



Activity

# DECORATING EASTER EGGS WITH OZOBOT

CREATED BY

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**TOPICS**

Robotics, Programming, Art

**AGES**

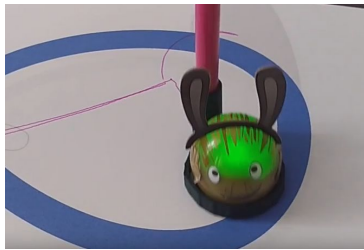
Grades 1-12

**METHOD**

OzoBlockly (optional: Color Codes)

**DURATION**

60 Minutes



# Happy Easter 2018 with Ozobot & Ozoblockly!

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Students will learn about patterns, coding basics and about the Easter traditions.

Tags: [turtle graphics](#) [coding](#) [OzoBlockly](#) [OzoCodes](#)

**Grades:** 1 to 12+

**Duration:** 45 - 90 minutes

**Supplies:** printed template of eggs, 1 Ozobot for each student/team, PC/tablet for Ozoblockly coding, thin color markers and [3D printed holder](#) (rubber bands or tape could work as well; for evo it could be used upside down), optional: scissors, colored paper, glue, stickers or Ozobot markers for off-line activity with Ozo codes.

## Vocabulary:

**Turtle graphics** - *"In computer graphics, **turtle graphics** are vector graphics using a relative cursor (the "turtle") upon a Cartesian plane."*<sup>1</sup> An Ozobot will be playing the "turtle" with pen always down (but you can change/replace color of pen manually) and moves with commands that are relative to its own position, such as "move forward 2 steps" and "turn right" with drawing a line - it is a shape coding like in [Games Ozoblockly](#), where the RGB LED on/off substitute the pen down/up.

## Step #1: Learn About Easter Traditions

Easter is a religious holiday for Christians around the world, but also a cultural holiday. It is a holiday celebrating the end of Lent and the resurrection of Jesus Christ after his crucifixion. Each country has their peculiar traditions.

### Educator Tip:

Depending on yours tradition, students could change Ozobot for Easter bunny or You can also hide this activity egg templates somewhere in the classroom for students.

It will be nice to share the different traditions among students and to talk about them, show photos or prepare a little tasting of Easter goodies.

But don't forgot remind students about keeping their Ozobot "safe and sound".

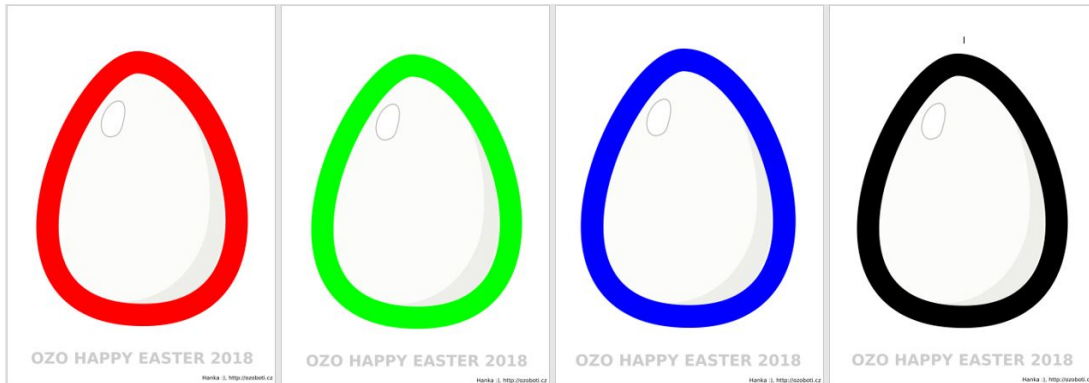
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<sup>1</sup> Turtle graphics. In: *Wikipedia: the free encyclopedia* [online]. San Francisco (CA): Wikimedia Foundation, 2001- [cit. 2018-03-19]. Dostupné z: [https://en.wikipedia.org/wiki/Turtle\\_graphics](https://en.wikipedia.org/wiki/Turtle_graphics)

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## Step #2: Preparation

For markers only usage, it is easy, simply print a [template](#) and markers of course. To decorate an egg use color lined ornaments and Ozo Codes. For Ozoblockly coding, print the same [template](#). There are four eggs. An egg with red, green, blue and black colored border. You need also thin markers and a holder for coding within Ozoblockly.



