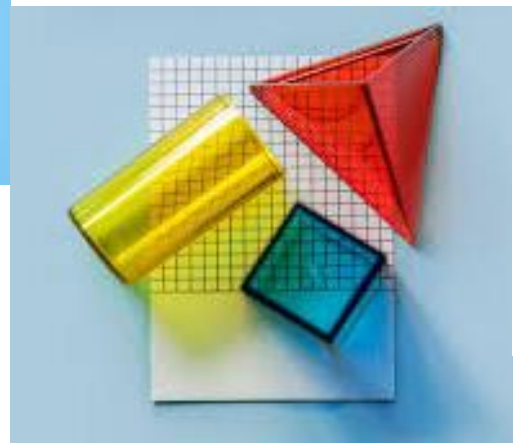
Project code:
2019-1-EL01-KA201-062914

Erasmus+ Call: 2019 - KA2 -



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UNIVERSITY OF THE AEGEAN
2nd Primary School of Chios
ISA13 Sarzana
AEM Agrupamento de Escolas de Marrazes
QmLab
Waste Management Laboratory Department of Environment University of the Aegean
PrivaSI

3D printing technology aims students understanding maths and recycling procedure

O2_3rd Curricula of Maths: Stereometry

2D shapes

Outline

- Playing with Shapes
- 2D shapes
- Videos

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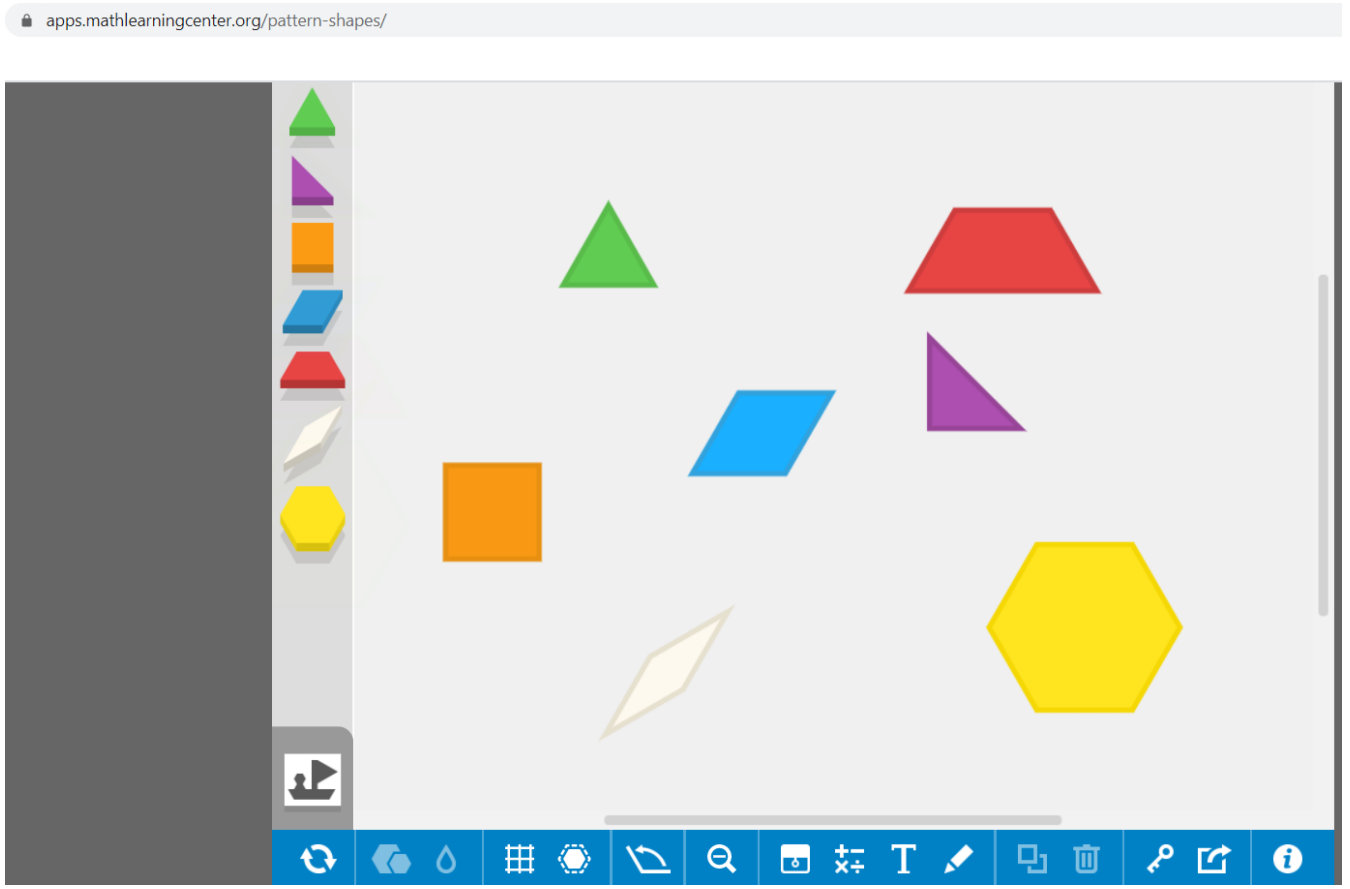
Let’s play with 2D shapes

