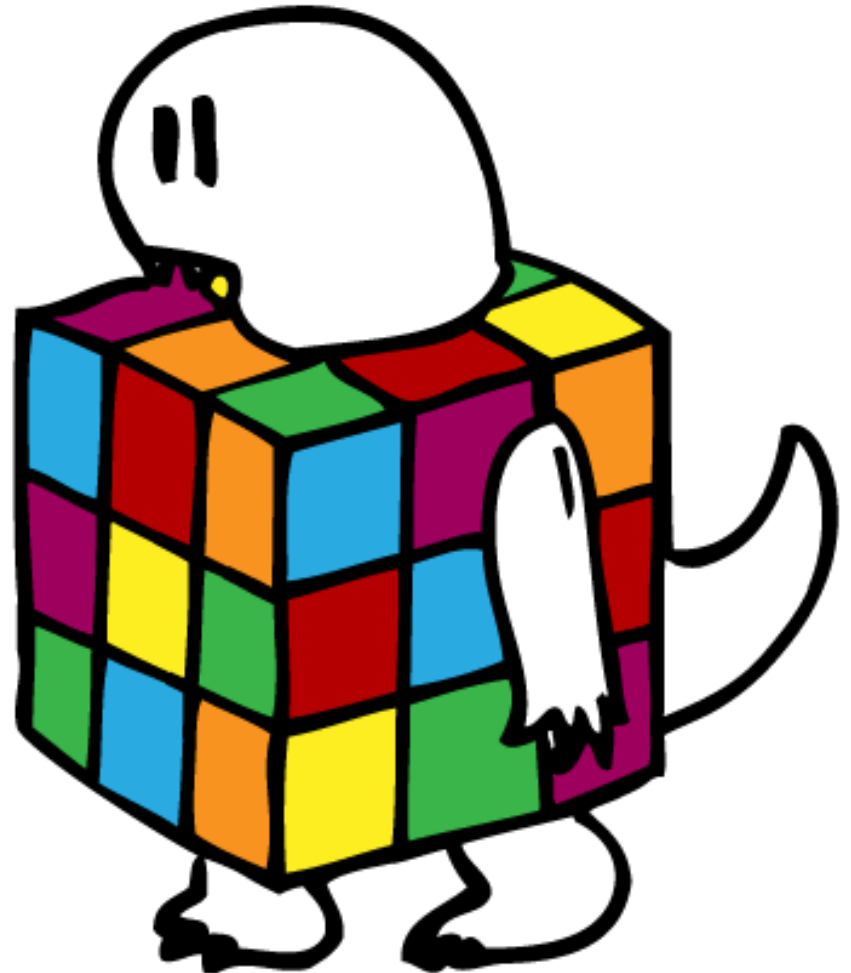


# GAME MAKER ONLINE

## Les 4 / Asteroids



# Vandaag

