Explore Physics with Algodoo

Presented by-

Om Prakash Patidar

National ICT Awardee

Govt. Excellence School Shajapur (M.P.)

What is Algodoo?

Digital sandbox for creating interactive **scenes.**

- **User friendly** operation.
- Visually **attractive interface**.
- **Science 2D simulation**
- **Animation tool Engineering tool**.

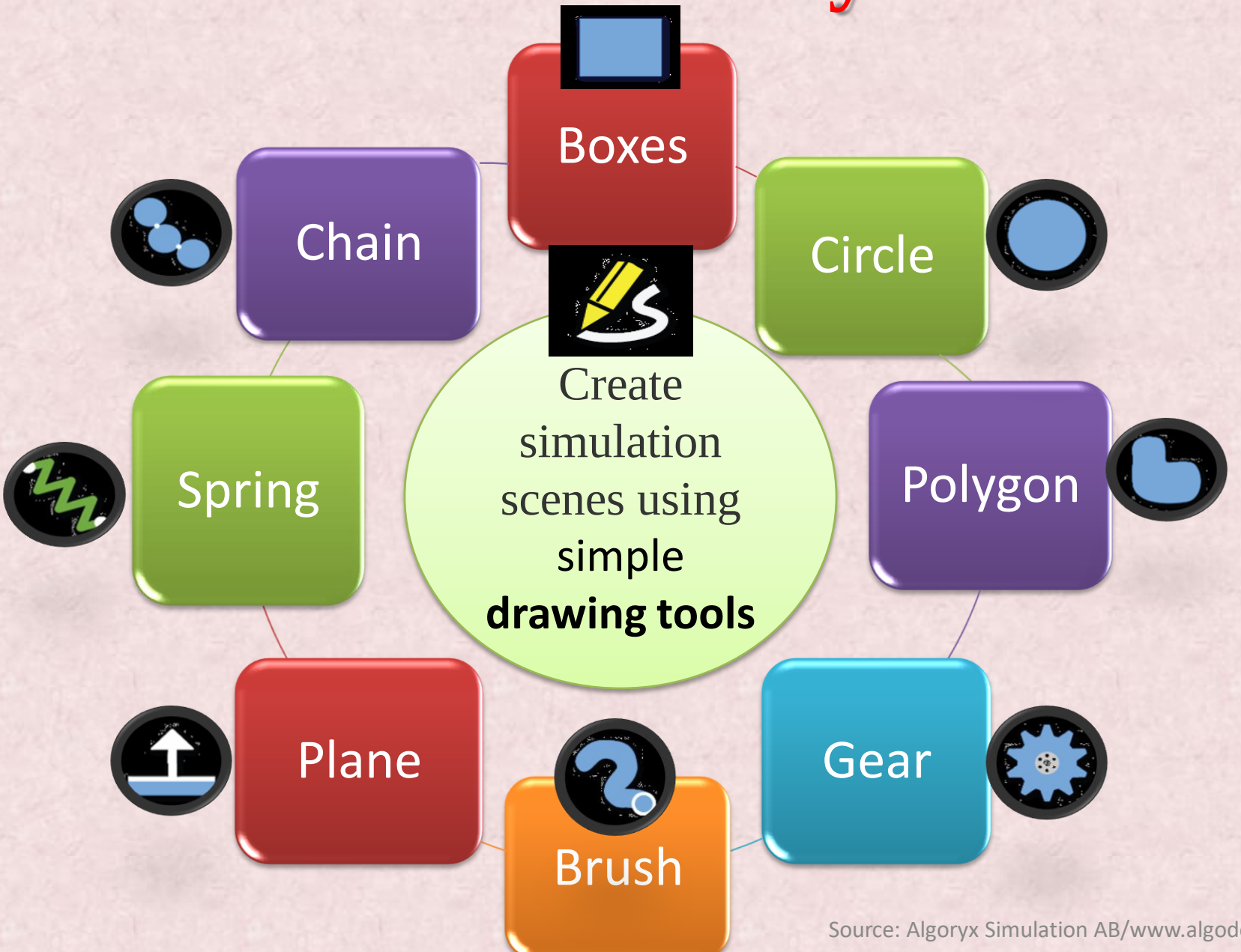
Source: Algoryx Simulation AB/www.algodoo.com

Education with Fun-Algodoo

- Designed in a playful, cartoony manner,
- Explore science with fun.
- Encourages children's own **creativity,**
- Motivation to **construct knowledge**.
- Learn and practice physics at home.
- **Open ended computer game,**

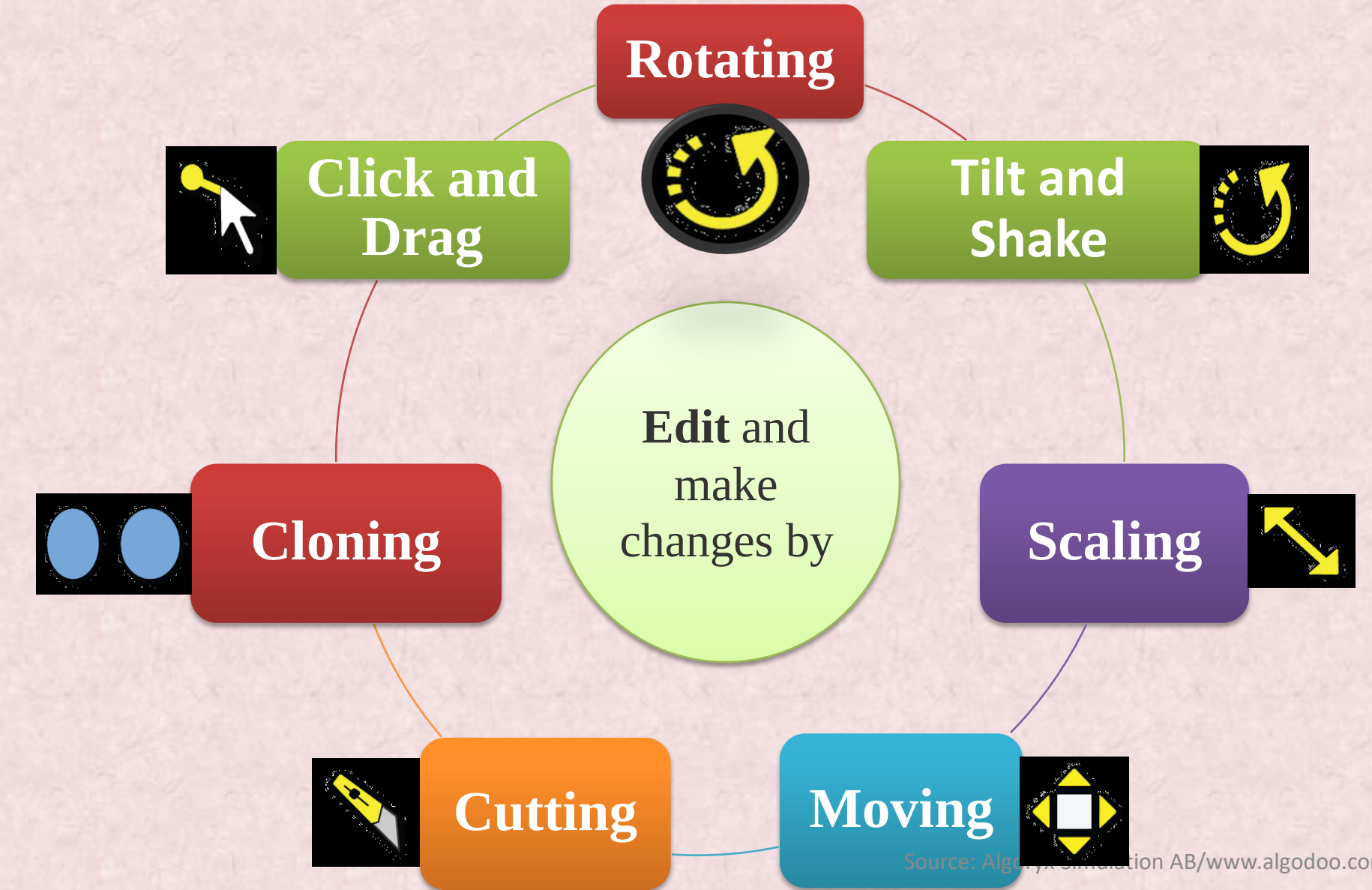
Source: Algoryx Simulation AB/www.algodoo.com

