

POWER OF AR AND VR

PARTICLE SYSTEM



**Co-funded by
the European Union**



2024-1-PL01-KA220-VET-000243150

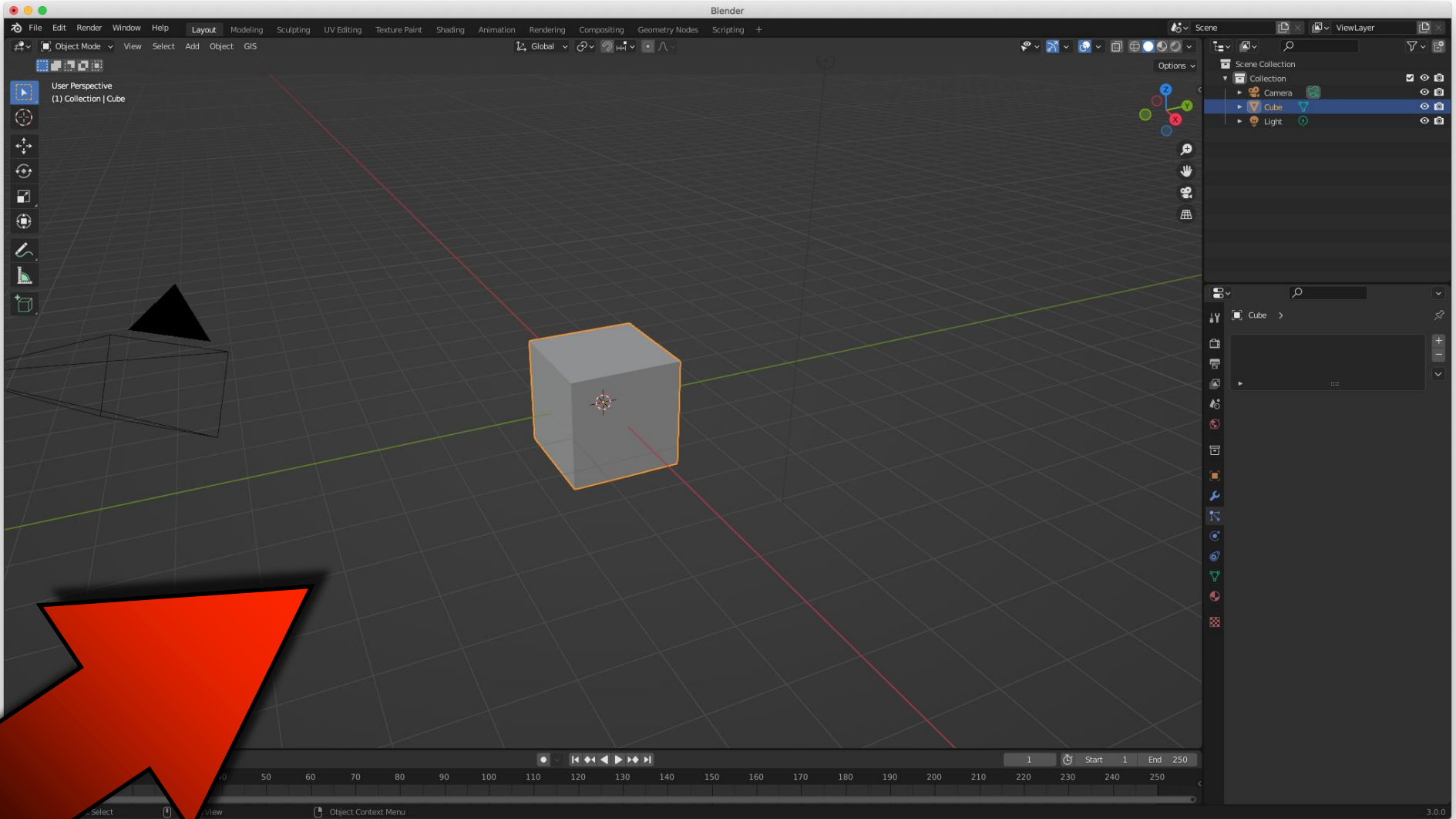
JACEK KAWAŁEK



POWER OF AR AND VR



START BLENDER



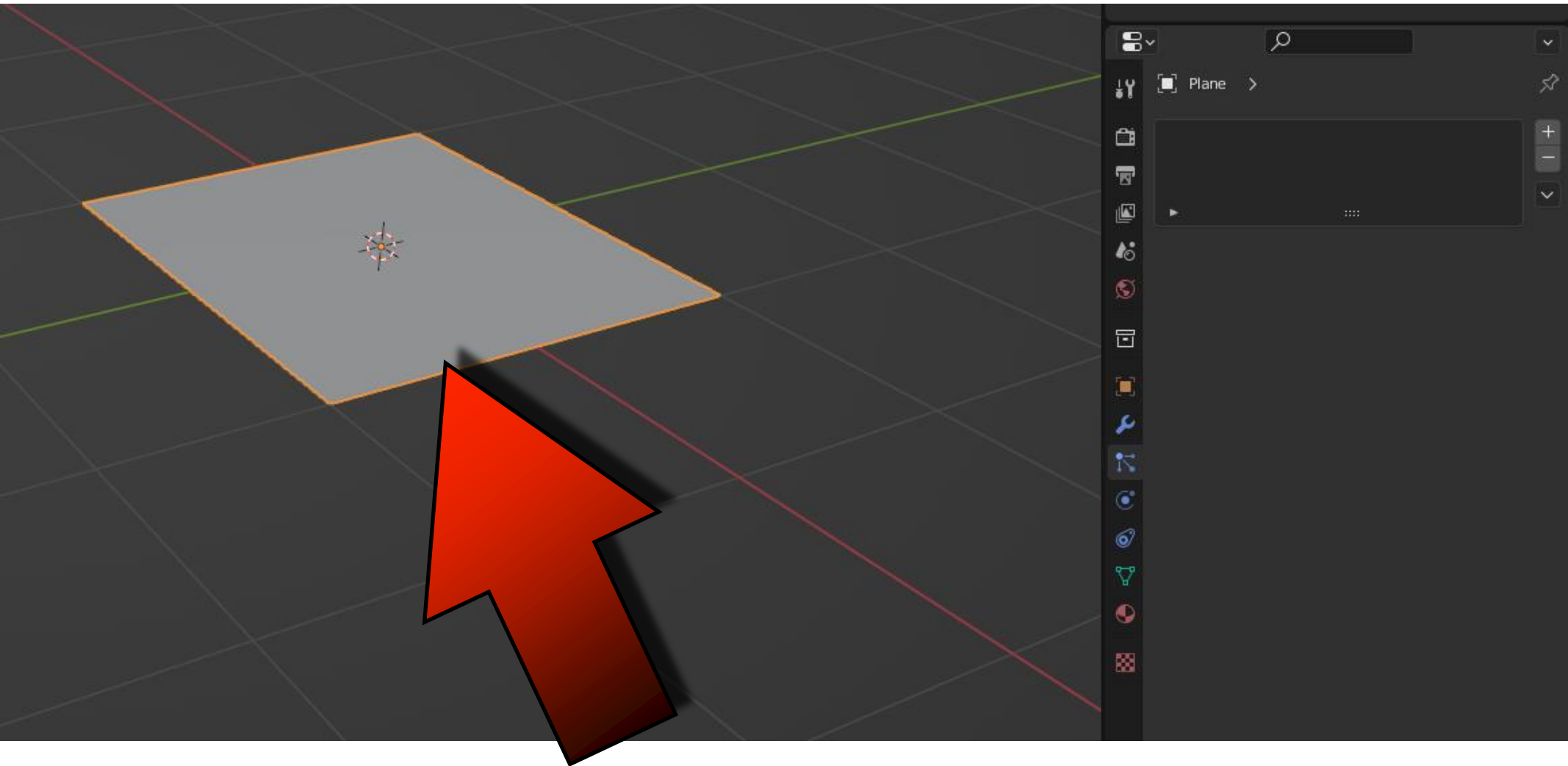
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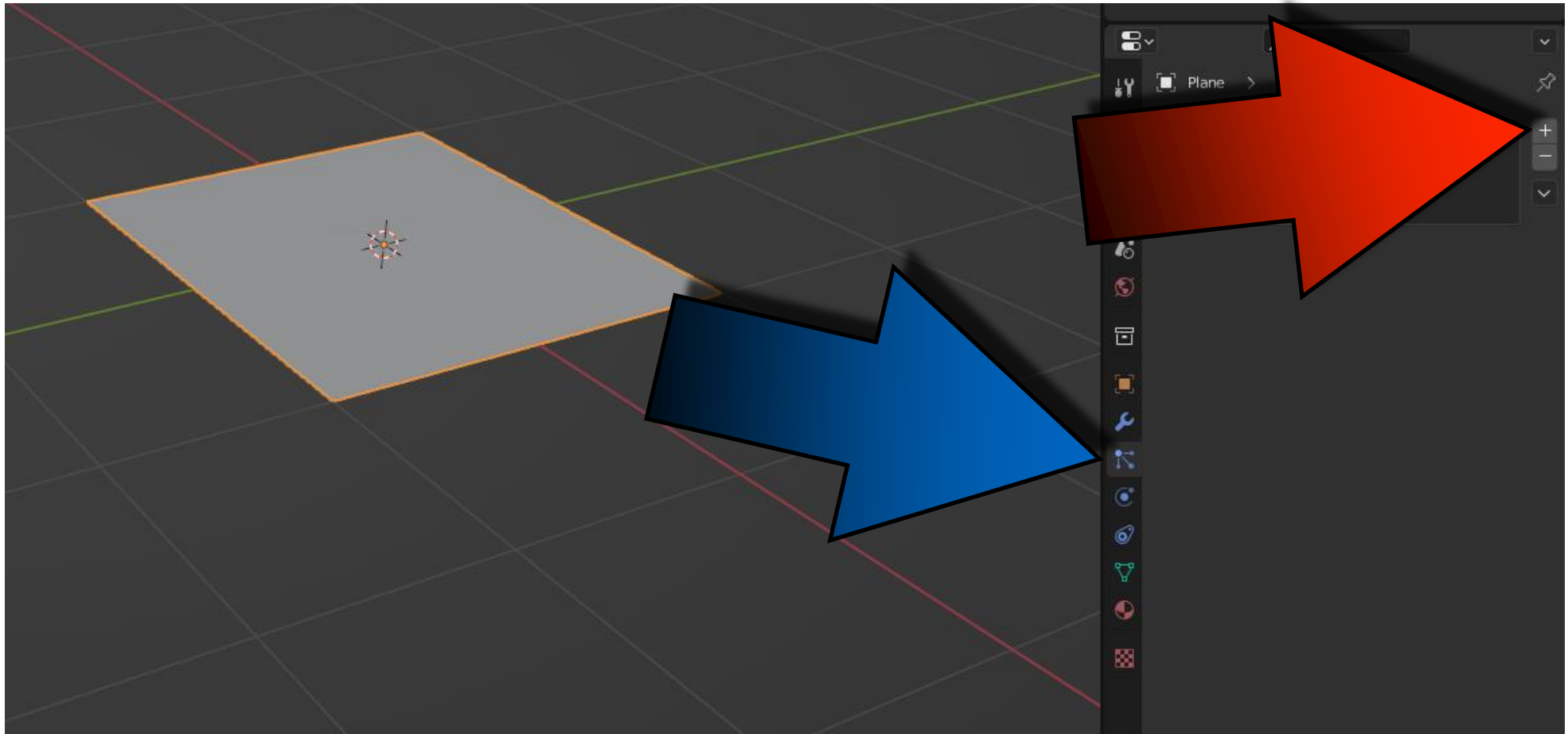


