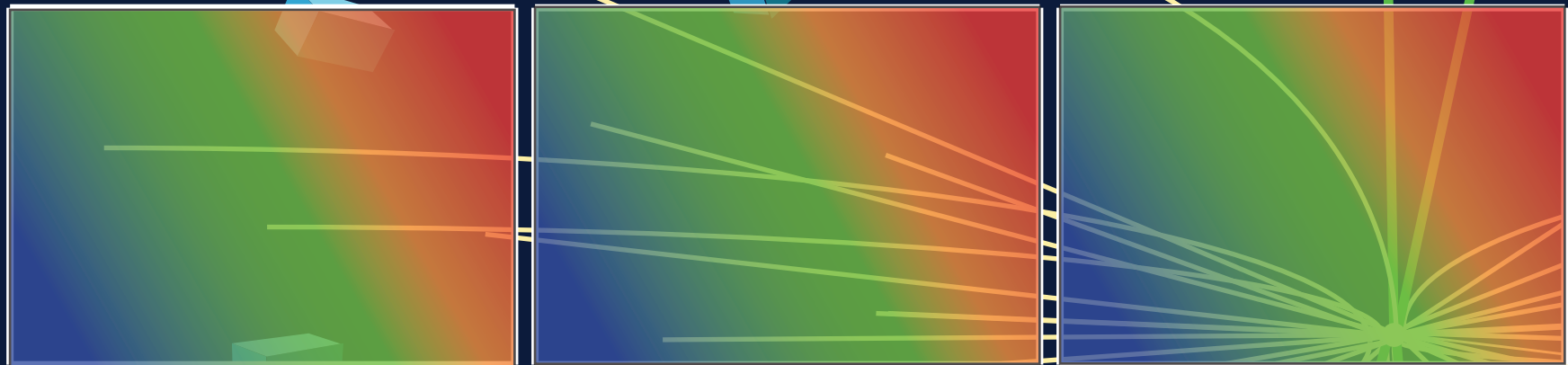
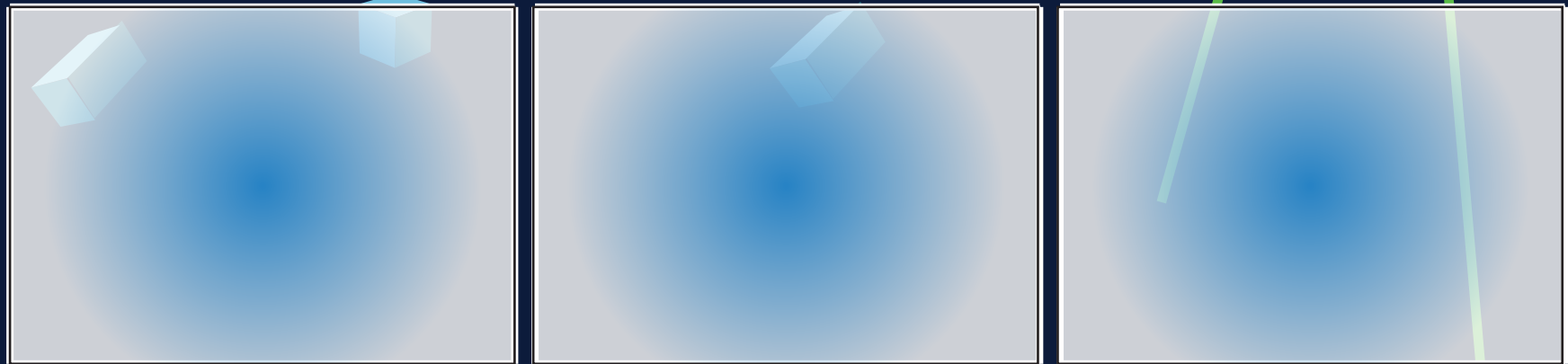


Quarks



Leptons




Bosons

Photon

Electric Charge: 0
Spin: 1
Mass: 0.0 eV
Half Life: Stable


Colour Charge: No
Exchange boson (1 point)
Note: the photon is its own antiparticle.



Gluon

Electric Charge: 0
Spin: 1
Mass: 0.0 eV
Half Life: Stable

Colour Charge: Yes
Exchange boson
(1 point)




The diagram illustrates the exchange of a gluon between two quarks. On the left, a blue circle represents a quark with a green 'b' (bottom) color charge. On the right, a green circle represents a quark with a red 'u' (up) color charge. Between them, a wavy line represents the gluon. The wavy line has a red end connected to the blue quark and a green end connected to the green quark. In the middle of the wavy line, there are two small circles: one with a green 'u' and one with a red 'b', representing the color charges of the gluon as it propagates.

W- Boson

Electric Charge: -1
Spin: 1
Mass: 80.4 GeV
Half Life: 3×10^{-25} s


Colour Charge: No
Exchange boson
(1 points)



W⁺ Boson

Electric Charge: +1
Spin: 1
Mass: 80.4 GeV
Half Life: 3×10^{-25} s


Colour Charge: No
Exchange boson
(1 points)



Z Boson

Electric Charge: 0
Spin: 1
Mass: 91.2 GeV
Half Life: 3×10^{-25} s

Colour Charge: No
Exchange boson (1 points)
Note: the Z boson is its own antiparticle.




Higgs Boson

Electric Charge: 0
Spin: 0
Mass: 126 GeV
Half Life: $\sim 10^{-22}$ s

Colour Charge: No
(5 points)

The Higgs Boson is an excitation of the Higgs's field which gives particles their mass.





Place Annihilated Cards Here