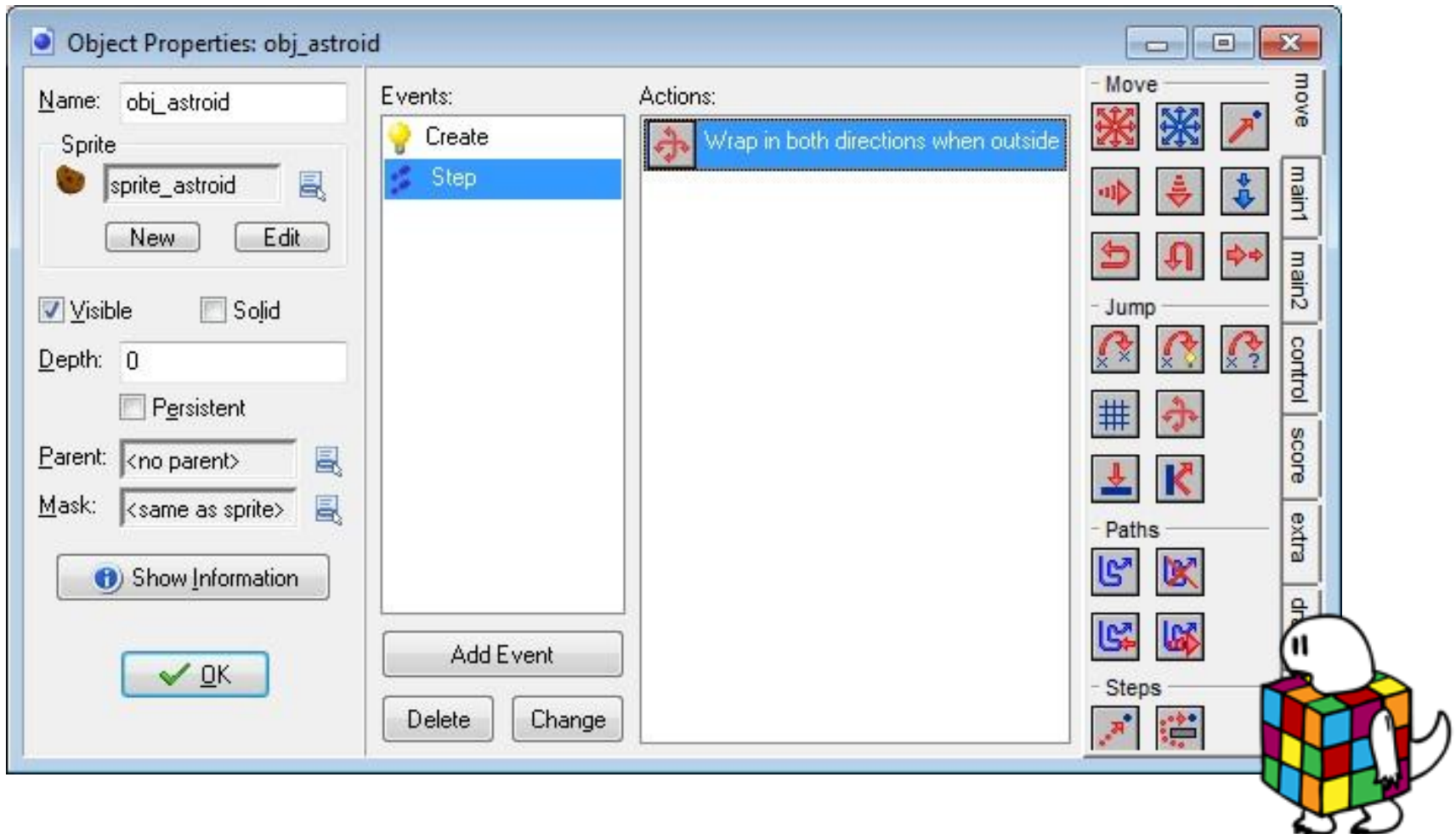
- Asteroids
- Eerst een uitleg van wat er allemaal al werkt
- Daarna zelf aan de slag!