INSERT PLANE



PARTICLE SYSTEM

GO TO **PARTICLE SYSTEM** AND **CLICK IN +**



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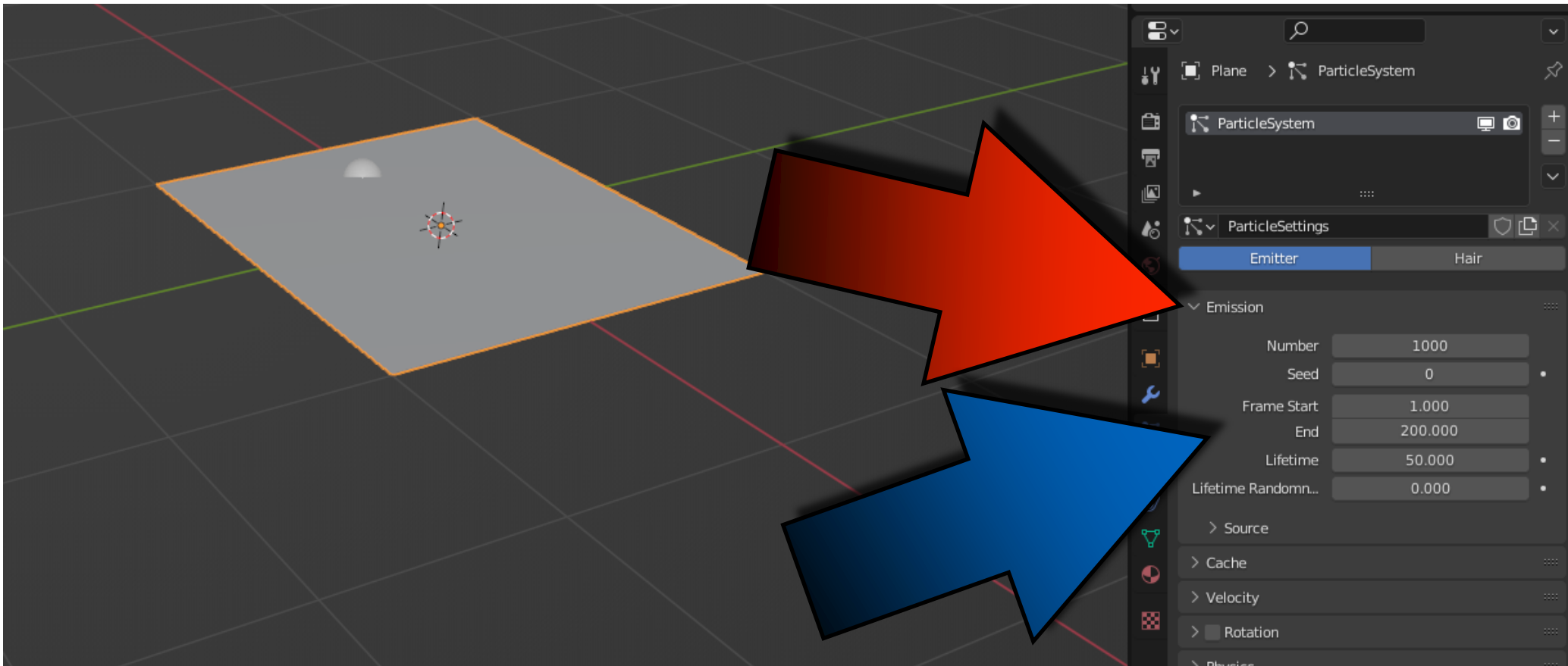
**PRESS THE SPACEBAR
AND SEE THE ANIMATION**



<https://youtube.com/shorts/eDceRbeUMC4?feature=share>

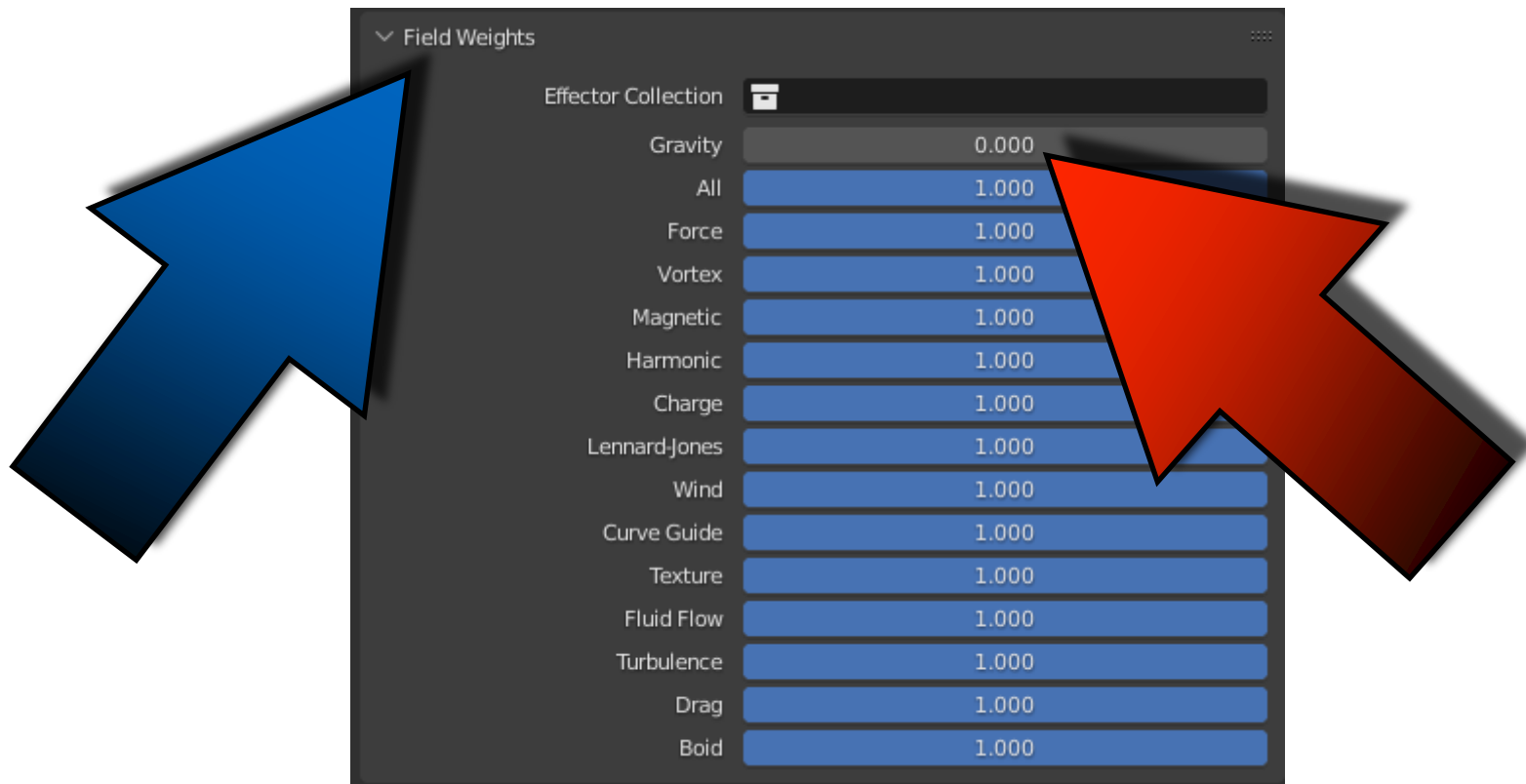
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IN **EMISSION** WE CAN CHANGE THE PARAMETERS OF THE PARTICLES



