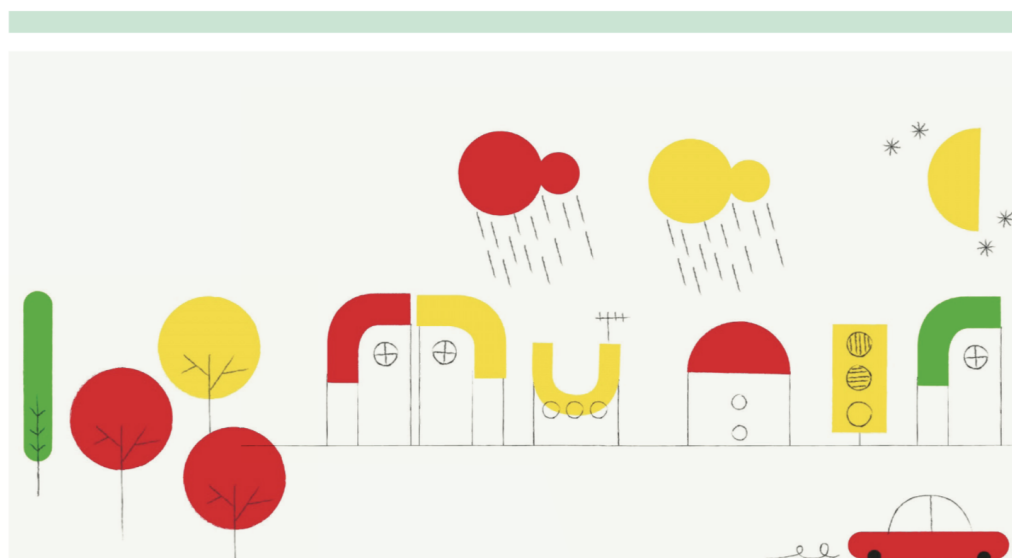
Step 5 --- *At school*	The educators project in the classroom at children's height the creations made at home with Oh!, each child tells what is happening in his or her landscape. Subsequently the class creates a collective work where each child chooses and places one of the shapes in the app. From the work, the educator guides the children in inventing and telling a story.
	For distance learning Each family sends the educator a photo of the landscape created with the app and a short audio in which the child explains what is happening in his or her landscape. The educators combine the images and audios to create a mini video.

Conclusion

Presence	Virtual
An exhibition of the children's fluorescent works and an immersive experience in the landscape collectively created by the children is set up in the classroom, leaving them to tell the parents the invented story.	Educators set up a virtual gallery (with padlet or eMaze) of the videos and works realised by the children and families during the various activities. The virtual gallery can be shared with families and on the school's website or social media.