- Use the following link

https://apps.mathlearningcenter.org/pattern-shapes/

- Kids drag and drop shapes in the grid surface



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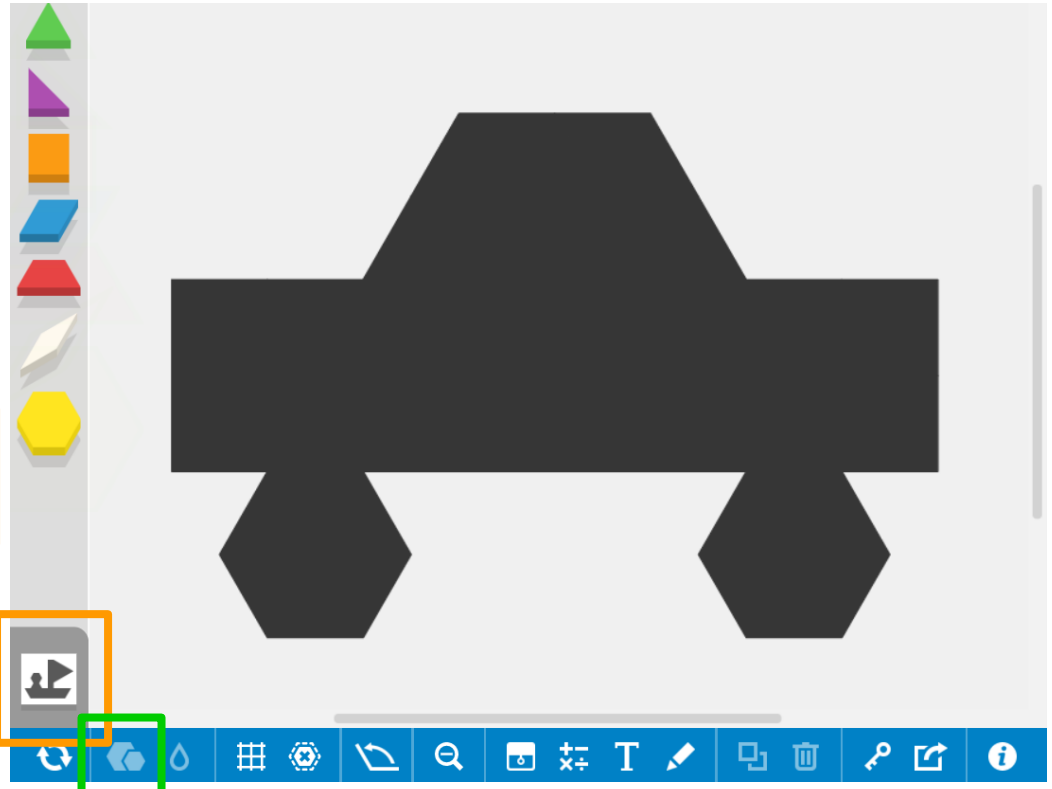
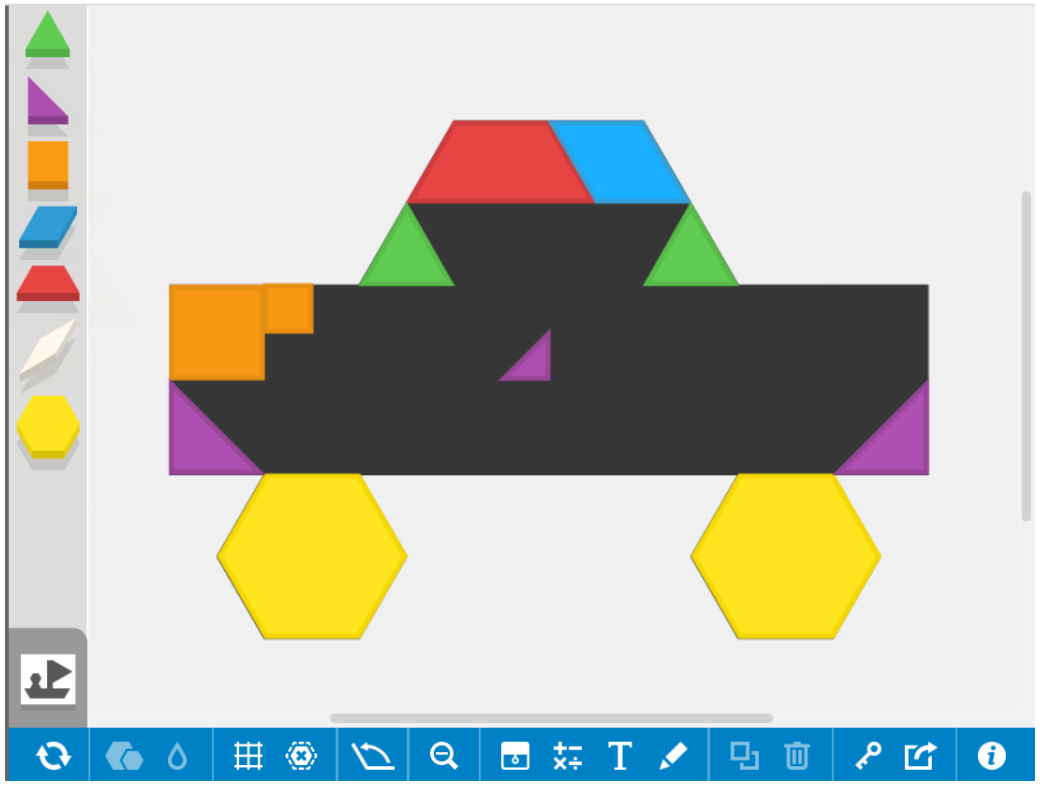
Let’s play with 2D shapes