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GO TO FILED WEIGHT AND CHANGE GRAVITY TO 0



PARTICLE SYSTEM



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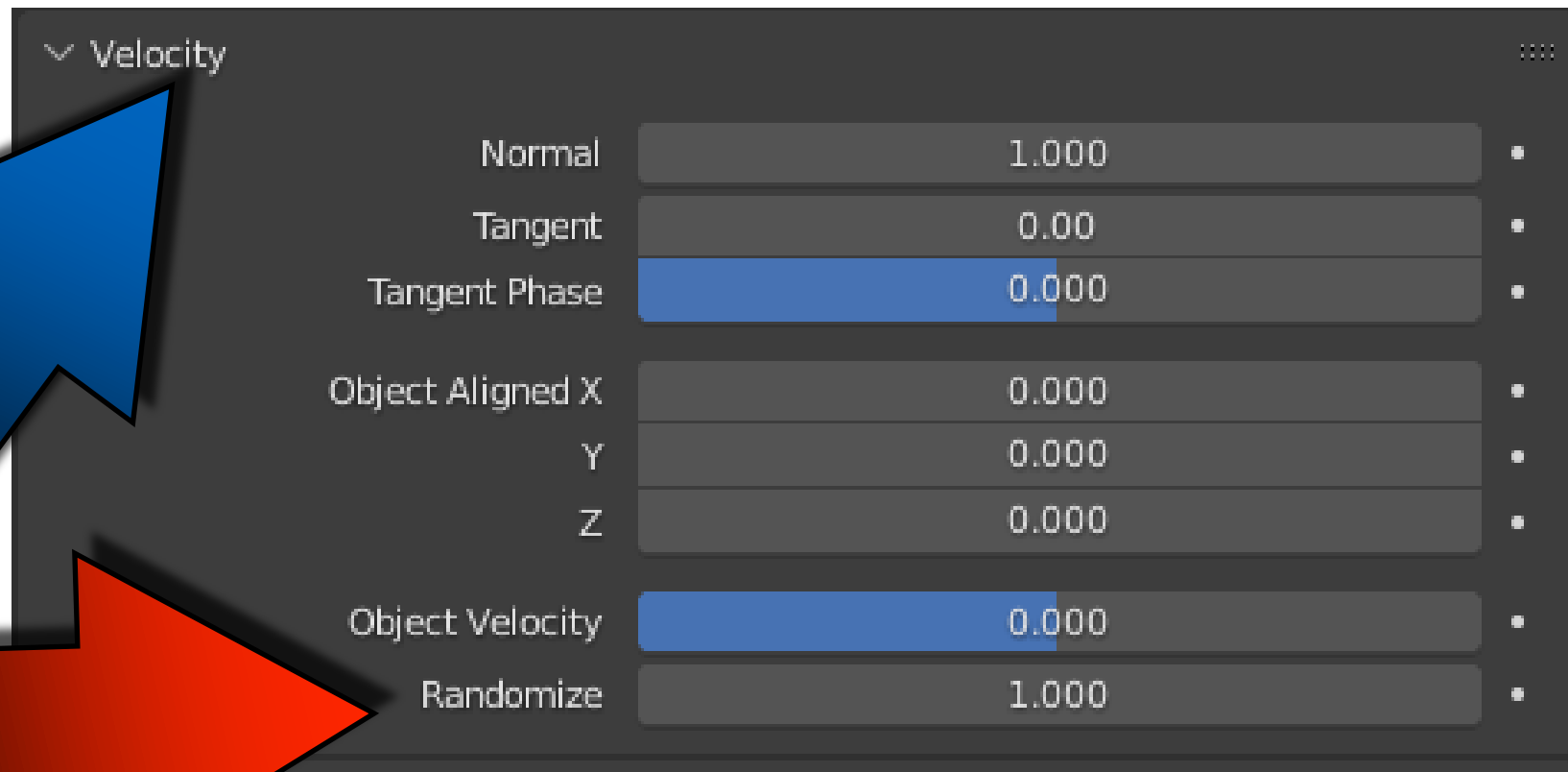
**PRESS THE SPACEBAR
AND SEE THE ANIMATION**



<https://youtube.com/shorts/M3k90iVR5Fk>

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IN VELOCITY RANDOMIZE SET TO 1



Velocity

Normal	1.000
Tangent	0.00
Tangent Phase	0.000
Object Aligned X	0.000
Y	0.000
Z	0.000
Object Velocity	0.000
Randomize	1.000

A screenshot of a software interface for a particle system's velocity settings. The panel is titled 'Velocity' and contains several rows of settings, each with a numerical value and a small circular icon to its right. A large blue arrow points to the 'Randomize' setting, which is set to 1.000. A large red arrow points to the 'Object Velocity' setting, which is set to 0.000. The 'Tangent Phase' setting is also highlighted with a blue bar.

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**PRESS THE SPACEBAR
AND SEE THE ANIMATION**



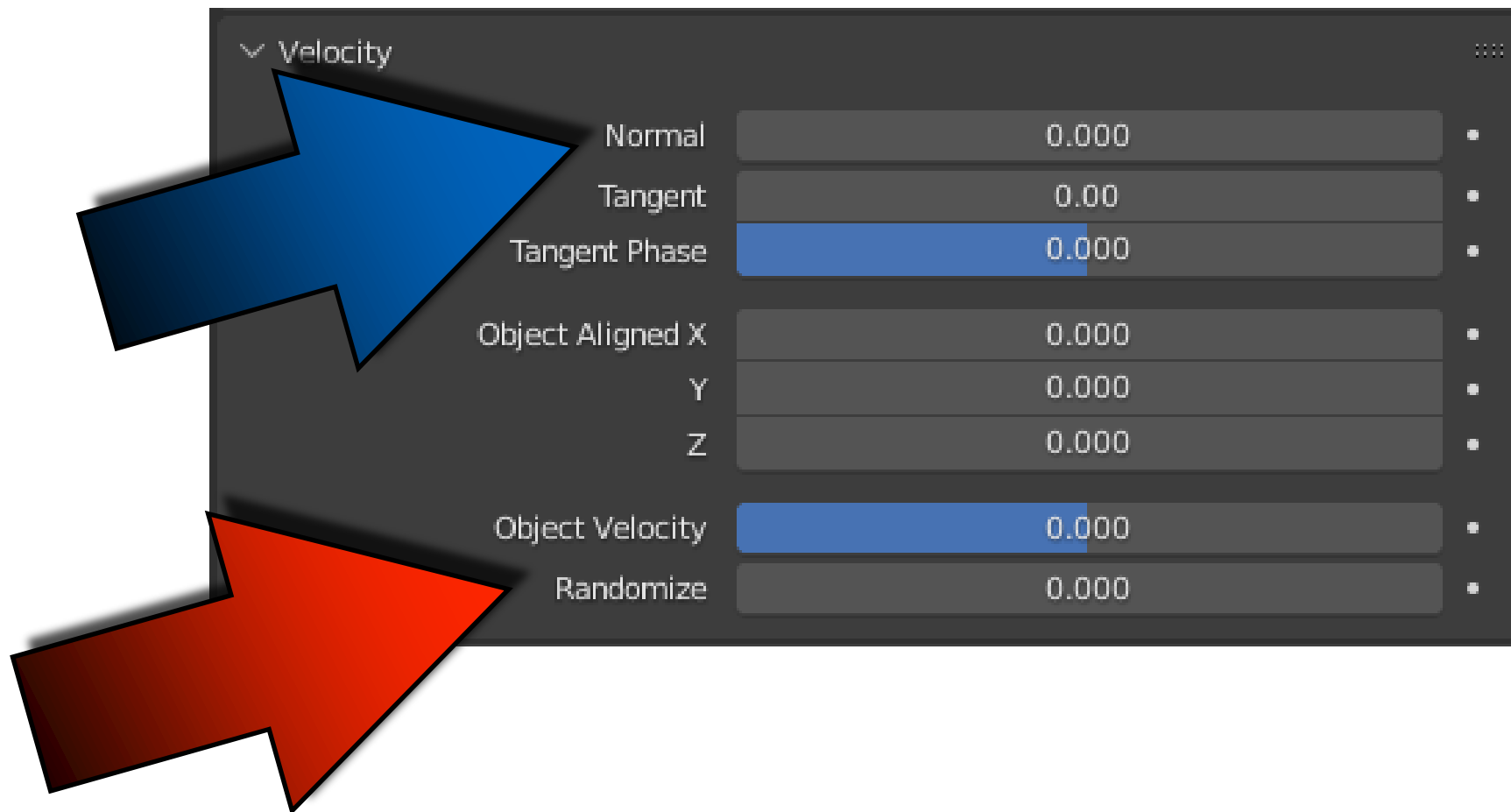
https://youtube.com/shorts/5olpm_1cn2s?feature=share

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SET NORMAL=0

RANDOMIZE=0



Velocity

Normal	0.000	•
Tangent	0.00	•
Tangent Phase	0.000	•
Object Aligned X	0.000	•
Y	0.000	•
Z	0.000	•
Object Velocity	0.000	•
Randomize	0.000	•

A screenshot of a particle system's velocity settings panel. The panel is dark grey with a list of settings. A blue arrow points to the 'Normal' field, and a red arrow points to the 'Randomize' field. Both fields are highlighted with a blue bar, indicating they are selected or active. The values for all fields are 0.000 or 0.00.