Functionality

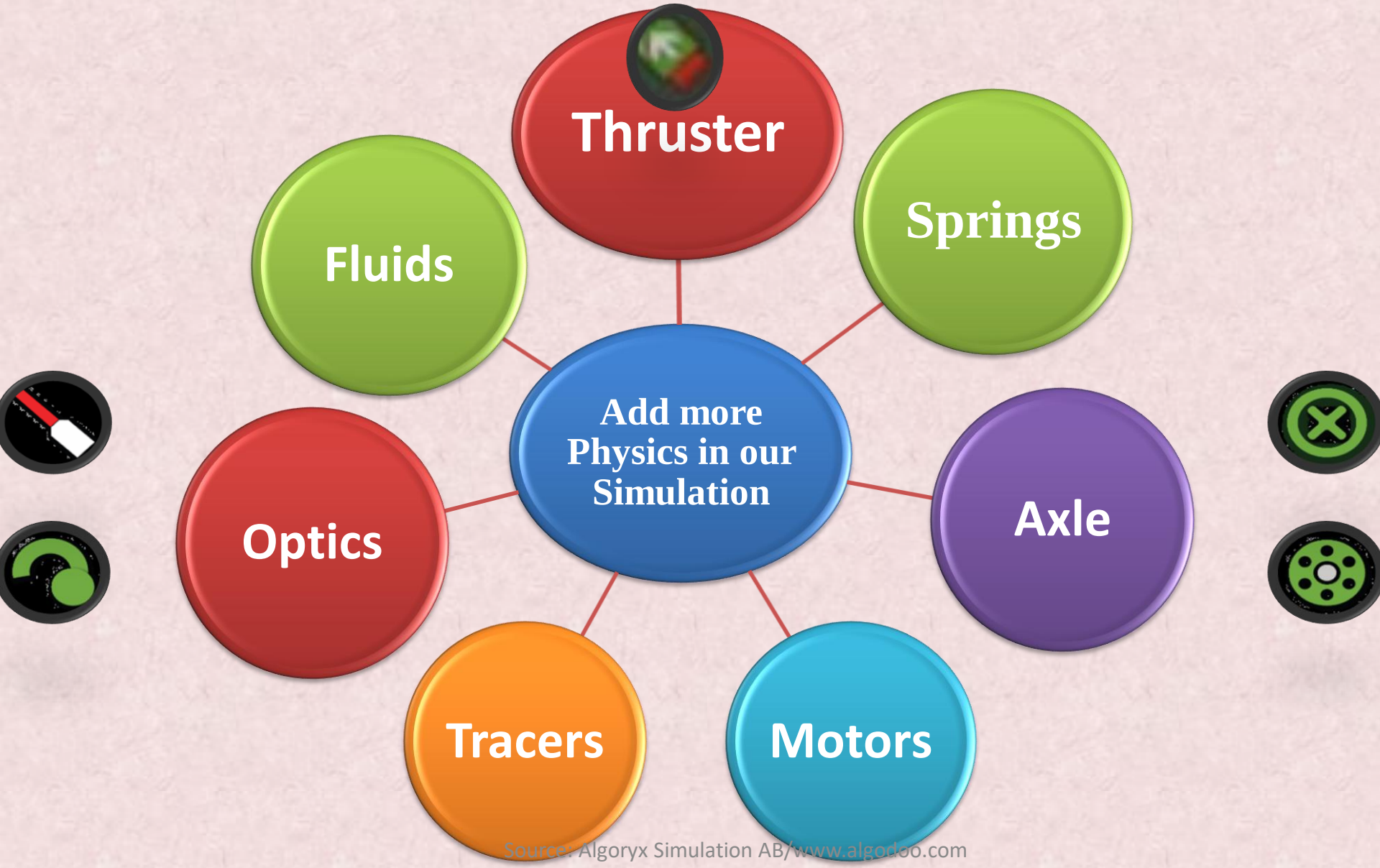


Source: Algoryx Simulation AB/www.algodoo.com

Functionality

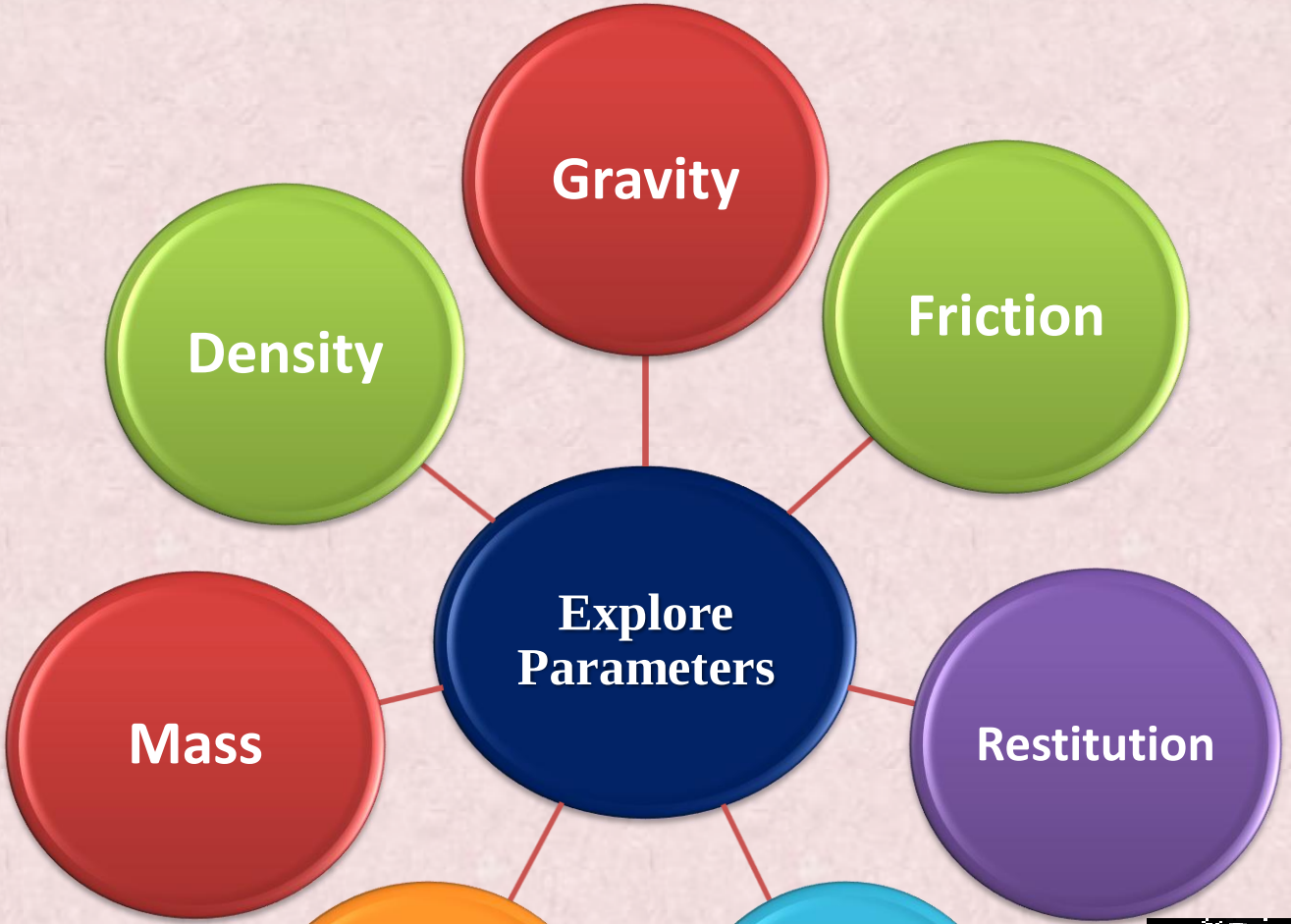


Physical Elements



Source: Algoryx Simulation AB/www.algodoo.com

Physical Elements



Source: Algoryx Simulation AB/www.algodoo.com

Technology

- Based on the **latest technologies** for **interactive simulation**,
- Runs on **Windows and Mac OS.**