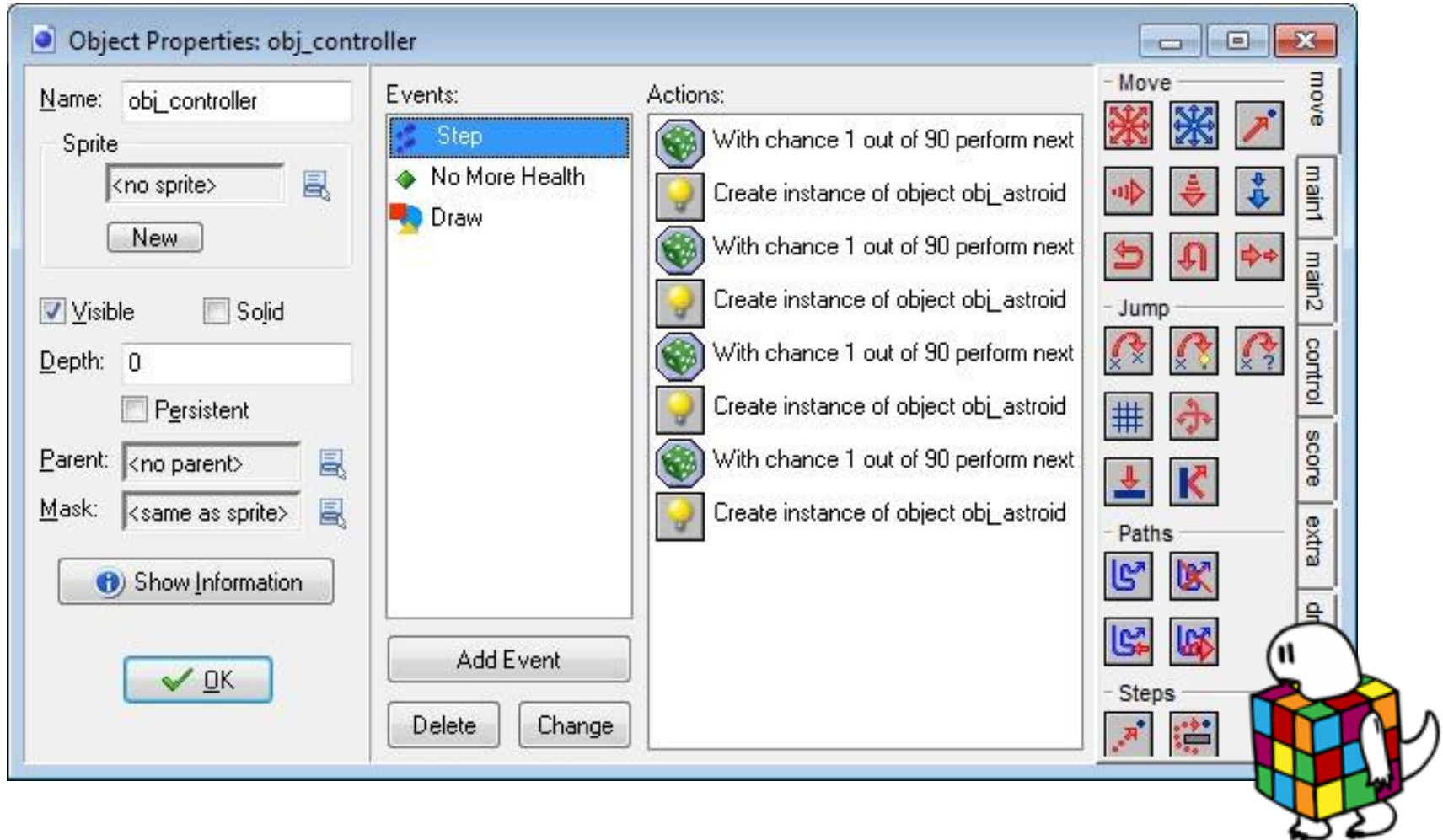
# Dus... Wat werkt er al?



# Er zijn al bewegende rotsblokken..



# Die willekeurig worden gemaakt..



# En willekeurig door de kamer vliegen!

The screenshot shows the 'Object Properties' window for an object named 'obj\_astroid'. The window is divided into several sections:

- Name:** obj\_astroid
- Sprite:** sprite\_astroid (with 'New' and 'Edit' buttons)
- Visible:**  Visible,  Solid
- Depth:** 0
- Persistent:**  Persistent
- Parent:** <no parent>
- Mask:** <same as sprite>
- Show Information:** (button)
- OK:** (button)

The **Events** section contains:

- Create (selected)
- Step

The **Actions** section contains:

- Change sprite into sprite\_astroid
- If the number of instances is a value
- Move towards point (obj\_ship.x,obj\_ship.y)
- Else
- Move towards point (random(640),random(480))
- With chance 1 out of 20 perform next
- Change instance into obj\_health

The right side of the window features a vertical toolbar with icons for various actions, categorized into:

- Move:** Includes icons for random movement, directional movement (up, down, left, right), and movement towards a point.
- Jump:** Includes icons for jumping to a point, jumping to a random point, and jumping to a point with a chance.
- Paths:** Includes icons for creating paths and following paths.
- Steps:** Includes icons for moving a step and moving a step towards a point.