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**PRESS THE SPACEBAR
AND SEE THE ANIMATION**

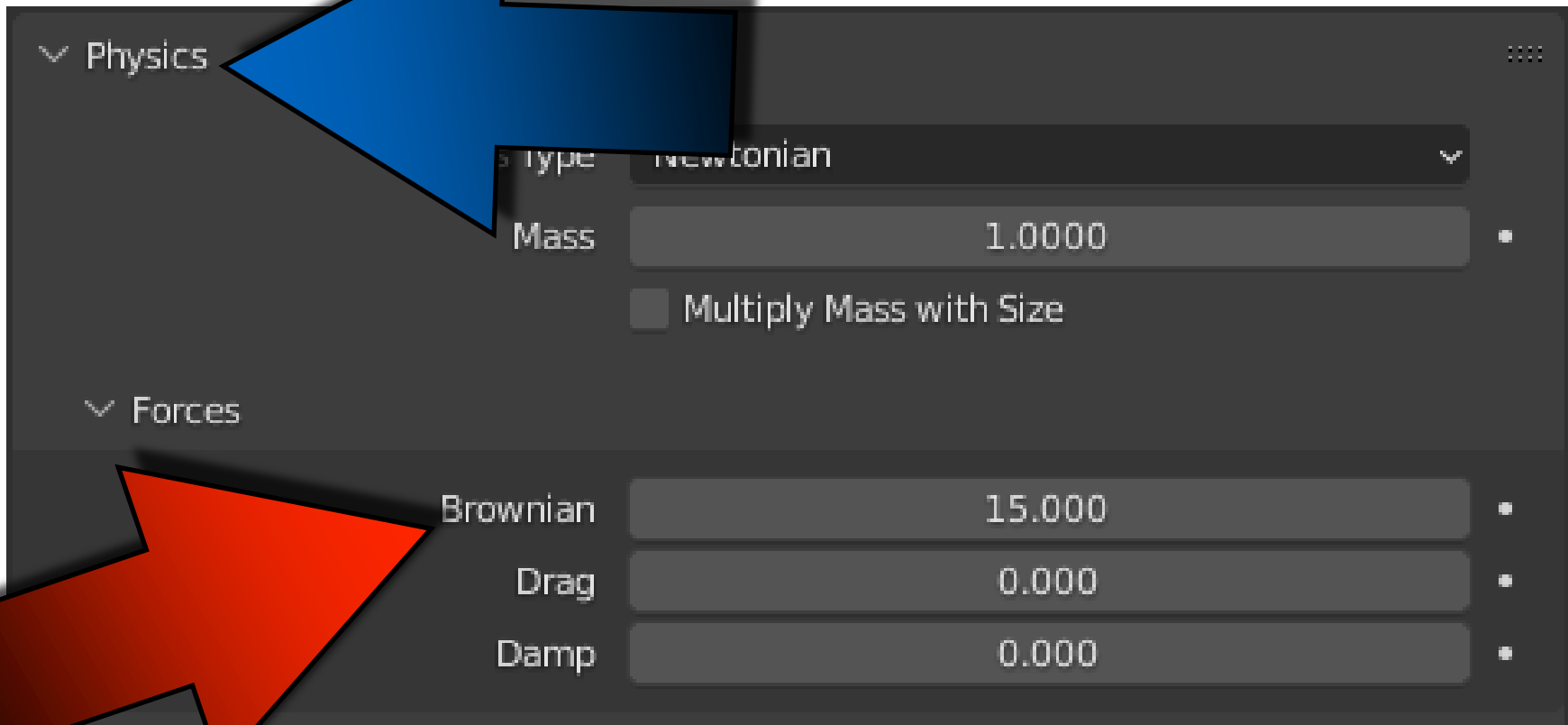


<https://youtu.be/SL4Ee6f9wsg>

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IN PHYSICS SET BROWNIAN TO 15



The screenshot shows a settings menu for a physics engine. A blue arrow points to the 'type' dropdown menu, which is set to 'newtonian'. A red arrow points to the 'Brownian' input field, which is set to '15.000'. Other visible settings include 'Mass' at '1.0000' and 'Multiply Mass with Size' (unchecked). Under the 'Forces' section, 'Drag' and 'Damp' are both set to '0.000'.

Category	Property	Value
Physics	type	newtonian
	Mass	1.0000
	Multiply Mass with Size	<input type="checkbox"/>
Forces	Brownian	15.000
	Drag	0.000
	Damp	0.000

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**PRESS THE SPACEBAR
AND SEE THE ANIMATION**