- Optimized for the **Intel® powered convertible Classmate PC.**
- Optimized for interactive whiteboard systems like **SMART Board**.

Source: Algoryx Simulation AB/www.algodoo.com

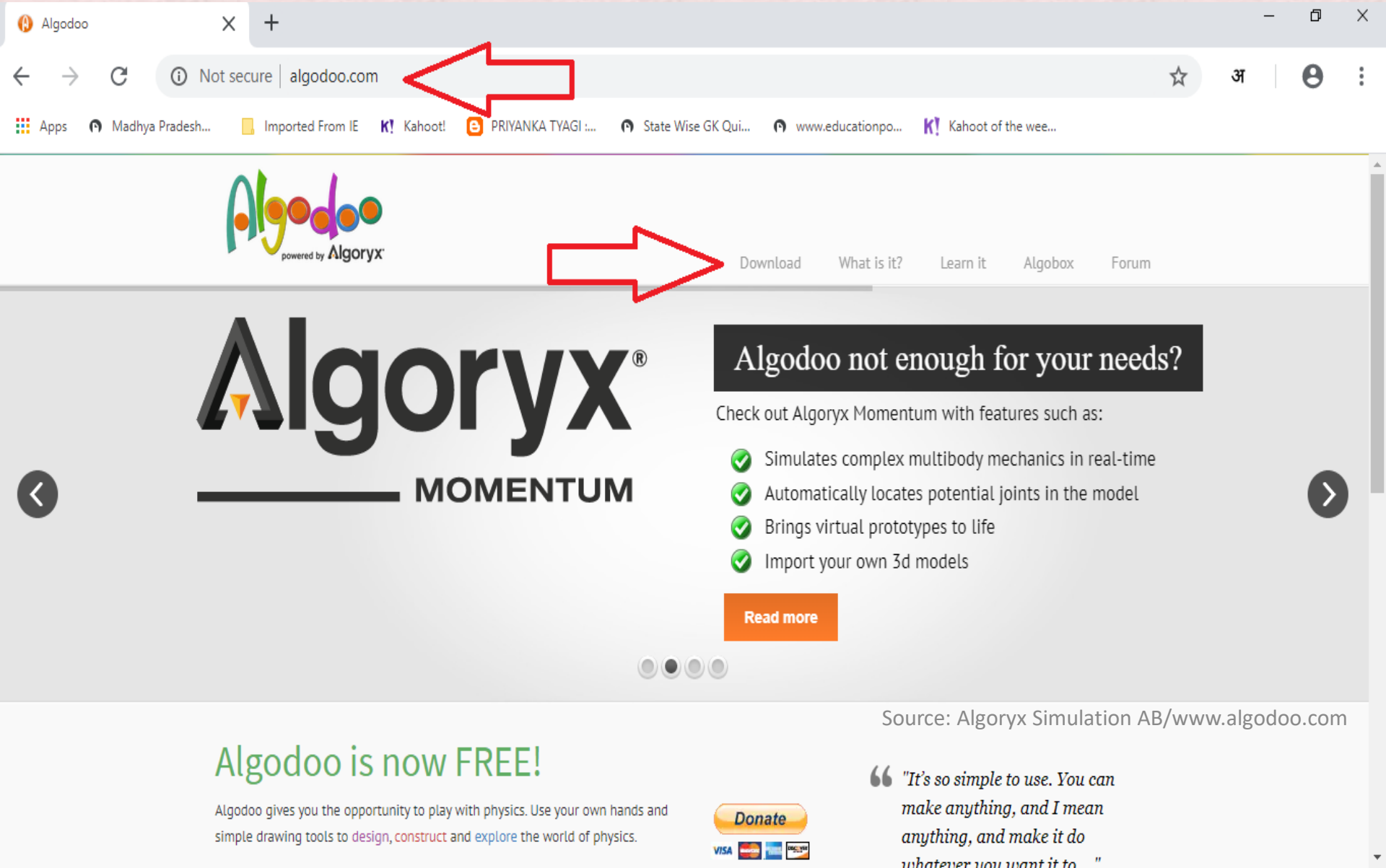
Algobox – Scene Repository

In **Algobox**,(scene library,) you can easily-

- **Save and share** your scenes.
- **Browse and download** scenes.
- **Discuss and share** your thoughts about Algodoo.