Fill in the car pattern by

move-rotate and resize shapes





Kids choose this box of pattern canvas

Resize object

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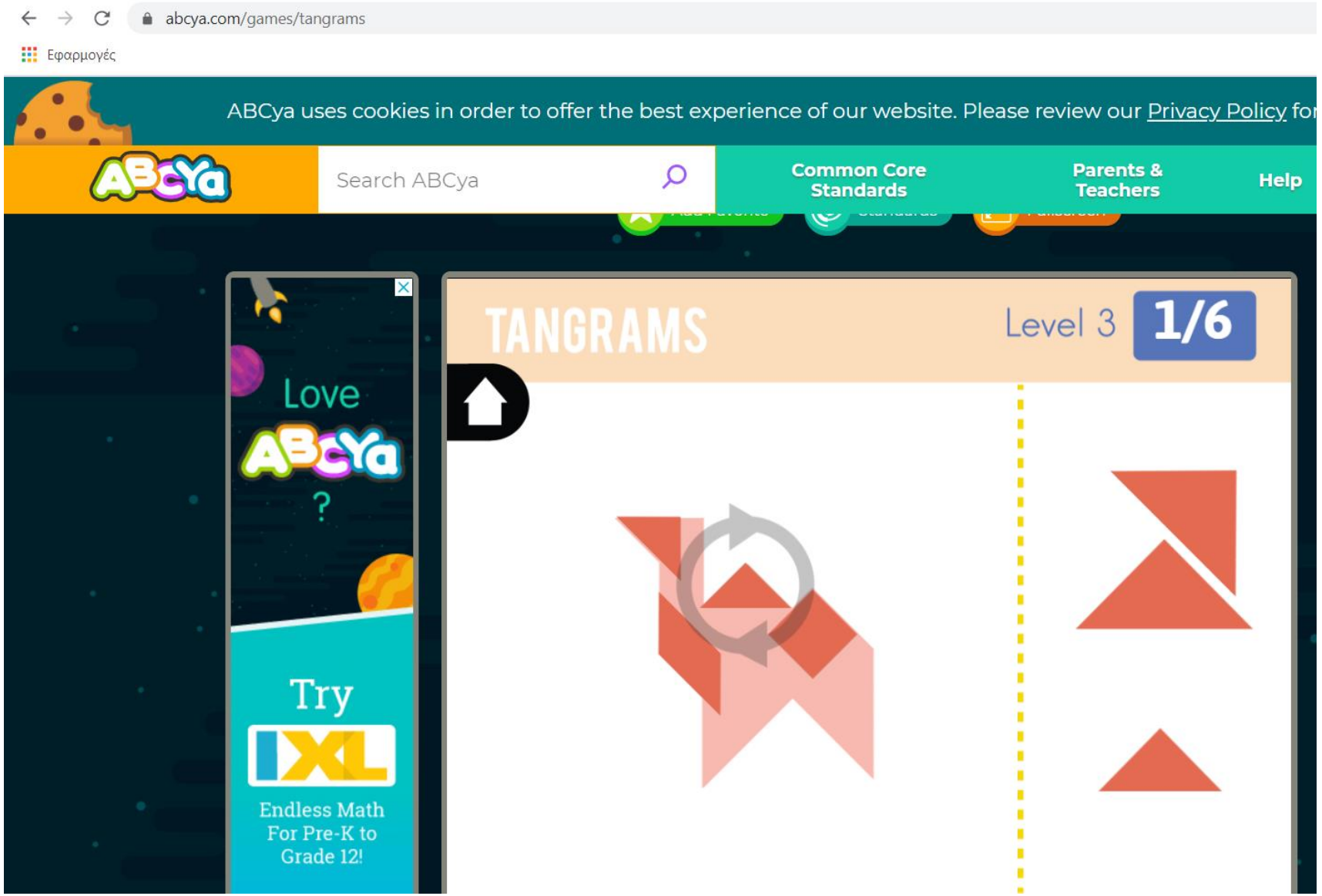
Let’s play with 2D shapes