### Educator Tip:

Students could choose color of their egg template and one or more thin markers colors.

## Step #3: Egg coding

Students will be using Ozoblockly to code Ozobot movement to do some ornaments or patterns on an egg. There are at least two ways how (see examples below):

1. The first one is to try some “turtle” graphics patterns or other ornaments.
2. The second one is to code Ozobot within Ozoblockly to be moving „randomly“ inside of the egg borders, that Ozobot will be heading back and turns, if there is colored surface. Before drawing, let students watch the bunny-Ozobot, to avoid him, to not escape outside the egg border.

### Educator Tip:

Students have to prepare holder with thin marker after code flashing to Ozobot, so it is supposed to put some wait command at the beginning of their code, my suggestion is at least 5 seconds or longer to make camera ready too.

## Step #4: Egg coloring

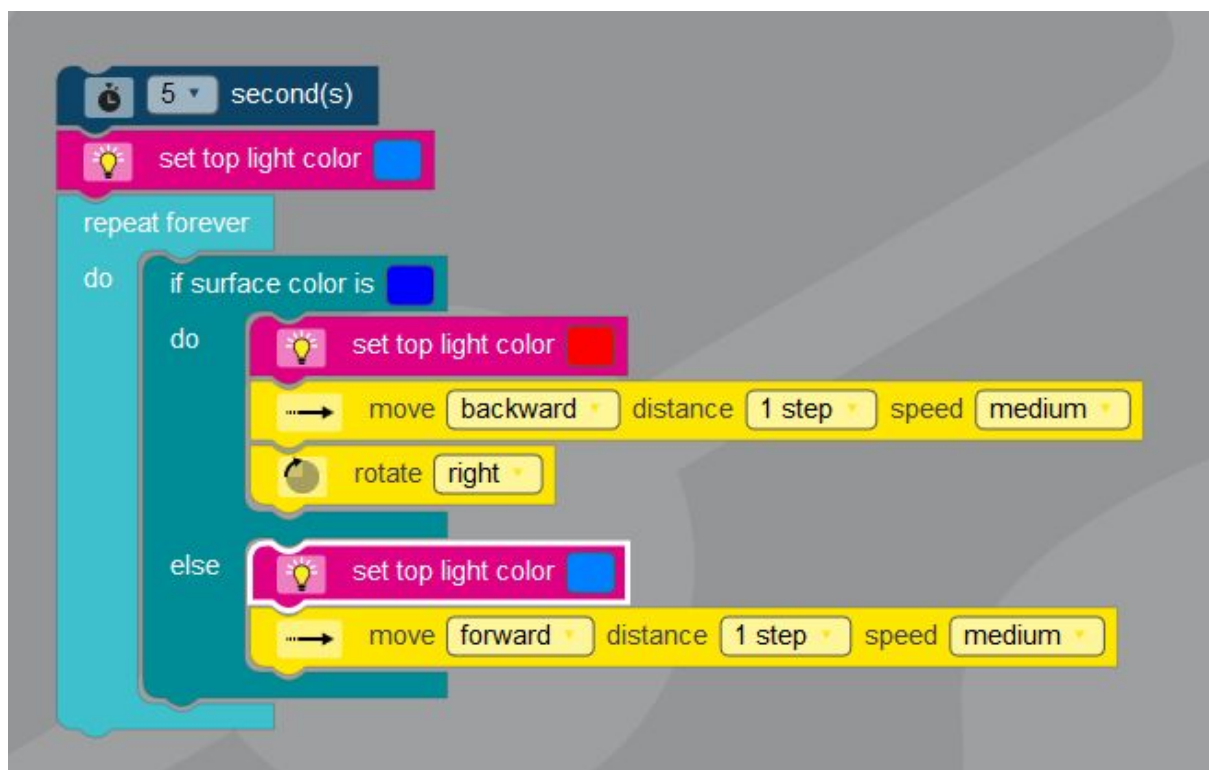
It is time to test! After double click Ozobot moves on an egg surface and draws patterns with attached thin marker. Students could try other colors of markers or other codes as well.