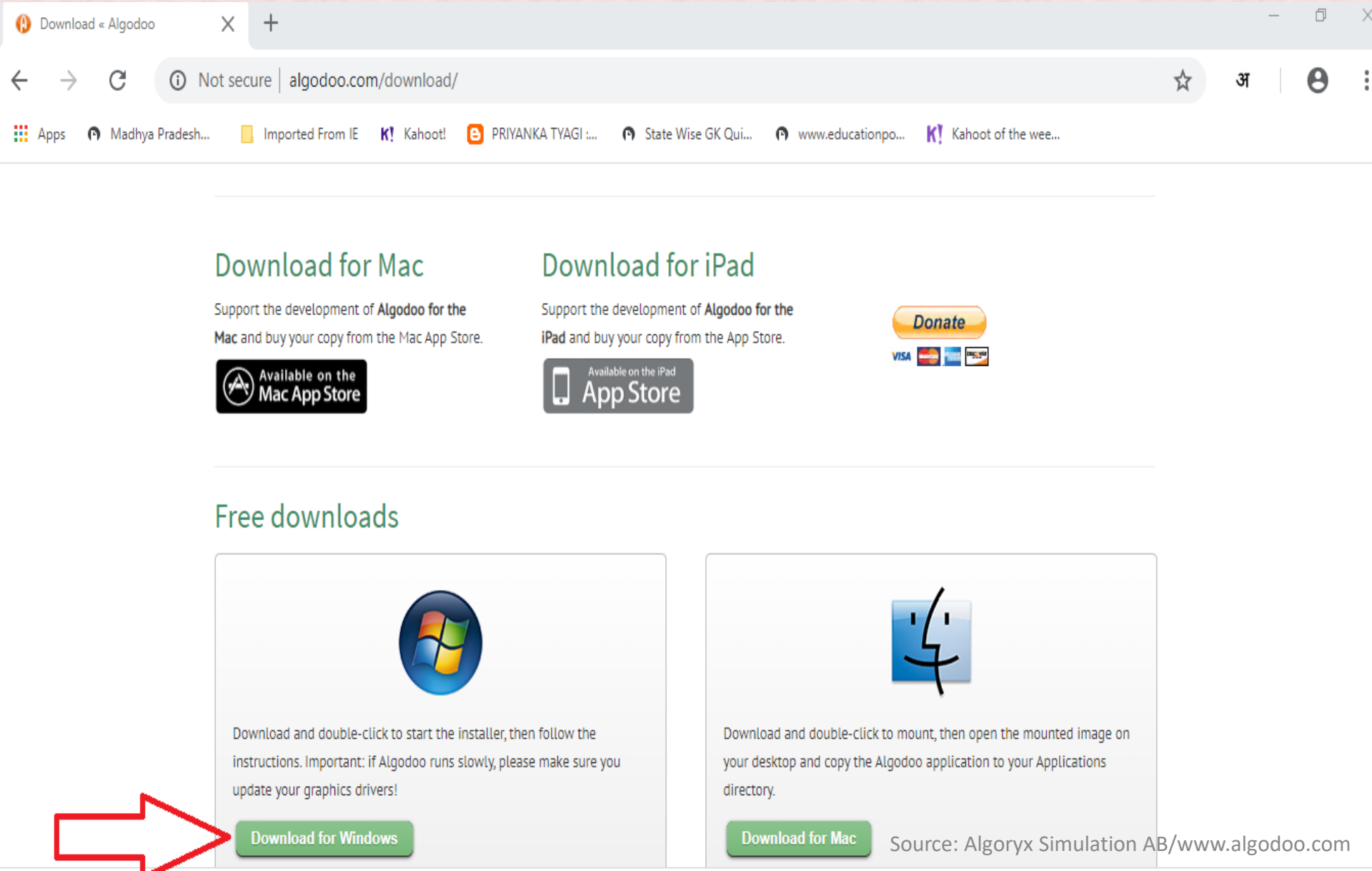
Source: Algoryx Simulation AB/www.algodoo.com

How to Download Algodoo?



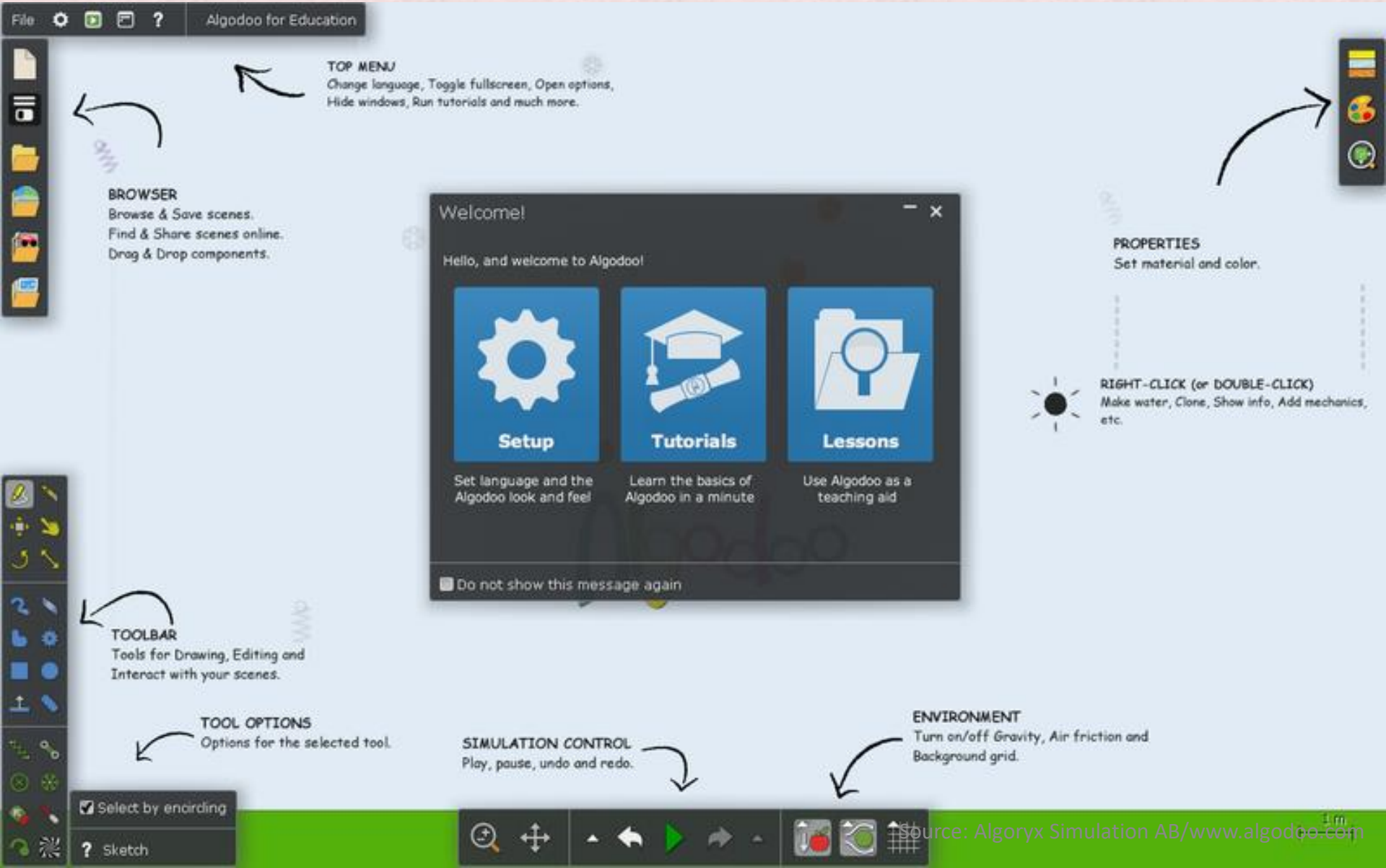
Source: Algoryx Simulation AB/www.algodoo.com

How to Download Algodoo?