Use this link

https://www.abcya.com/games/tangrams

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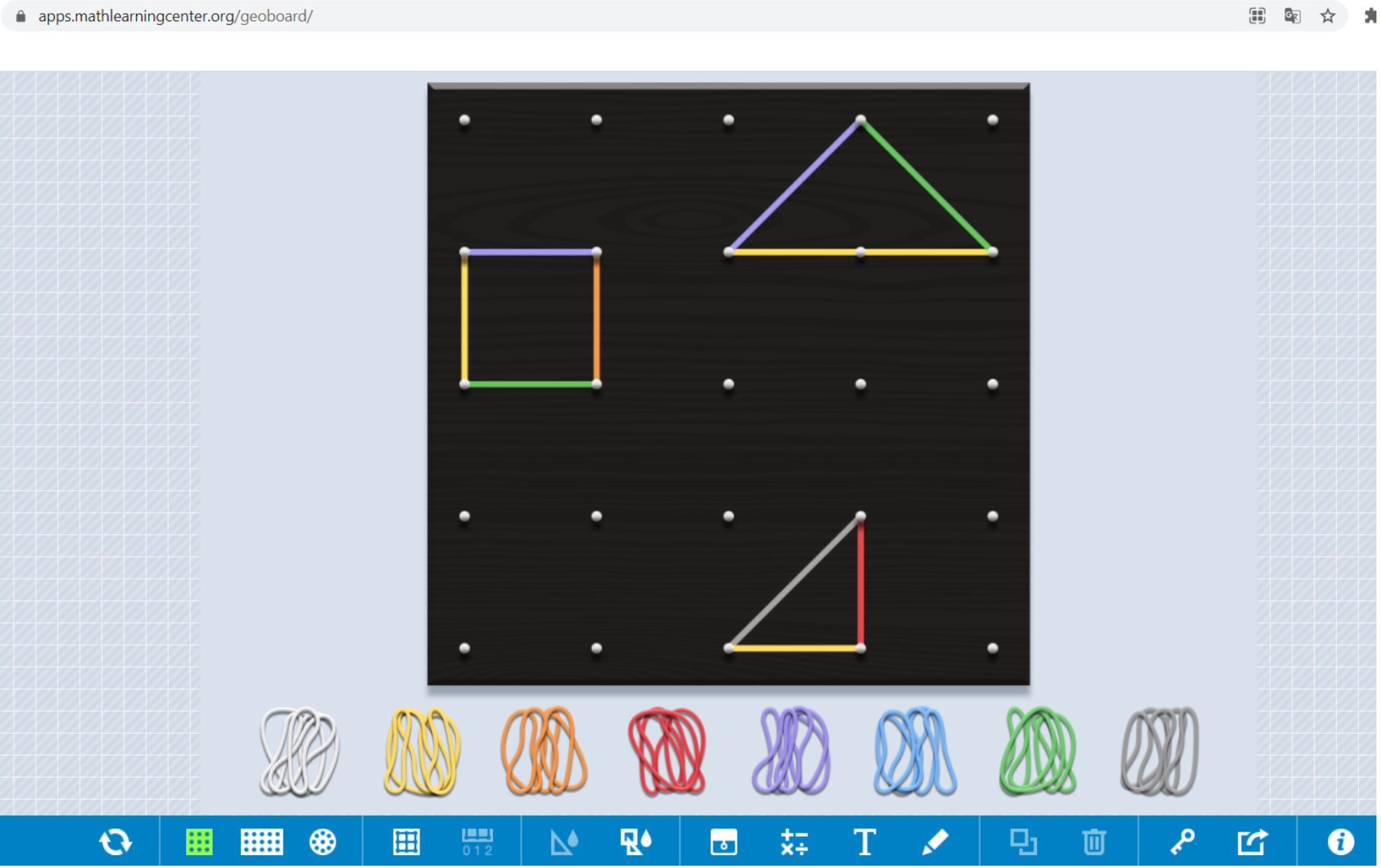
Design 2D shapes in a geoboard 6-10