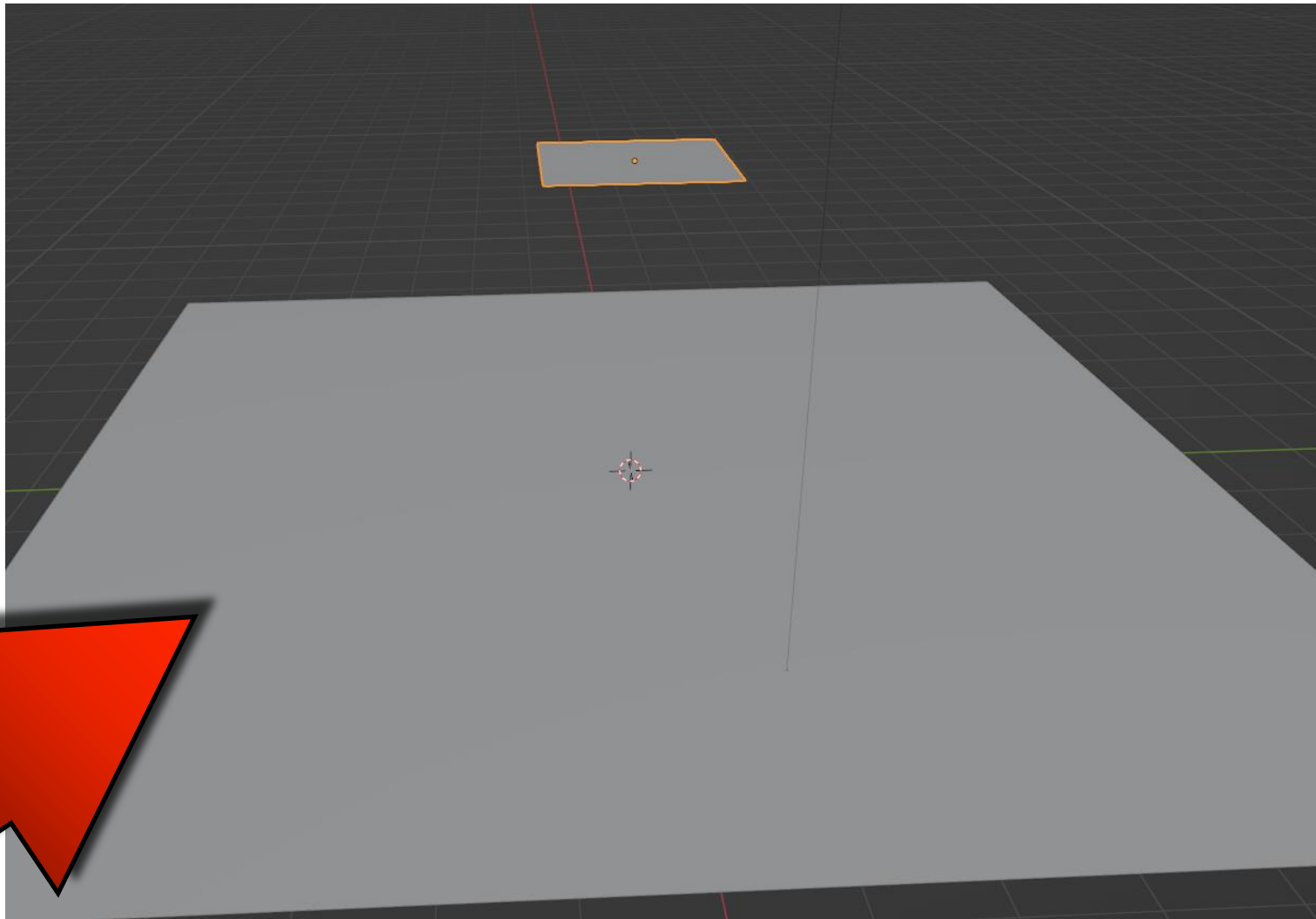
<https://youtu.be/XiQ99ZLVjBA>

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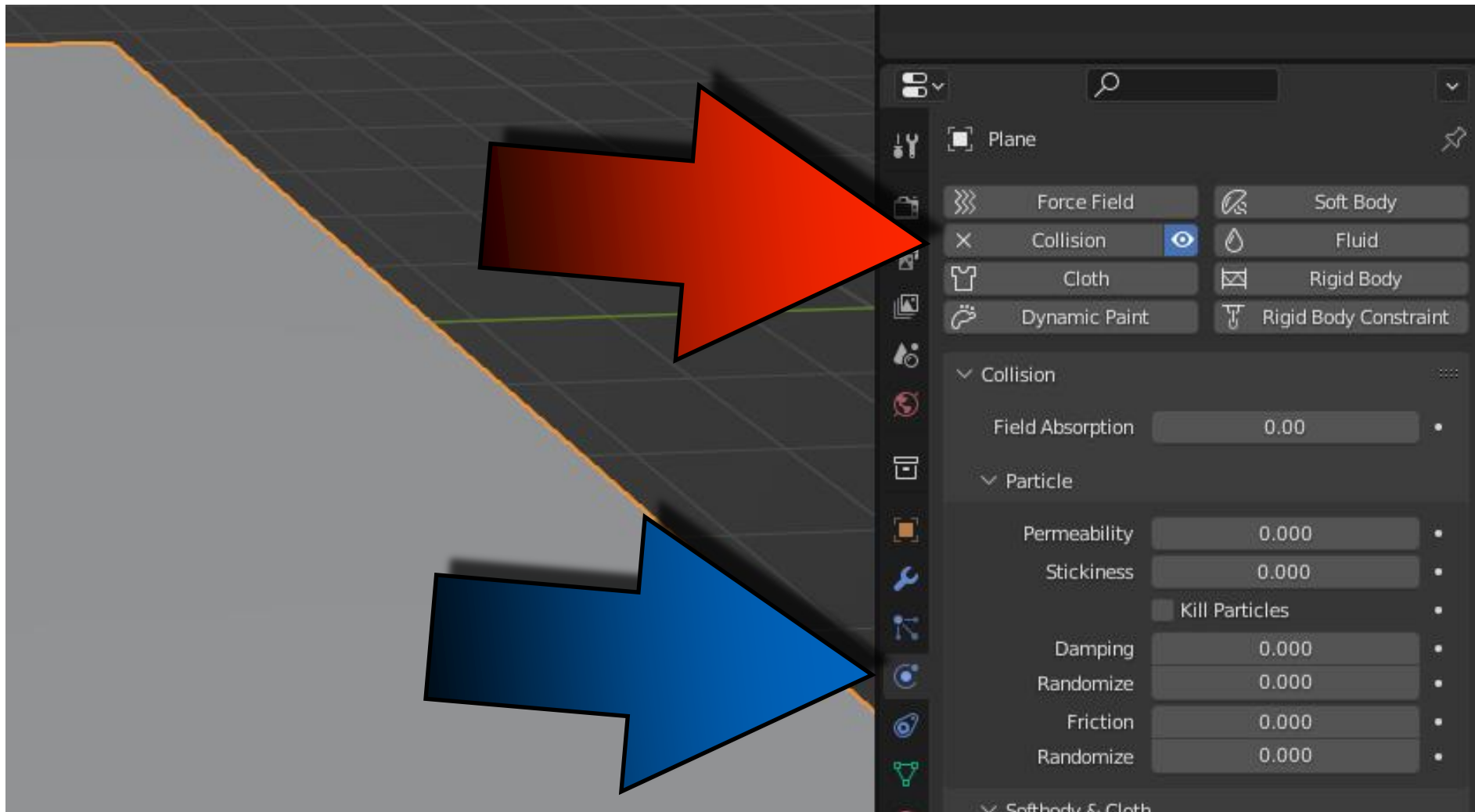
OPEN A NEW BLENDER

AND INSERT **TWO PLANES** AS ON A SCREEN



PARTICLE SYSTEM

FOR LOWER TURN ON **COLLISION**



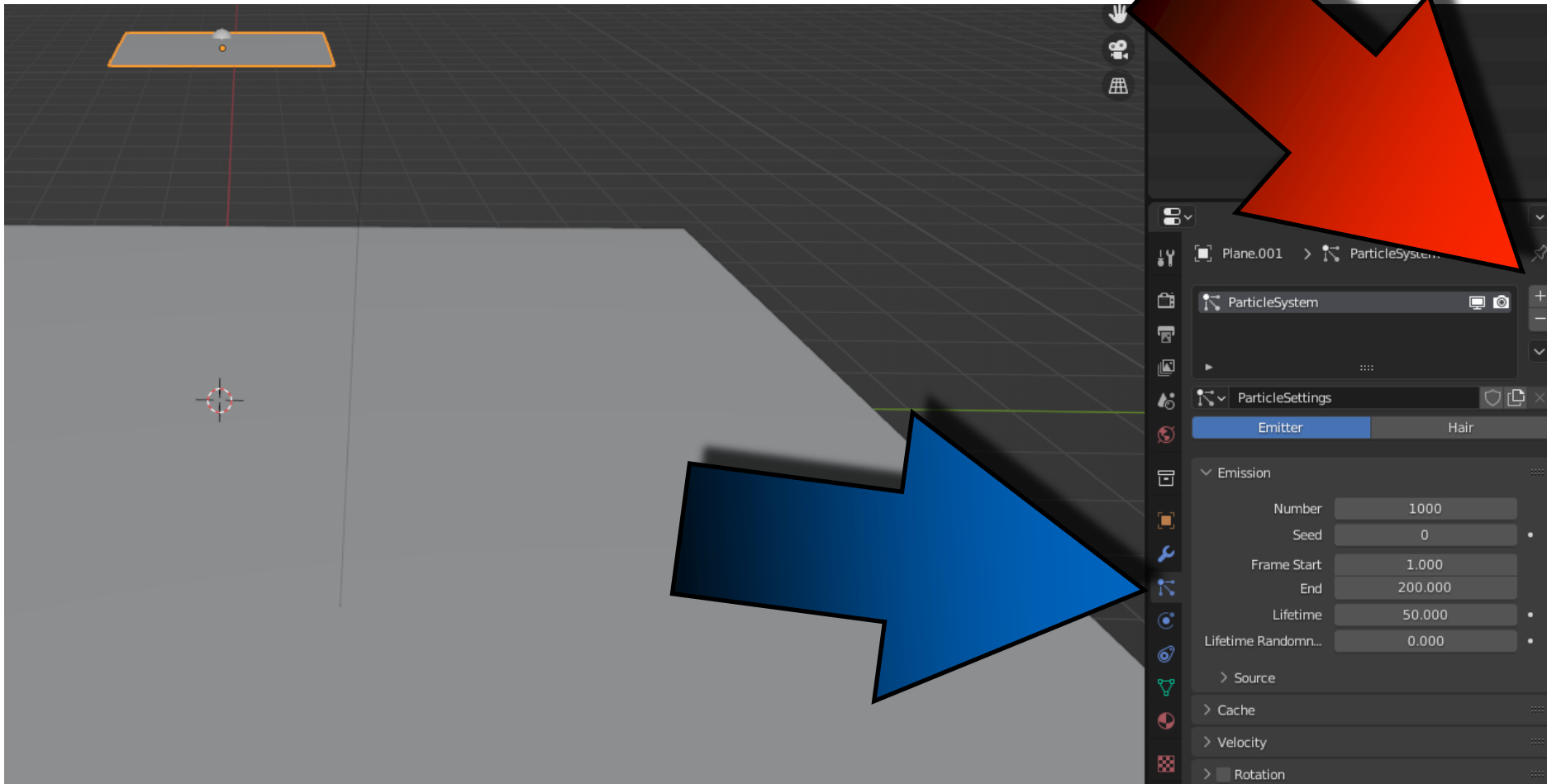
PARTICLE SYSTEM



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FOR THE UPPER **PARTICLE SYSTEM**



PARTICLE SYSTEM



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**PRESS THE SPACEBAR
AND SEE THE ANIMATION**