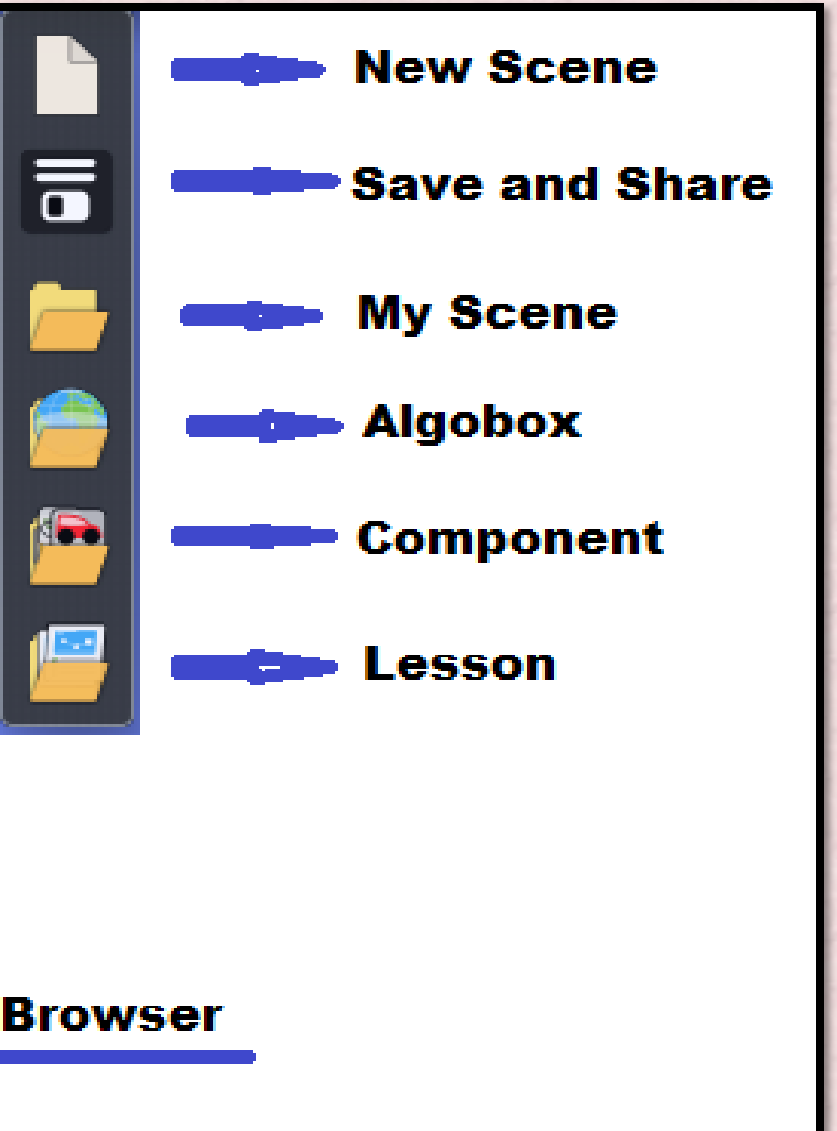
Source: Algoryx Simulation AB/www.algodoo.com

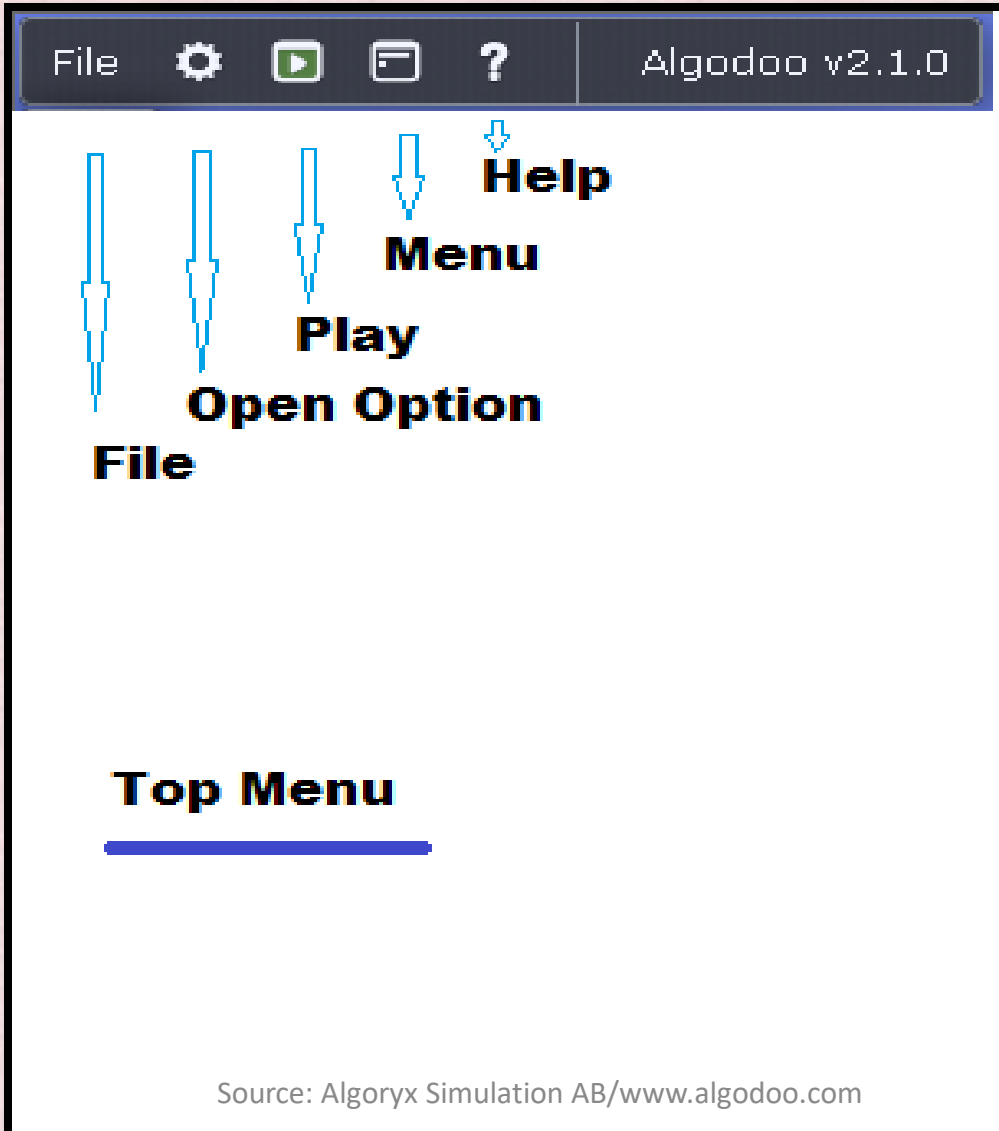
Main Window



Source: Algoryx Simulation AB/www.algodoo.com

Tool Bar





Source: Algoryx Simulation AB/www.algodoo.com

Tool Bar

Sketch (K)

Move Tool (M)

Rotate

Brush (B)

Polygon (P)

Box (X)

Plane Tool (A)

Spring Tool (S)

Axle Tool (H)

Laser Pen (L)

Texture Tool (U)

Knife (T}

Drag

Scale (R)

Eraser

Gear Tool (G)

Circle Tool (C)

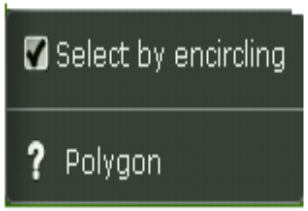
Chain Tool (N)