- https://apps.mathlearningcenter.org/geoboard/



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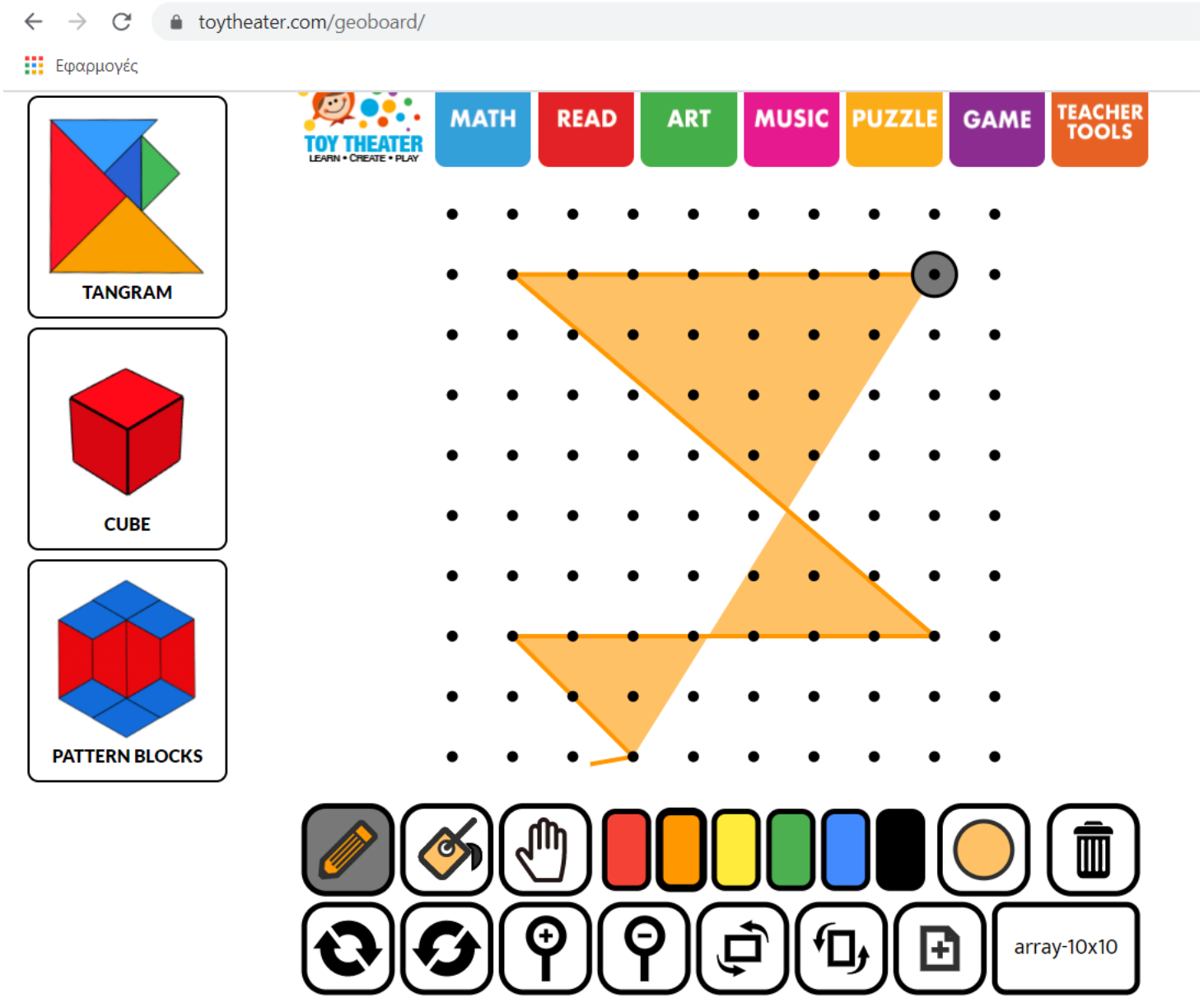
Design 2D shapes in a geoboard 11-14

- https://toytheater.com/geoboard/



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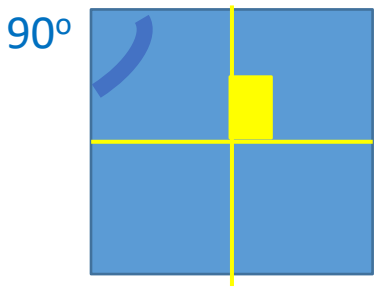
2D Shapes