### Educator Tip:

Students could post-process their eggs with stickers or markers etc. So after coding lesson it is time to do more art too. And now ready to organize an Easter easter egg show now!

## Examples

### Random moving inside an egg



<https://ozoblockly.com/editor?lang=en&robot=bit&mode=3#hfvpx9>

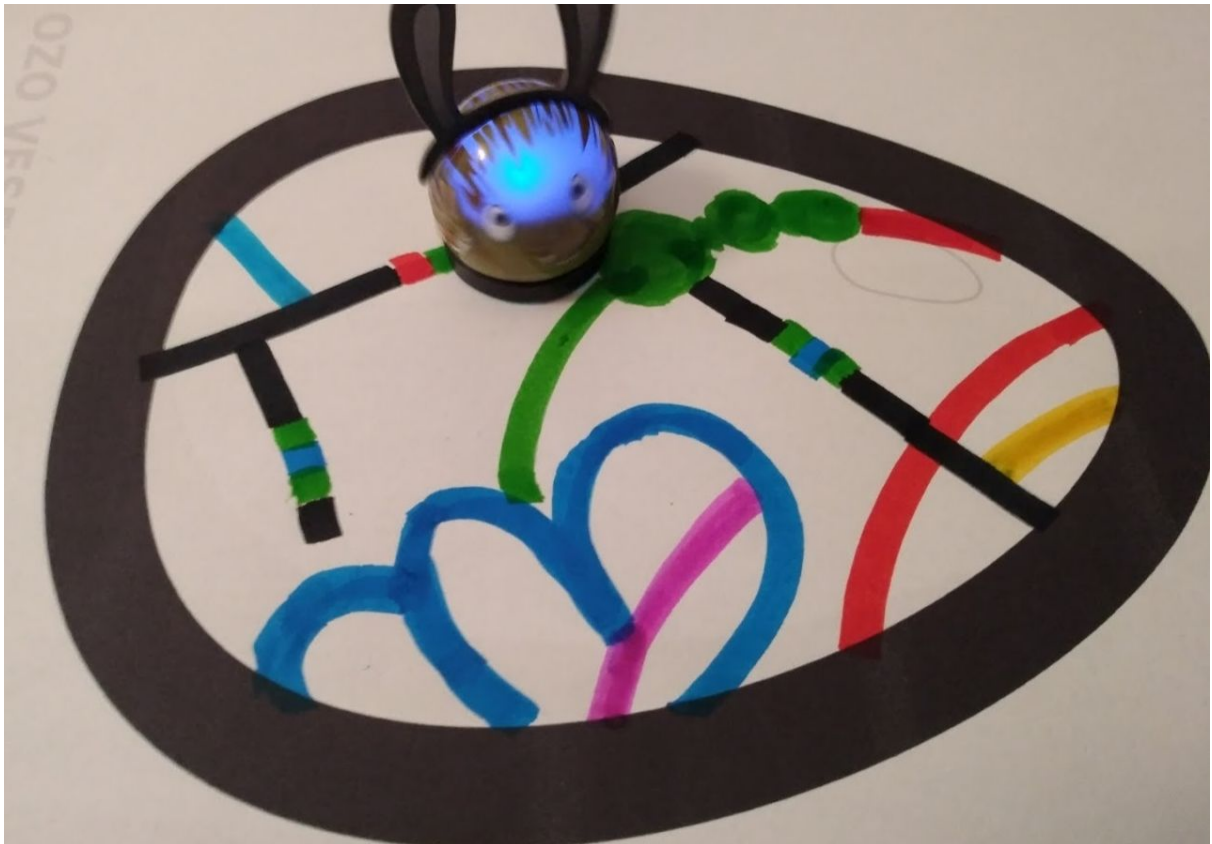
## Turtle graphics - flower pattern



```
5 second(s)
set top light color [blue]
repeat 6 times
do
  move forward distance 2 steps speed medium
  rotate right
```