Fixate (F)

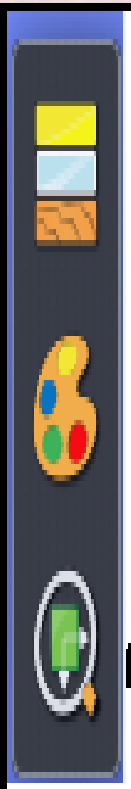
Thruster (O)

Tracer (E)

Tool Bar



Tool Option



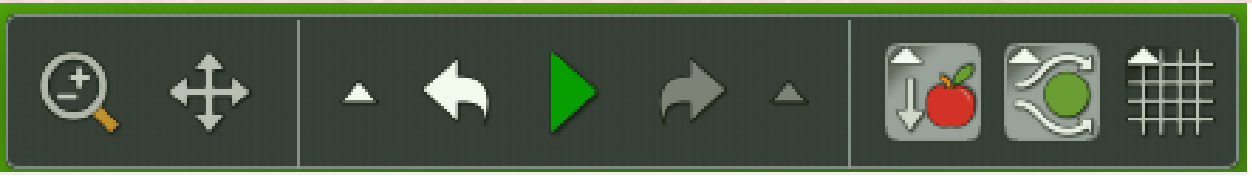
Material

Appearence

Visualization

Properties

Tool Bar



Environment

Grid

Air Friction and Buoyancy

Gravity

List of latest redoing

Redo

Pause and start Simulation

Undo

List of latest undoing

Move Screen

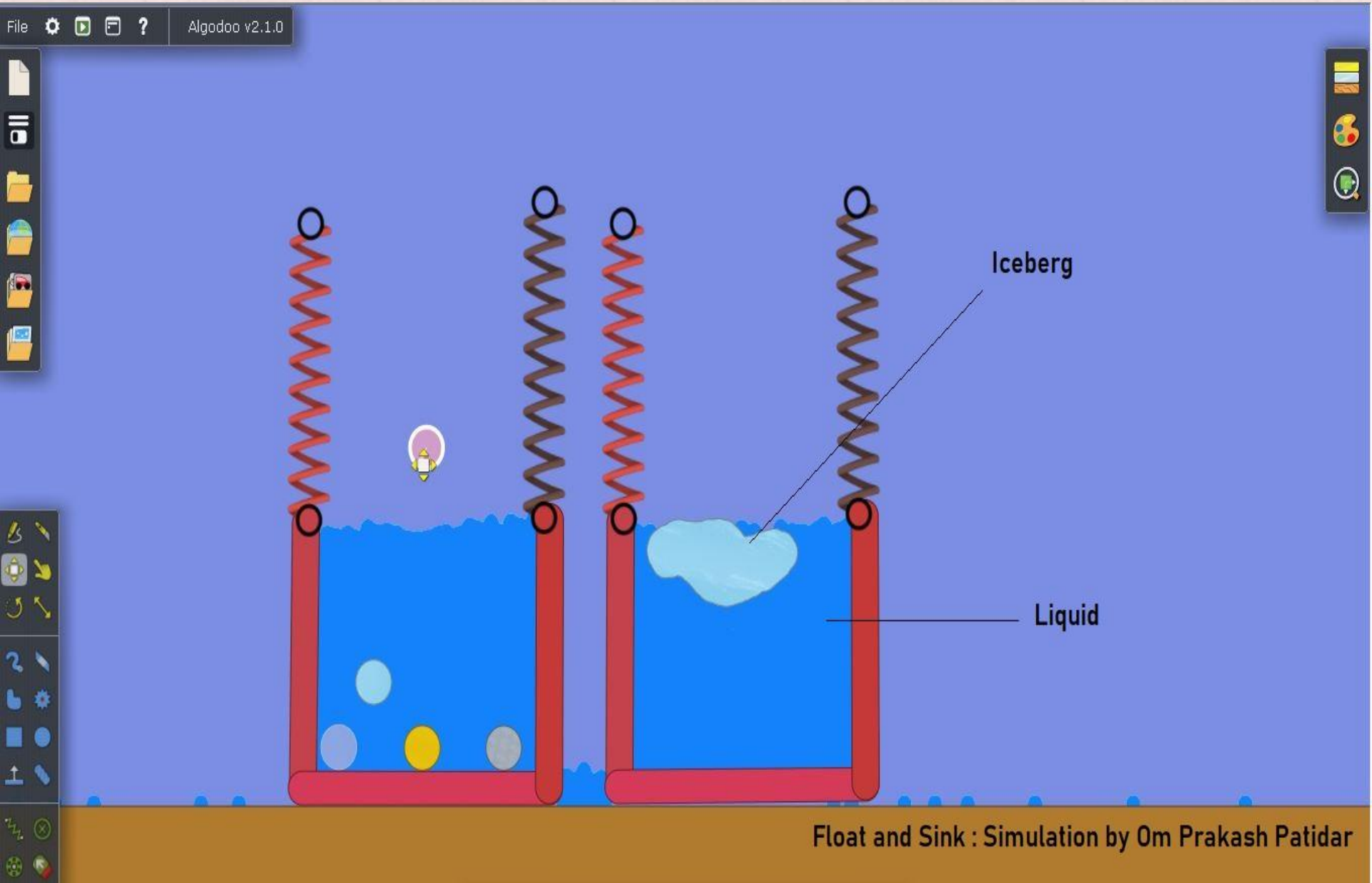
Zoom in -Zoom out

Simulation Control

Source: Algoryx Simulation AB/www.algodoo.com

Why Wheels are Circular in Shape?