Pupils 6-8

Square

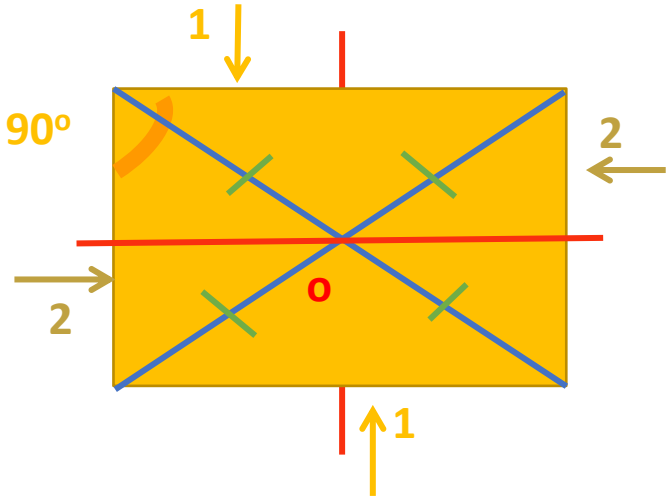
Pupils 8-11 and Pupils 11-14 (each teacher chooses



Square

- 4 sides equal
- 4 right angles
- Diagonals equal and vertical

Rectangular



- 2 opposite sides equal
- 4 right angles equal
- Perpendiculars of its sides are axes of symmetry
- Diagonals are equal and bisected

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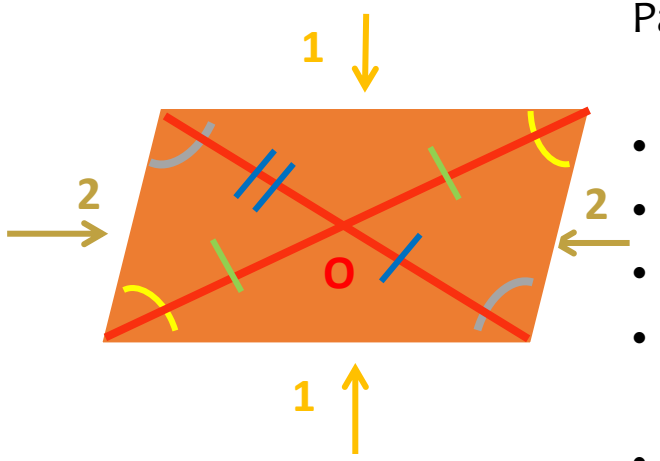
2D Shapes

Pupils 6-8

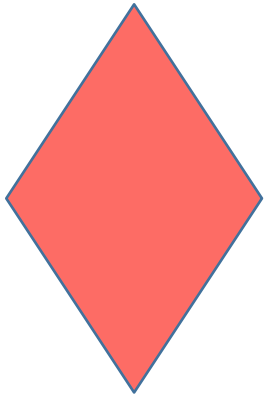
Parallelogram



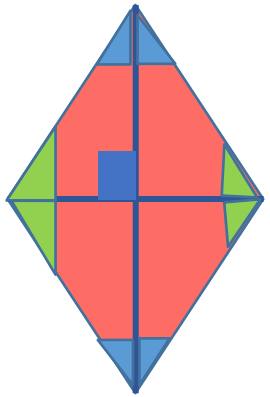
Pupils 8-11 and Pupils 11-14 (each teacher chooses

Parallelogram

- 2 pairs of opposite sides equal in length and parallel
- 2 pairs of opposite angles equal
- Adjacent angles are supplementary (180°)
- Diagonals are bisected (each passes through the middle of the other)
- The point of intersection of diagonals is the center of symmetry



Rumpus



Rumpus

- All sides are equal
- 2 pairs of opposite sides are parallel
- 2 opposite angles equal
- Diagonals are axes of symmetry
- Diagonals are vertical and bisected
- Diagonals are bisectors of its angles

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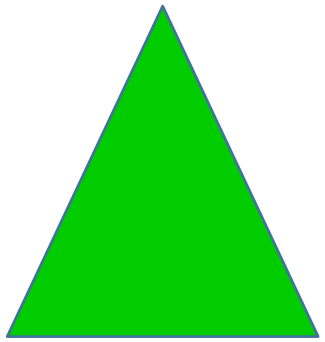
2D Shapes

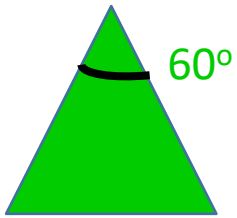
Pupils 6-8

Pupils 8-11 and Pupils 11-14 (each teacher chooses)