<https://youtu.be/SlohDVKPvbY>

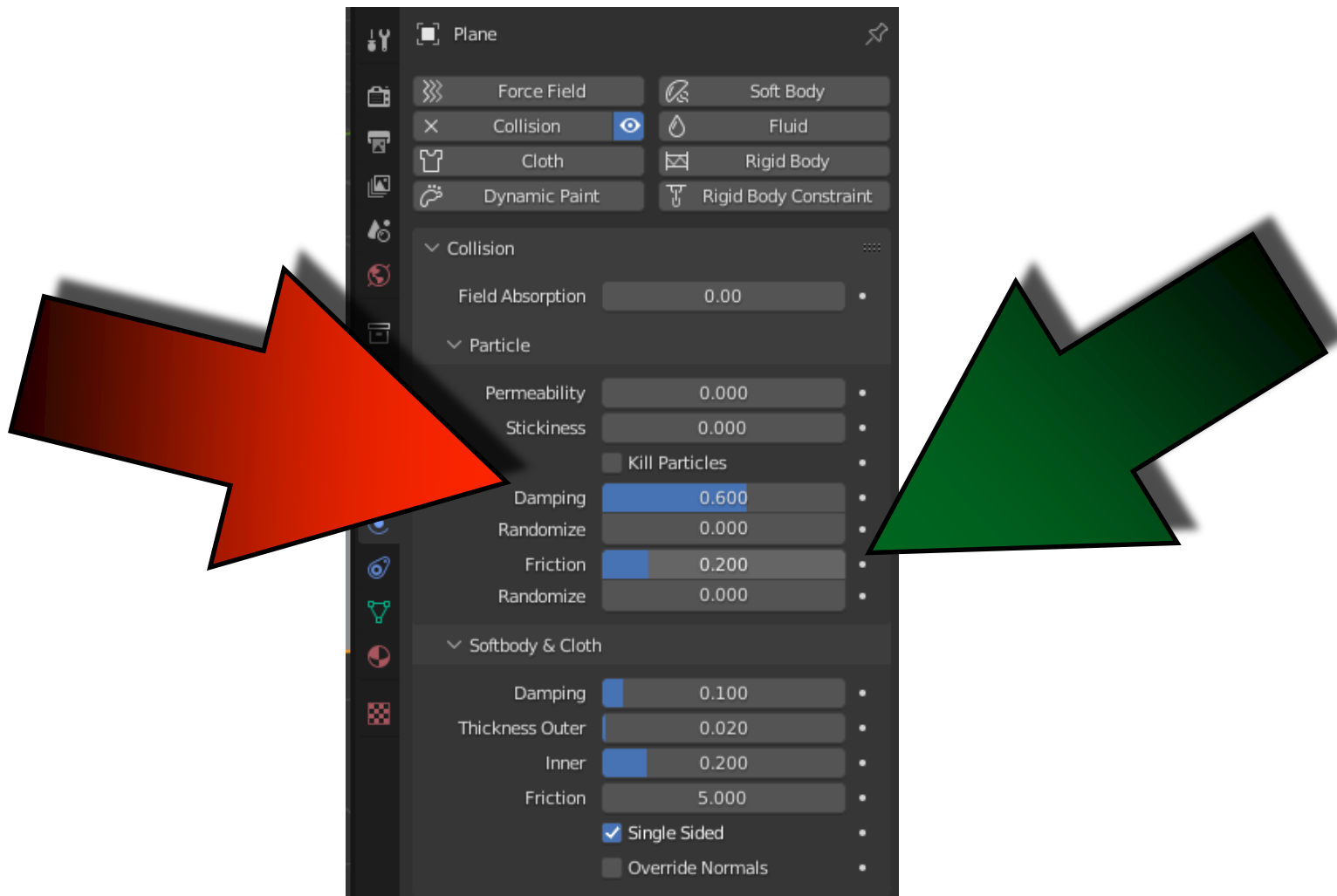
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FOR LOWER PLANE SET

DAMPING TO 0.6

FRICTION TO 0.2



The screenshot displays the 'Plane' settings panel in a software interface. The 'Collision' section is expanded, showing the following settings:

- Field Absorption: 0.00
- Permeability: 0.000
- Stickiness: 0.000
- Kill Particles: (checkbox)
- Damping: 0.600** (highlighted with a red arrow)
- Randomize: 0.000
- Friction: 0.200** (highlighted with a green arrow)
- Randomize: 0.000

The 'Softbody & Cloth' section is also visible, showing settings like Damping (0.100), Thickness Outer (0.020), Inner (0.200), and Friction (5.000).

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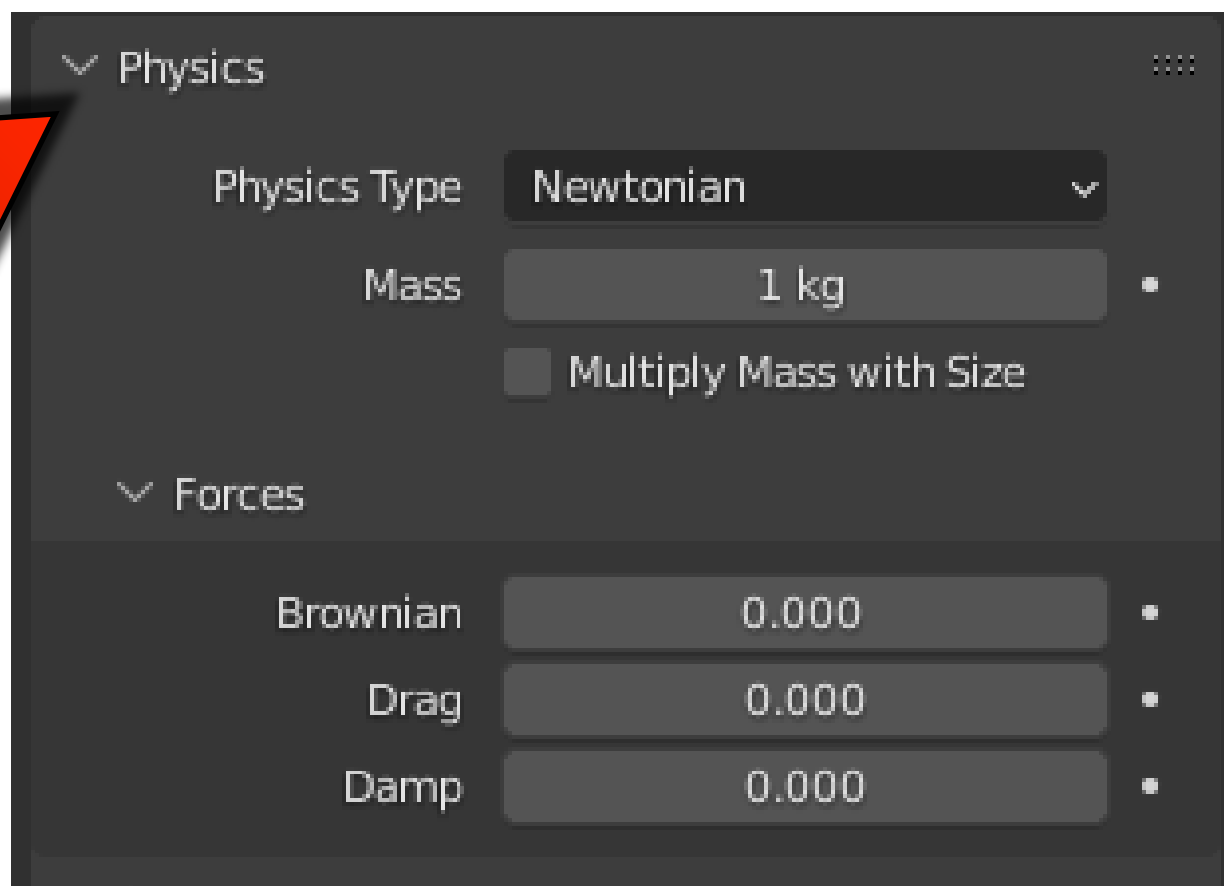
**PRESS THE SPACEBAR
AND SEE THE ANIMATION**



<https://youtu.be/yGaqh4dvwtA>

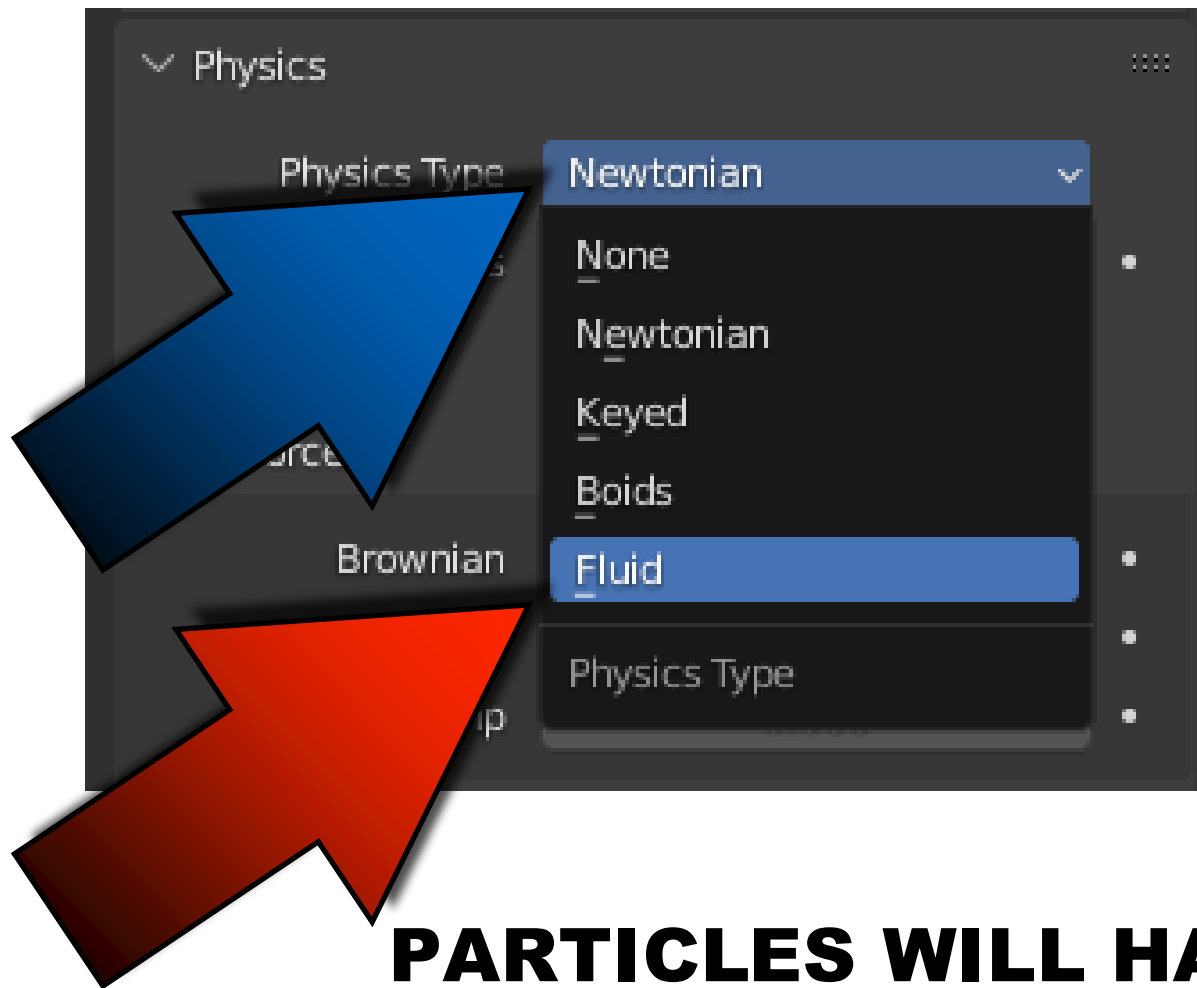
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FOR UPPER PLANE GO TO PHYSICS