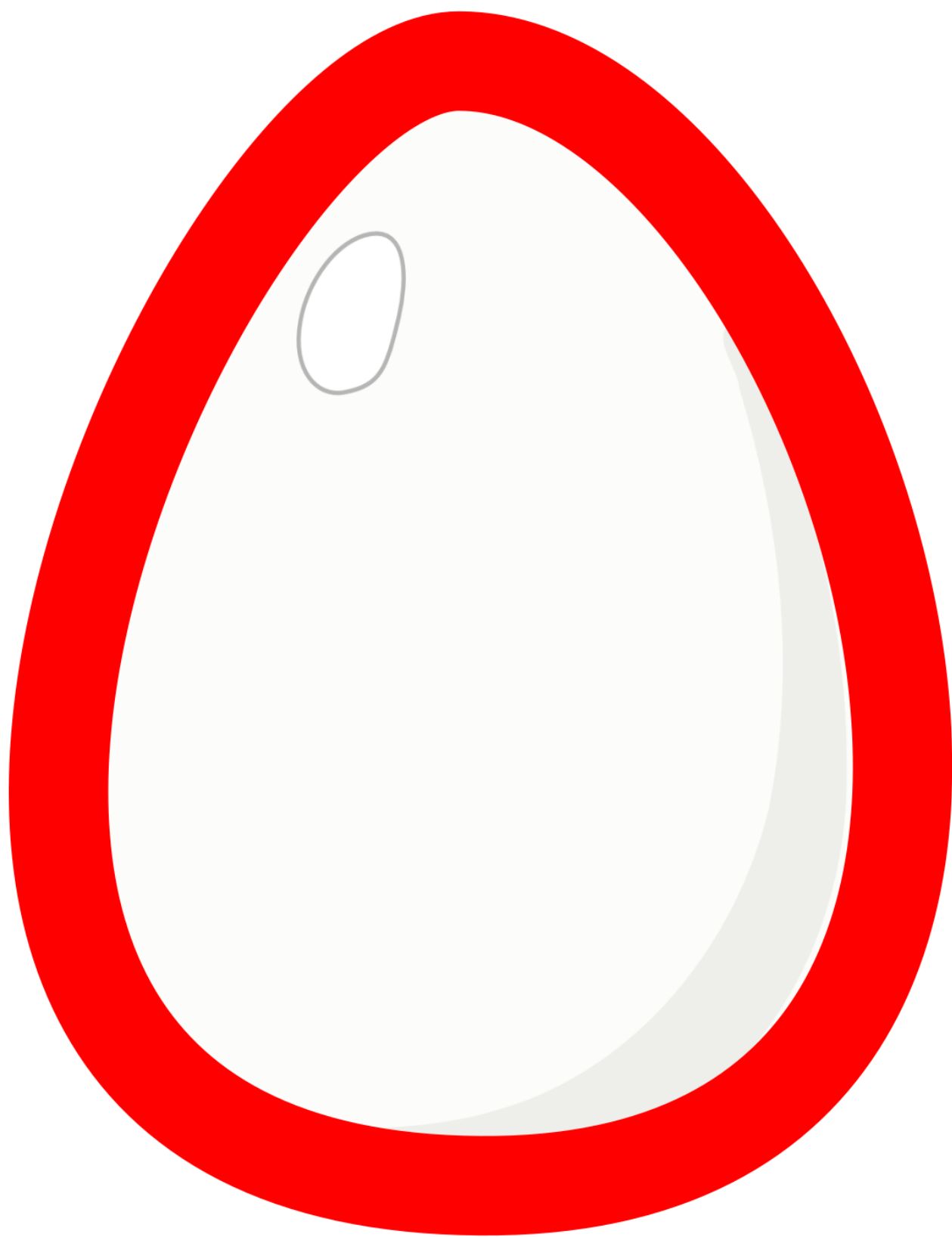
<https://ozoblockly.com/editor?lang=en&robot=bit&mode=3#h4kkjd>