Triangle

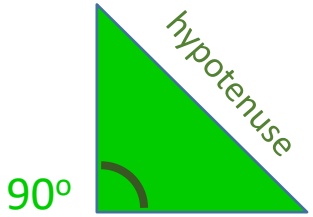
- equilateral triangle



3 sides equal

3 equal angles

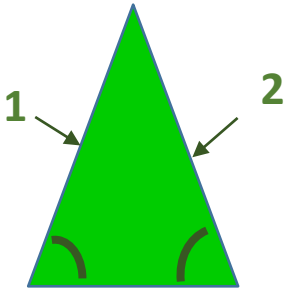
- right triangle



1 right angle

Sum of two other angles 90°

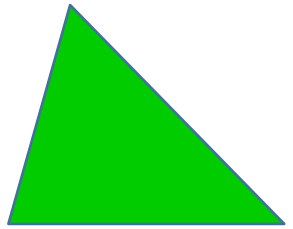
- Isoskeles triangle



2 equal angles

2 equal sides

- scale triangle



Unequal angles

Unequal sides

Diagonal

Height

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2D Shapes

Pupils 6-8

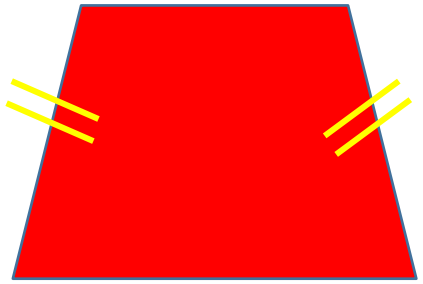
Trapezoid

Pupils 8-11 and Pupils 11-14 (each teacher chooses

Trapezoid

- Only two sides are parallel
- The distance between parallel sides is called “height”

Isoskeles trapezoid



- Non parallel sides are called bases
- Line passes through the middle of the bases is an axis of symmetry and perpendicular to its bases
- Angles adjacent to each bases are equal

Orthogonium trapezoid

- Angles adjacent to one of the non parallels sides are right

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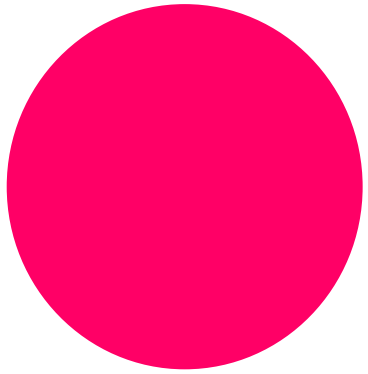
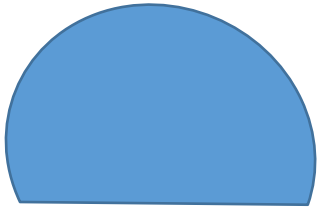
2D Shapes

Pupils 6-8

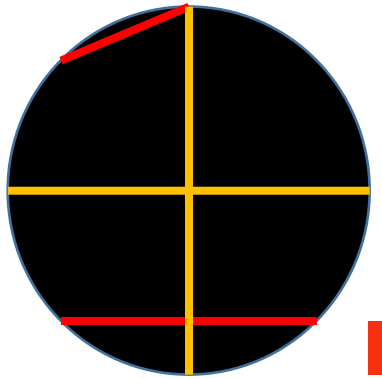
Circle

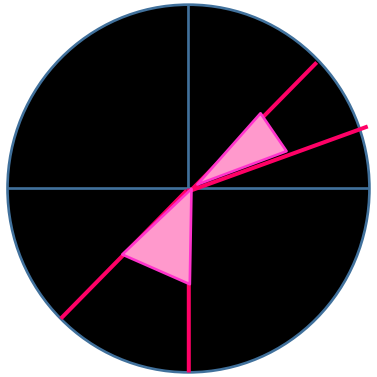


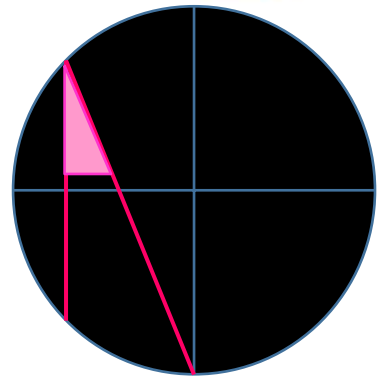
Semi-cycle



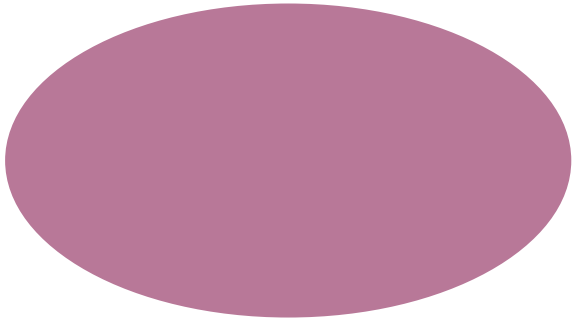
Pupils 8-11 and Pupils 11-14 (each teacher chooses