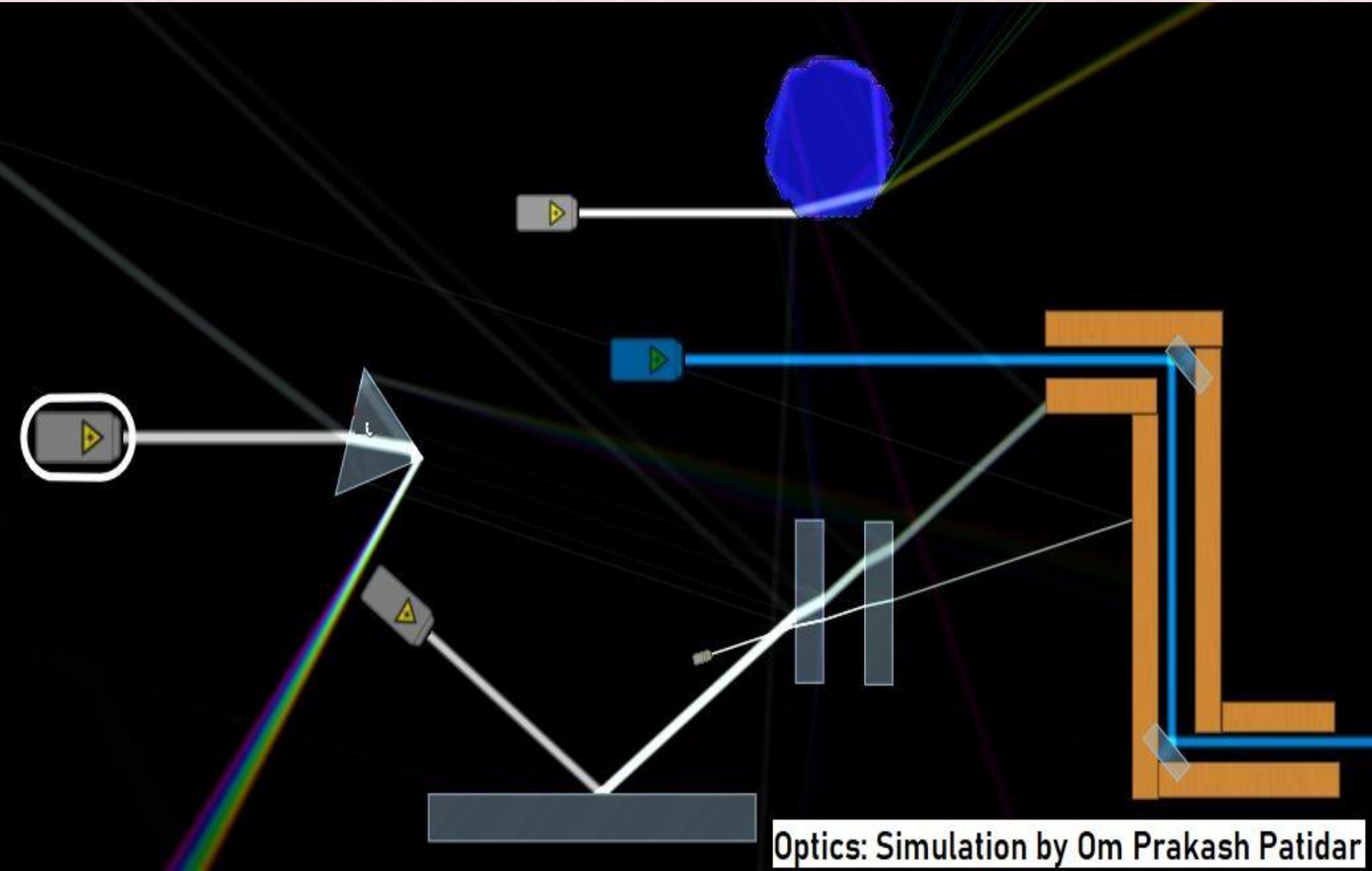
Float and Sink



Motion

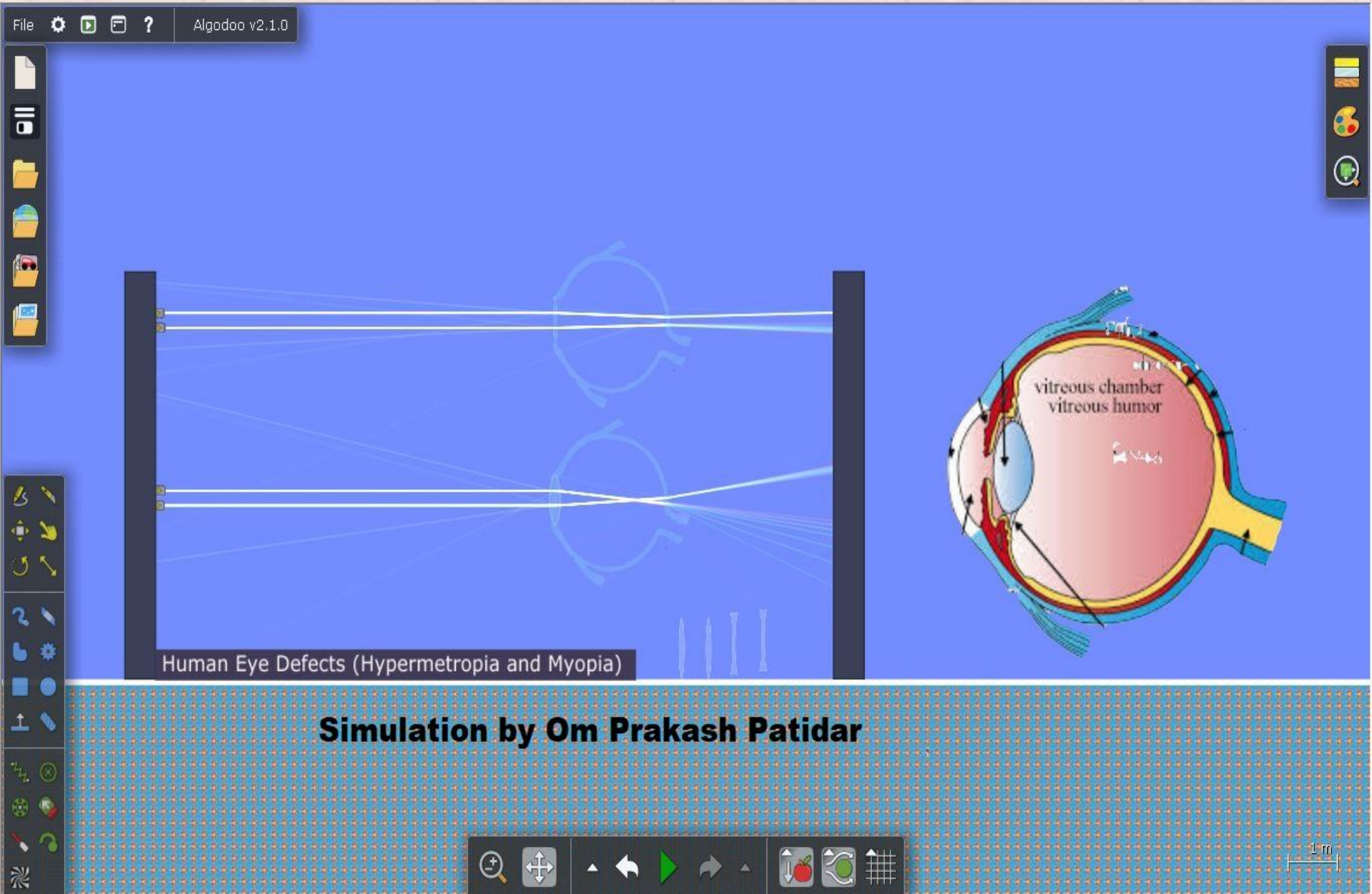

File
Algodoo v2.1.0
Circle
Speed / Time
3 m/s
2 m/s
1 m/s
0
1780 s
1790 s
1800 s
x = 1778.93 s (Time)
y = 0.982 m/s (Speed)
dy/dx ≈ -5.081 m/s²
∫(x=1777.08 - 1778.93 s) ≈ 4.82 m
p
N
p
Motion : Simulation by Om Prakash Patidar