Markers Only - free drawings

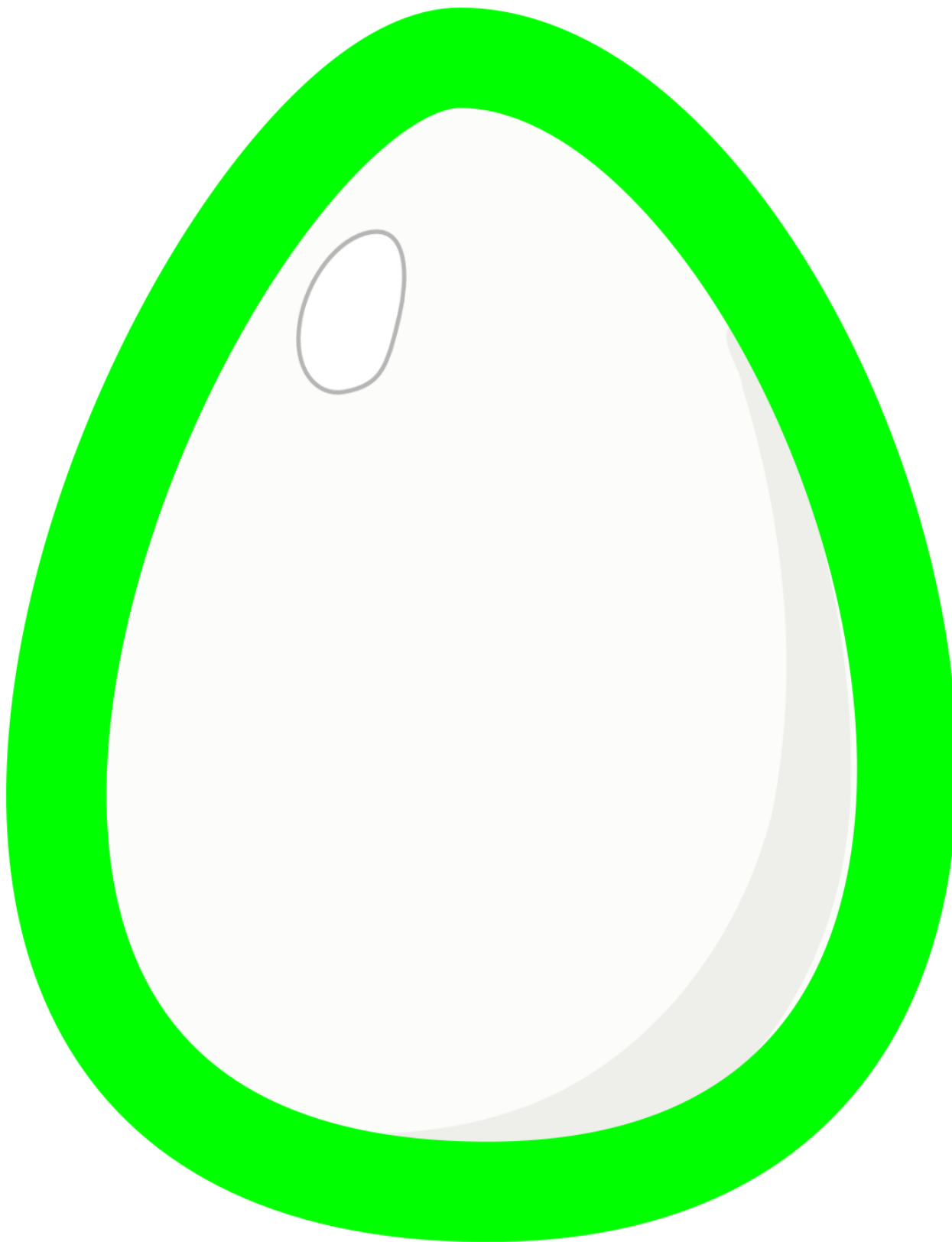


**HAPPY EASTER  
2018!**