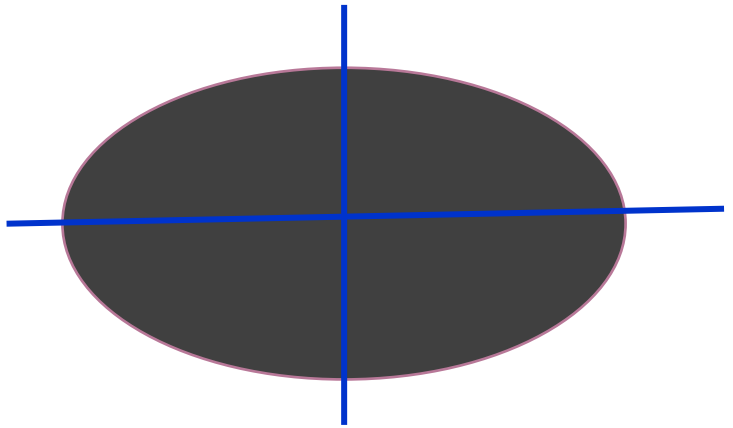






Oval- Ellipsis





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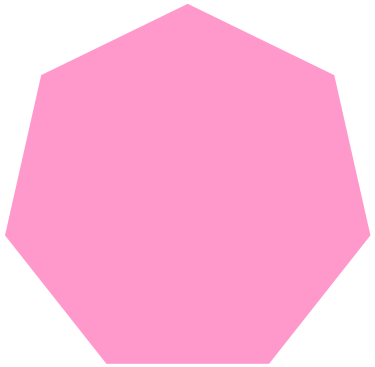
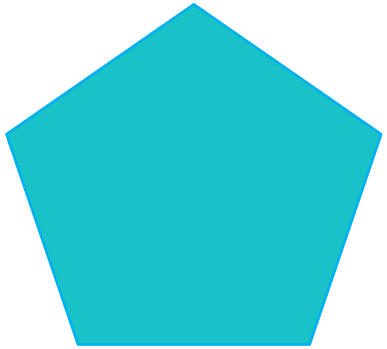
2D Shapes

Polygons Pupils 6-8



Hexagon

Pentagon



Pupils 8-11 and Pupils 11-14 (each teacher chooses

Polygons

- A polygon, which has n vertices is called n- vertice
- A polygon which all sides equal and all angles equal is called normal

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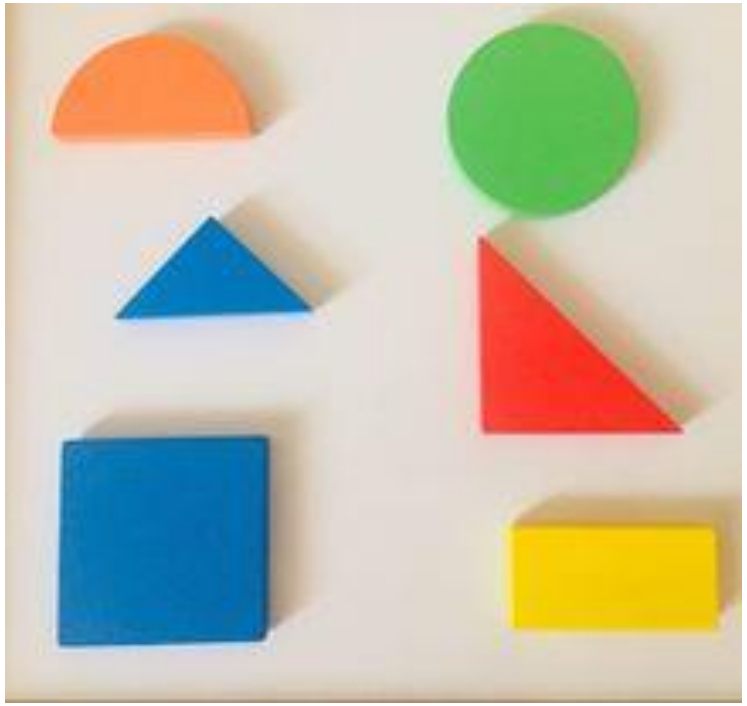
Video



- https://www.youtube.com/watch?v=4tlSK2a05EQ
- https://www.youtube.com/watch?v=ZzomlgPtVOc
- https://www.youtube.com/watch?v=mitk0Puvj2U

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