Optics: Reflection and refraction



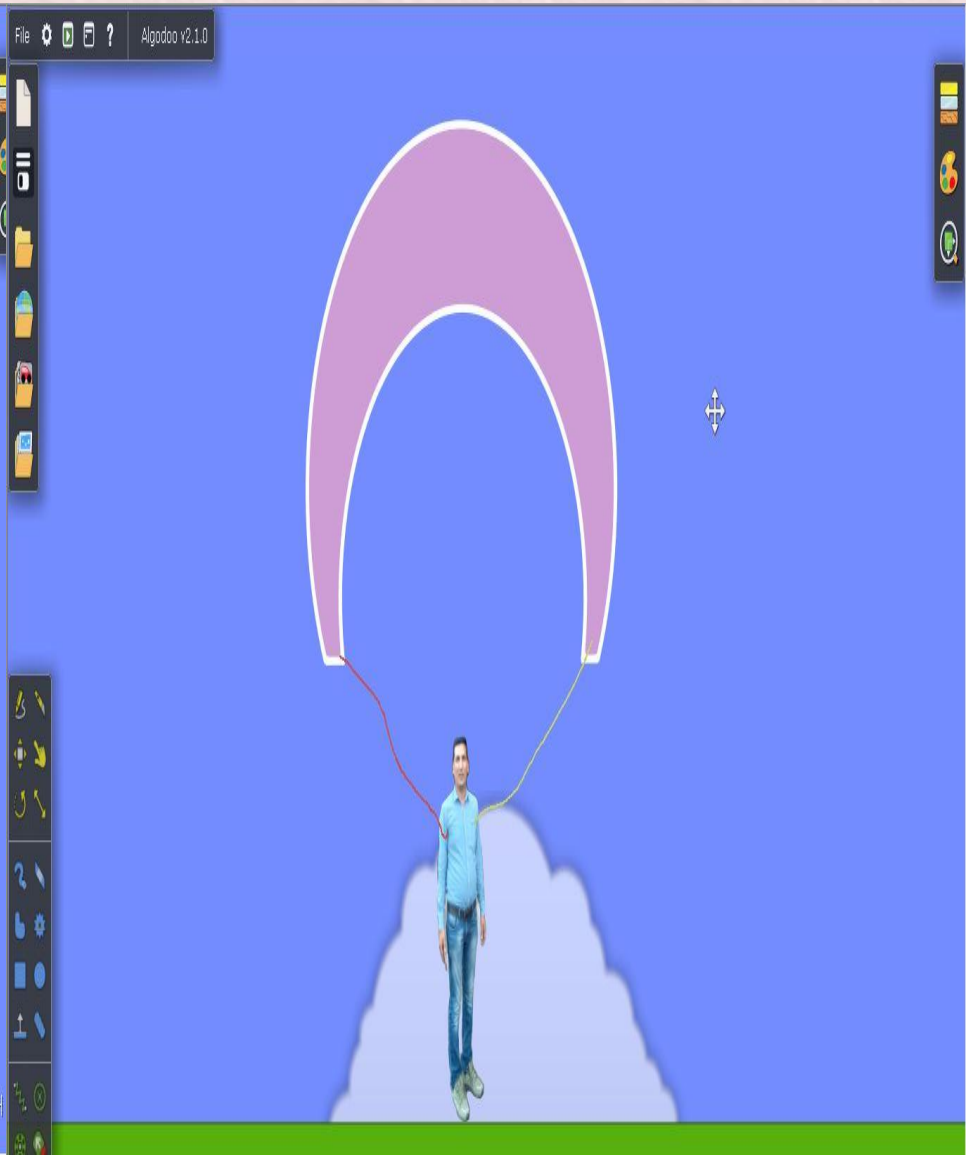
Friction of a Sliding Surface

Human Eye and its Defects

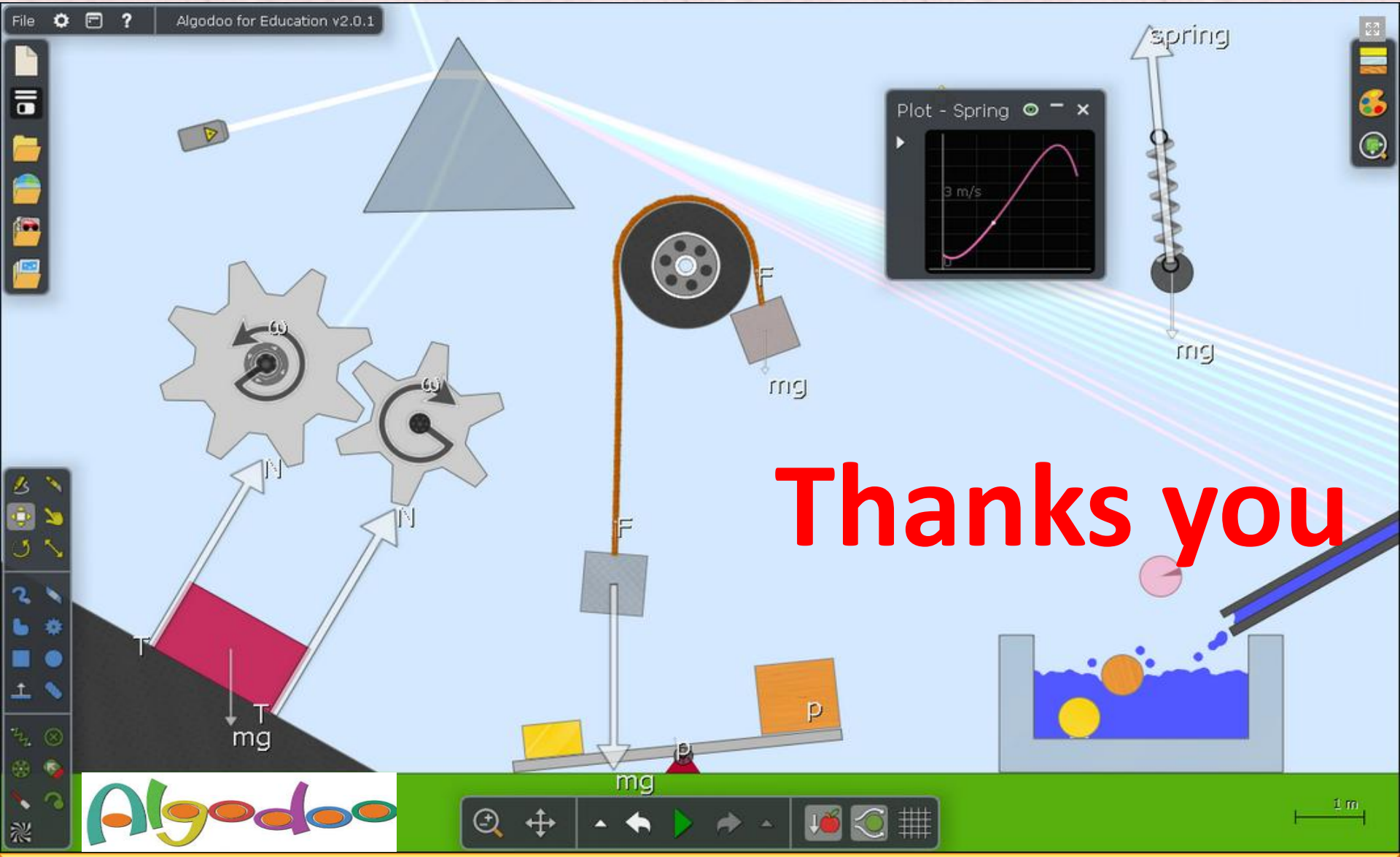


Gears, Chains, Ropes and Pulleys

Centre of Gravity-Parachuting



be creative with Algodoo…



Source: Algoryx Simulation AB/www.algodoo.com