The Clutch
By Macey and Jen
What is the clutch?

In basic terms:

The clutch disengages the transmission and rear wheel from the engine temporarily.

Where is the clutch and what does it look like?

https://www.hotbikeweb.com/rekluse-exp-30-auto-clutch

History of the Clutch

Early models of the clutch were just a pulley connected to a belt that connected the engine to the rear wheel.

Later on metal clutches with plates were invented

Suicide Clutch on Harley-Davidson Motorcycles (1952)

Dry ---> Wet clutches

https://www.123rf.com/photo_96324467_close-up-of-racing-motorcycle-handlebar-and-clutch-lever-.html
https://theridingcenter.com/how-do-you-shift-motorcycle-gears/
https://www.youtube.com/watch?v=7hUljSCv7SI
What is the clutch?

Clutch bolts and springs

Forces everything together

Pressure plate

Clutch pack
With steel and friction plates

Steel plates
- groves on the inside
- connect to the inner basket
Friction plates
- groves on the outside
- Connects to outer basket

Inner hub/inner basket

Connects to the transmission input shaft

Outer basket

Connects to and turns with the crankshaft

A diagram of the clutch

https://www.motorcyclespecs.co.za/Technicale/Clutch.htm
How does it all connect?

https://www.youtube.com/watch?v=agLa0A8GAf
Comparison to Car Clutch -- Breakdown of the Clutch Disk

Friction facing

Hub
Clutch Plates

Option 1: Small clutch, lots of plates (most common)

Option 2: Large clutch, less plates

Option 3: Use different springs or bolts to increase pressure (rare)

Steel Plates

Friction Plates

https://motorcycleparts2u.com/vesrah-steel-clutch-plates-cs-419-971417-ad

https://motorcycleparts2u.com/barnett-complete-clutch-kit-brntkit-0716
Wet vs Dry Clutch

Wet

❖ Bathed in oil
  ➢ Cools the clutch pack
❖ Easy to use
❖ Lasts longer
❖ Quieter
❖ Can take a lot of abuse
❖ Messier
❖ More common

Dry

❖ Avoids fluid drag
❖ More horsepower to rear wheel
❖ Cleaner oil
❖ Less clutch cooling
❖ More difficult to use
❖ Doesn’t last as long
❖ Loud
❖ Used mostly in older models
THANK YOU!!!!!!!

https://www.slideshare.net/ShirishGoel/clutch-66185801

https://www.youtube.com/watch?v=mxTSw3d5anE

Rest of links are on slides where information/pictures are presented