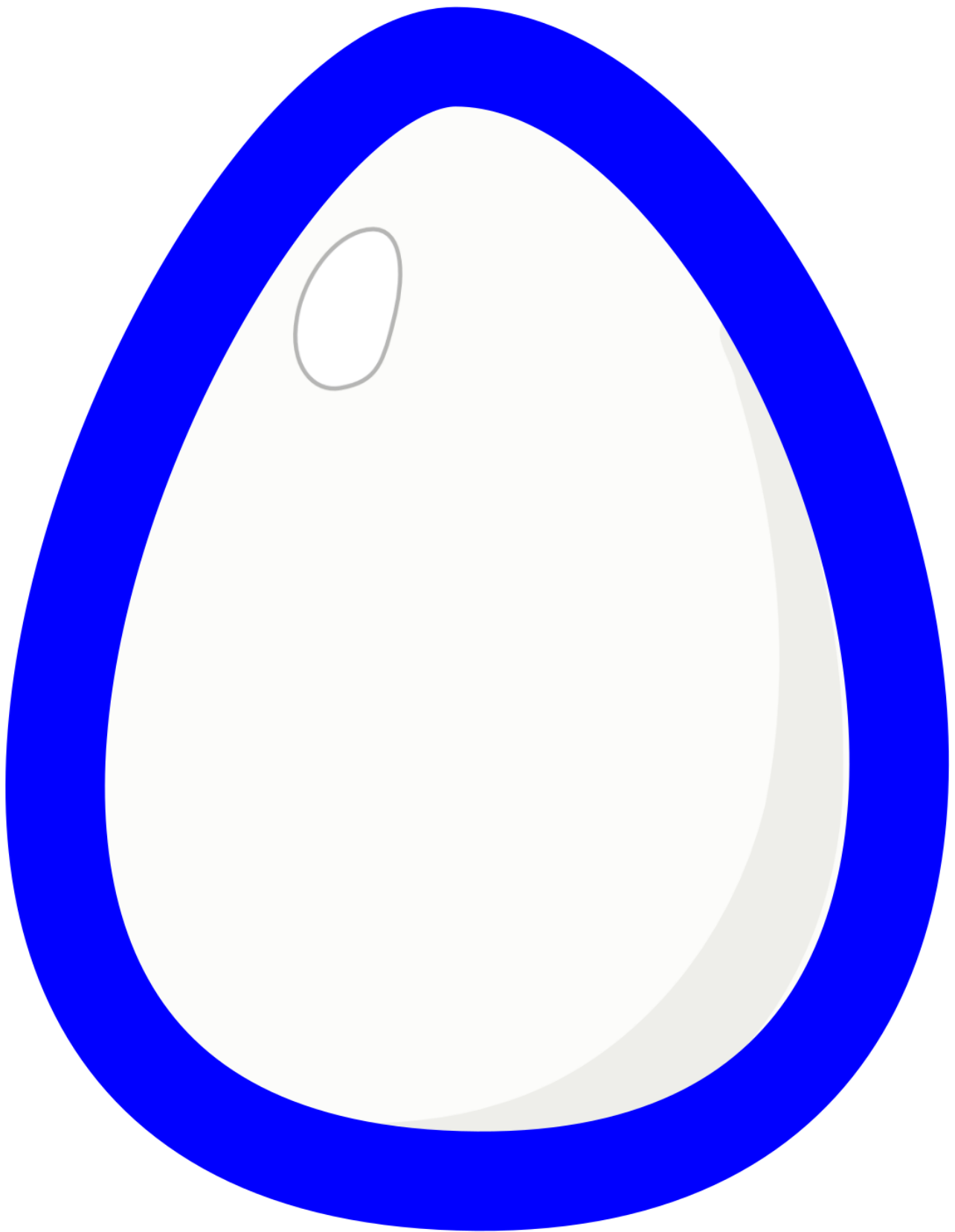
<https://youtu.be/l7201sLhv9Q>



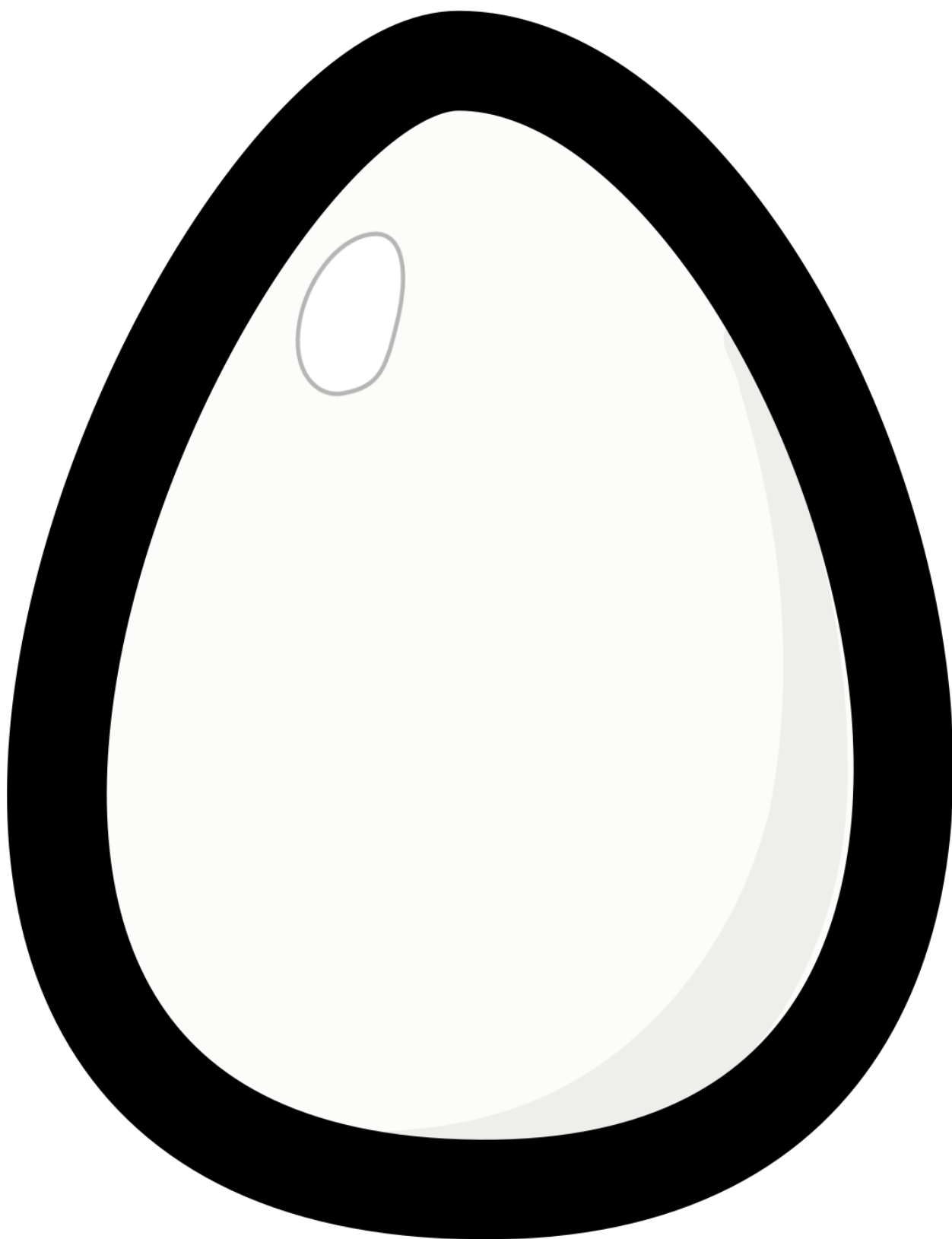
**OZO HAPPY EASTER 2018**



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