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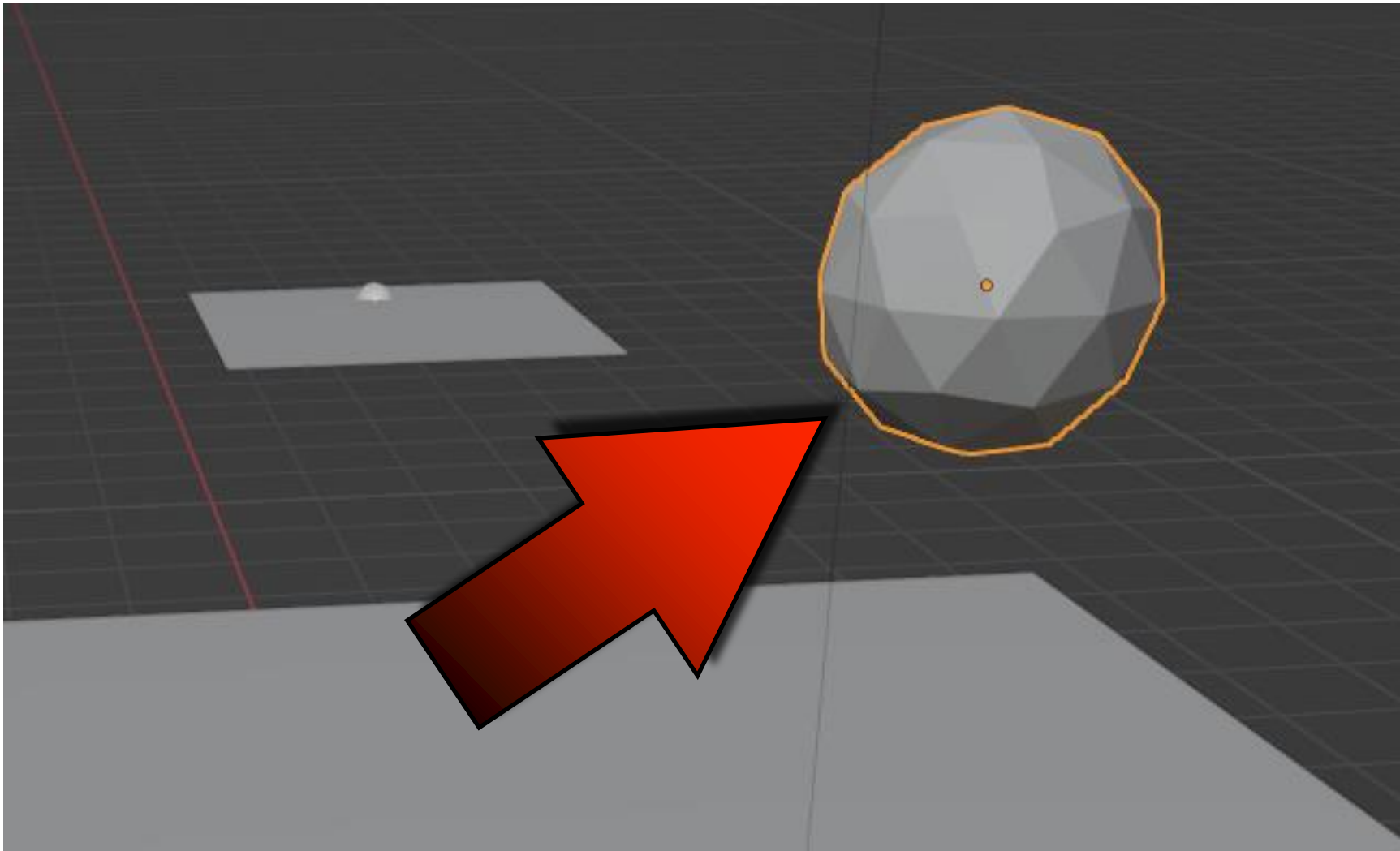
CHANGE NEWTONIAN TO FLUID