At the bottom right of the window, there is a small cartoon character holding a Rubik's cube.

# Aan de slag: Ruimteschip maken!



# Zelf aan de slag

- <http://gm.michelfiege.nl>
- Goed lezen
  - Gebruik de plaatjes!
- Oefenbestanden downloaden
  - In dit geval “asteroids.zip”
- Help elkaar!

*Succes!*





Wat heb je vandaag  
geleerd?



# Overerving

- Parent: **obj\_ship**
- Children: **obj\_ship\_normal**, **obj\_ship\_flames**
  
- Botsing met asteroid?
  - **obj\_ship <> obj\_astroid**



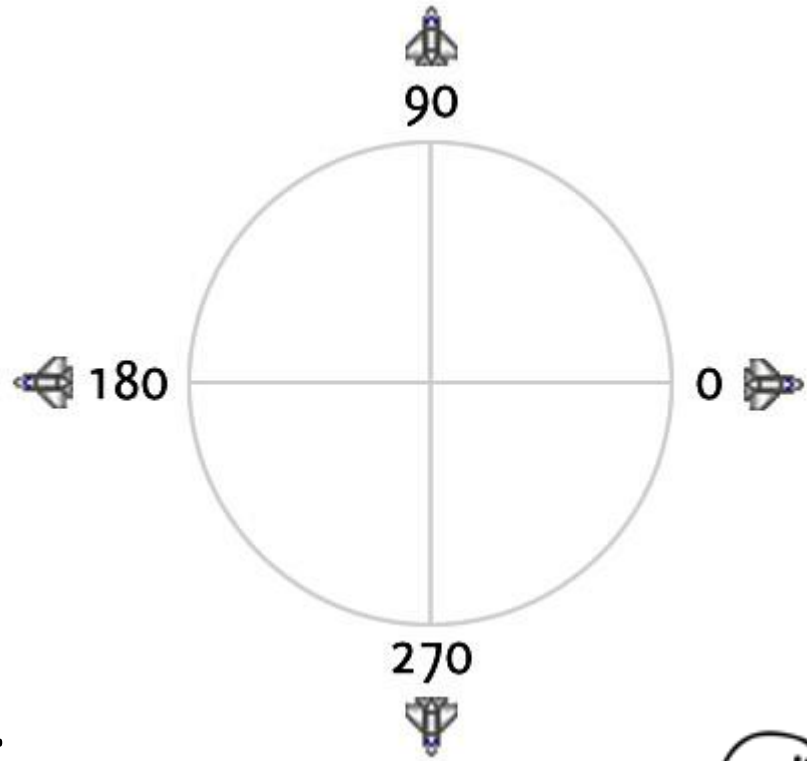
# De functie floor()

- Afronden naar beneden
  - $\text{floor}(81,2) = 81$
  - $\text{floor}(3,2122) = 3$
  - $\text{floor}(55,88) = 55$



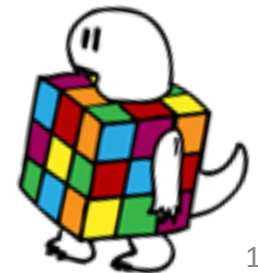
# Modulo rekenen

- De rest van een deling
  - $8 \bmod 4 = 0$
  - $8 \bmod 5 = 3$
  - $24 \bmod 5 = 4$
  - $24 \bmod 12 = 0$
- Denk aan uren (24), en...
  - 360 graden in een cirkel



# De functie min()

- Geeft de kleinste van twee waarden terug
  - $\text{min}(4,3) = 3$
  - $\text{min}(8,100) = 8$
- Met deze functie kunnen we snelheid begrenzen
  - $\text{min}(\text{speed}+0.3,10)$



# Volgende keer...

