Please collect ideas about printable puzzles here :)

Interesting could be:

Switching dimensions - making a 2D game to 3D

like the game that Diego made 3D https://www.geogebra.org/m/vsrpgzek

Combining it with AR - if I can not see inside, maybe I can using GeoGebra?

https://math4all4math.blogspot.com/2019/06/3d-printing-as-dream-job.html?showComment=1568736103449

Natalias student did this.

Rotational stuff

I love the vases that Diego does https://www.geogebra.org/m/dwunsqm9

Cubes of course in general

https://www.geogebra.org/m/eyfs9ptx

New ideas Diego and Eva:

maze

Make a maze for opening boxes - create a generator, decide complexity, see inside the cylinder using AR if you get stuck

make a maze moving a ball enclosed in the maze itself (have it closed on top and on bottom, see through using AR if you get stuck)
https://www.thingiverse.com/thing:3664036
https://www.thingiverse.com/thing:2734815
https://www.thingiverse.com/thing:42468

print out several pieces of mazes and create a new maze
https://www.thingiverse.com/thing:3615917
https://www.thingiverse.com/thing:2734815
https://www.thingiverse.com/thing:1364179

_____

ideas Diego:

magic words
Pipe
https://www.geogebra.org/m/Ífzk9z5sr
http://archive.bridgesmathart.org/2018/bridges2018-359.pdf

Intersecting cubes

O_o curious!!

_____

Idea Natalia:

[17:36, 1.10.2019] Natalia: Hello, just some update about 3d printing in my class
[17:36, 1.10.2019] Natalia: Since I work with 7th grade Pythagorean theorem
[17:37, 1.10.2019] Natalia: And in high school
[17:37, 1.10.2019] Natalia: Sustainability
[17:37, 1.10.2019] Natalia: Energy and making model of a town 3d printed
[17:38, 1.10.2019] Natalia: Students would learn
[17:38, 1.10.2019] Natalia: About ratio and things like that

Ideas Gustavo

Create a solid of revolution with given volume. (Units is an issue here) after printing you can compare different solutions. (This is not a puzzle?)

What about an overseas puzzle battle?

Pitágoras with cubes. I think you can create a cube.

Educational resources for teacher as in here:
https://www.geogebra.org/m/rjen4vj2#material/bdkjptek

Infinite chocolate https://youtu.be/Cerfzj7rFy0

Ideas Alex

- Ideas for the Halloween related printing project by Alex:
    - Printing Voronoi patterns that look like spiderwebs.
    - Printing a skeleton that has parts consisting of a Voronoi pattern
    - https://docs.google.com/document/d/1RUuH0nr-e0M0lU3hXfEc02Q_tPR9UhqobO3sMFsSIHs/edit?usp=sharing
- Modeling and testing spinning tops

Ideas Zsolt

Have entire workshops on GeoGebra including not only the learning goals and description but also all STLs to have a box like a toolset.

Boxes could be

- Puzzle
- Maths cookie cutter set by mrbenbrittonCubes
- …

Ideas Eva

Spirograph: https://www.thingiverse.com/thing:905849
Cookie cutters
print cookie cutters that make parts of a jigsaw puzzle. disect an object, the smaller pieces are turned to cookie cutters automatically so you then eat the thing part by part or recombine the pieces to a different shape if you want to after eating a part :) disect an object using geogebra, automation that needs to be done: then make additional lines for extra outlines so all objecty have their own outlines, add a base on one side, and extrude every piece for 1 cm

---

unrelated stuff Eva (old) fell in love with https://www.thingiverse.com/thing:962814
3D printable castles out of fractals

math cookie cutters https://www.thingiverse.com/thing:33096

parametric spiderwebs https://www.thingiverse.com/thing:1815532

https://mrbenbritton.wordpress.com/author/mrbenbritton/

https://www.thingiverse.com/thing:1318696
tessellation escher

https://www.thingiverse.com/thing:89983
Escher Lizard

Stackable math objects https://www.thingiverse.com/thing:301742

task: create a hat that can be printed :)

task: create a shape which is a rotational form and can hold an egg (create an egg cup)

---

ideas in relation to school plan
cookies - dividieren mit Rest
divide up a square

3D printing ideas to explore maths with kids

The Prince Rupert Problem

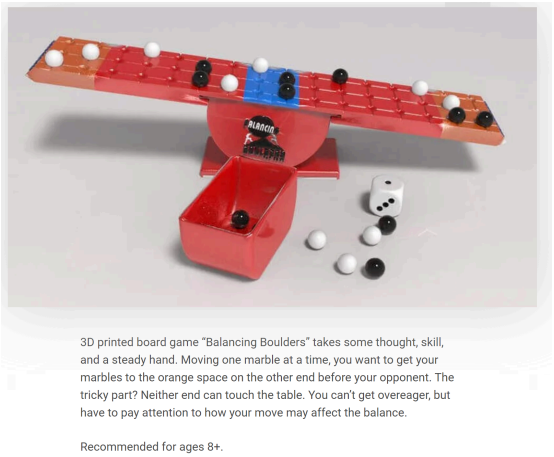
The problem is -> can you cut a hole in a cube large enough so that you can pass another cube of the same size through the first cube?

This is one of the most amazing illusions that you'll ever see 🙂

[The apparently impossible cube]

More IDEAS at: https://all3dp.com/1/3d-printing-diy-board-games-make-3d-printer/

- Balancing Boulders:



3D printed board game "Balancing Boulders" takes some thought, skill, and a steady hand. Moving one marble at a time, you want to get your marbles to the orange space on the other end before your opponent. The tricky part? Neither end can touch the table. You can't get overeager, but have to pay attention to how your move may affect the balance.

Recommended for ages 8+.