**PARTICLES WILL HAVE
A TRENDS TO FOLLOW LIQUID**

PARTICLE SYSTEM

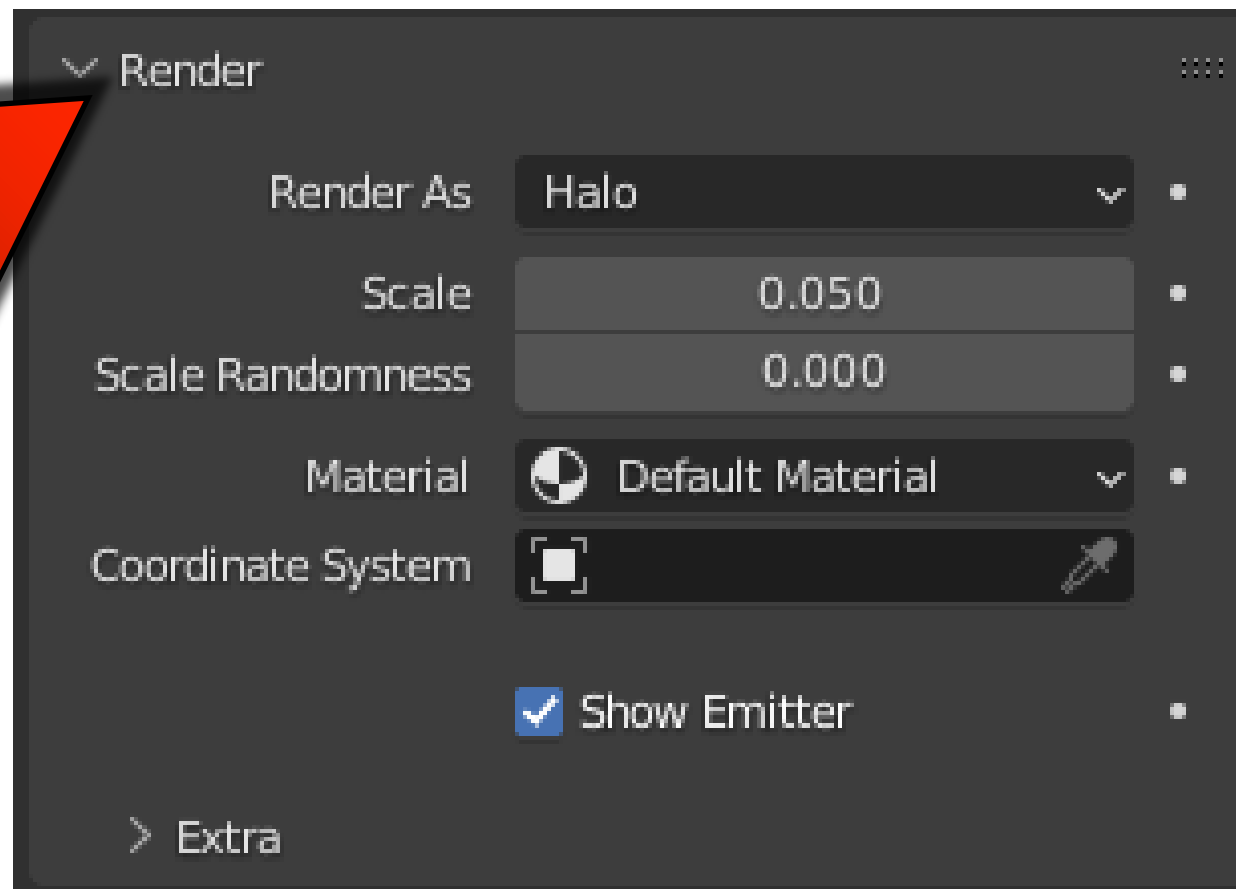
LET'S ADD **ICO SPHERE**



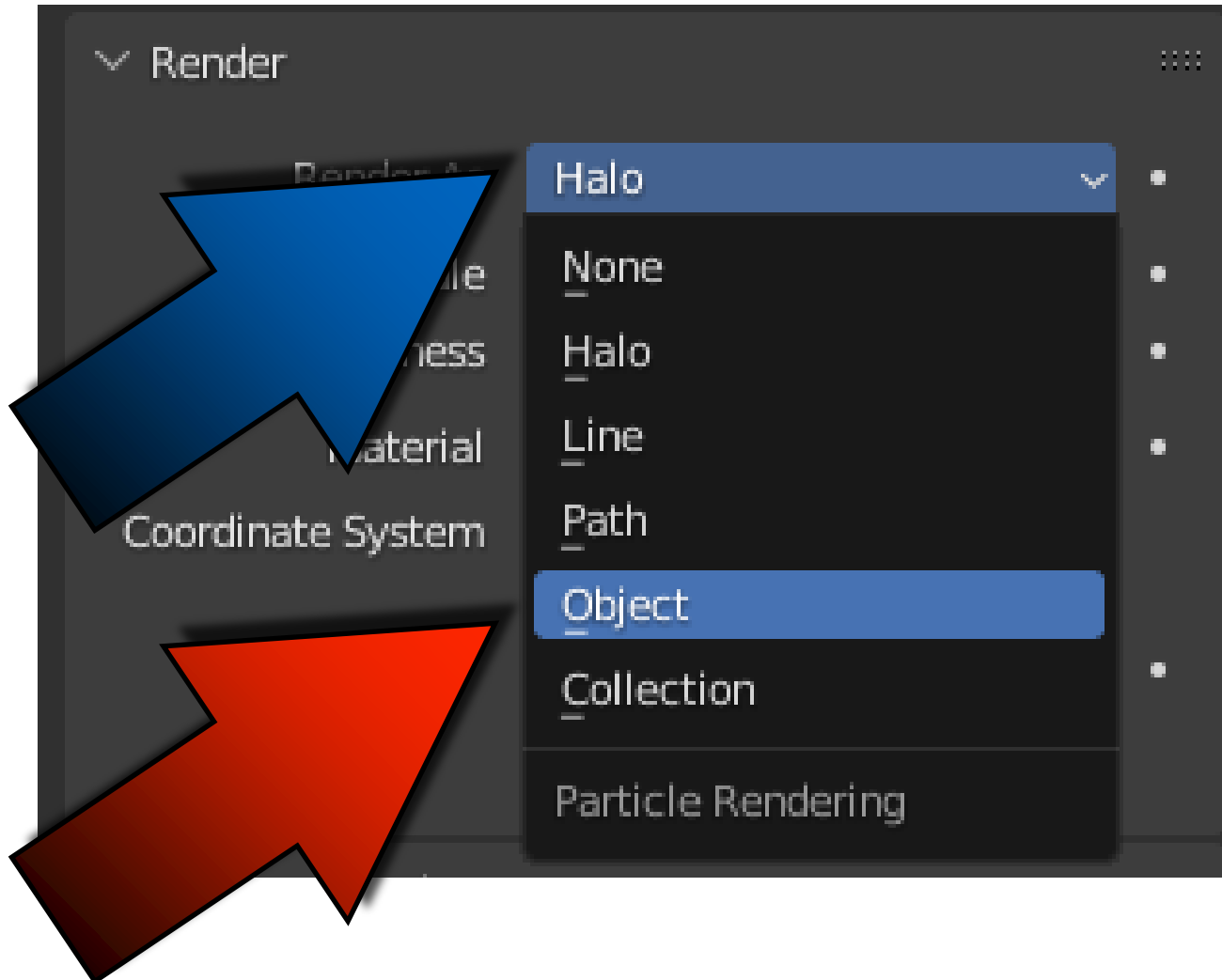
PARTICLE SYSTEM

FOR UPPER PLANE

GO TO RENDER

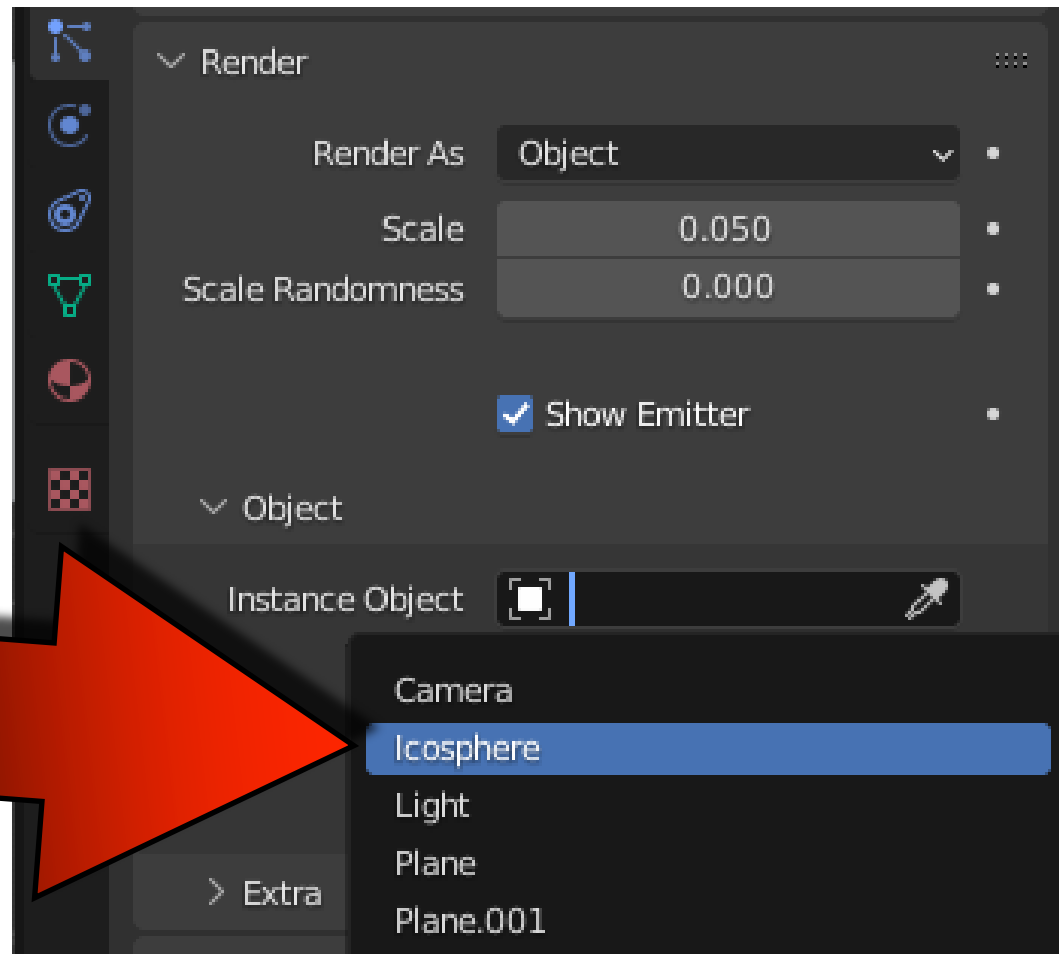


CHANGE HALO TO OBJECT



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THEN CHOOSE ICOSPHERE



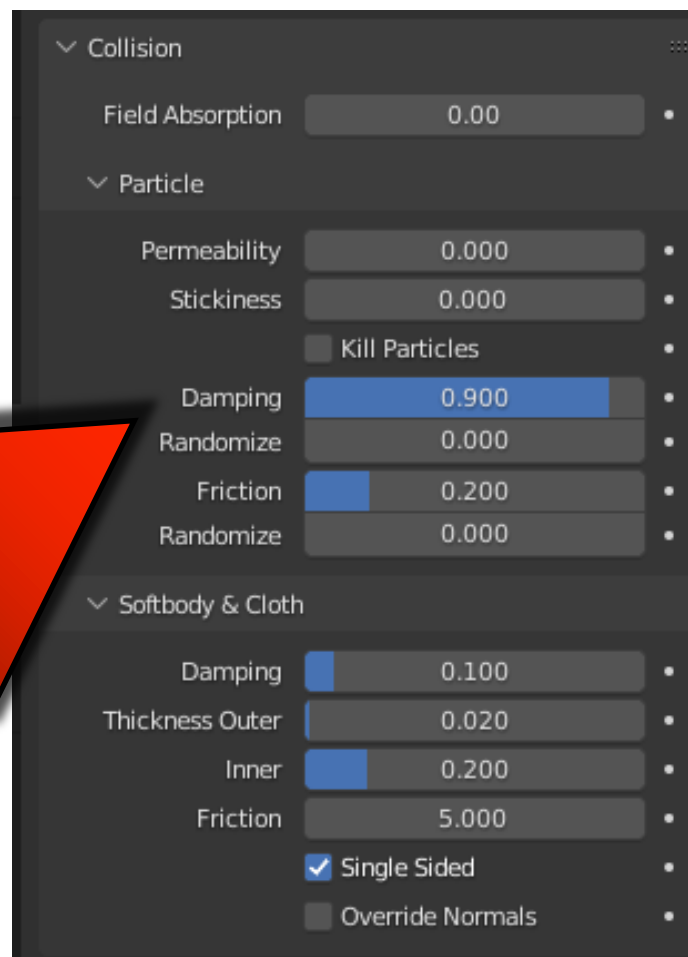
**PRESS THE SPACEBAR
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NOW THE PARTICULARS WILL BE ICO SPHERA

<https://youtu.be/a0iCcqxW-TU>

FOR LOWER PLANE CHANGE DAMPING TO 0.9





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**PRESS THE SPACEBAR
AND SEE THE ANIMATION**



WE OBTAIN THE EFFECT OF COMBINING PARTICLES AS IN LIQUIDS

<https://youtu.be/IRo2L5wJGLE>

PARTICLE SYSTEM

THERE MAY BE SEVERAL SOURCES OF PARTICLES



<https://youtu.be/Qf1P6JgnEcM>

WE CAN SIMULATE A FLIGHT OF INSECTS



<https://youtu.be/aIM0GwKryY8>

**IN CREATING ANIMATION
WE ARE LIMITED ONLY BY IMAGINATION**



<https://youtu.be/7bvOPuCwF8A>

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**THANK YOU FOR
YOUR ATTENTION**



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