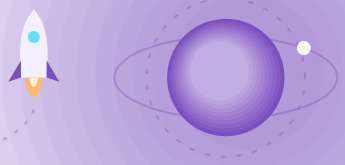
COURSE MAP

All 36 lessons at a glance

FREE CLASSROOM RESOURCE



Pick lessons by grade band and concept. Each lesson has a matching student worksheet; teacher answer keys are grouped by tier.

ID	Lesson	Grades	Standards	Worksheet file
T1-01	Force Cart in Vacuum	Gr. 6–12	MS-PS2-2, HS-PS2-1	KPE-T1-01-force-cart-in-vacuum
T1-02	Rocket Anatomy Relay	Middle School	MS-PS2-2	KPE-T1-02-rocket-anatomy-relay
T1-03	Balancing Act	Gr. 6–12	—	KPE-T1-03-balancing-act
T1-04	Fuel Moves the Balance	Gr. 6–12	—	KPE-T1-04-fuel-moves-the-balance
T1-05	The Hanging Rocket Myth	Gr. 6–12	—	KPE-T1-05-the-hanging-rocket-myth
T2-01	Exhaust Exchange	Gr. 6–12	HS-PS2-2, MS-PS2-1	KPE-T2-01-exhaust-exchange
T2-02	The Fuel Trap	Gr. 6–12	MS-PS2-2	KPE-T2-02-the-fuel-trap
T2-03	Shed the Dead Mass	High School	—	KPE-T2-03-shed-the-dead-mass
T2-04	Nozzle Altitude Match	High School	HS-PS2-1	KPE-T2-04-nozzle-altitude-match
T2-05	Payload Frontier / SSTO	High School	—	KPE-T2-05-payload-frontier-ssto
T3-01	Falling Speed Lab	Gr. 6–12	MS-PS2-2, HS-PS2-1	KPE-T3-01-falling-speed-lab
T3-02	Max Q Conductor	High School	—	KPE-T3-02-max-q-conductor
T3-03	Gravity Turn Ghost	High School	—	KPE-T3-03-gravity-turn-ghost
T3-04	Loss Budget Duel	High School	—	KPE-T3-04-loss-budget-duel
T3-05	Weathercocking and Active Control	High School	—	KPE-T3-05-weathercocking-and-active-control
T4-01	Miss the Ground	Gr. 6–12	MS-ESS1-2, HS-ESS1-4	KPE-T4-01-miss-the-ground
T4-02	Circularize or Burn	High School	HS-ESS1-4	KPE-T4-02-circularize-or-burn
T4-03	Equal-Area Courier	Gr. 6–12	HS-ESS1-4	KPE-T4-03-equal-area-courier
T4-04	Periapsis Energy Bonus	High School	—	KPE-T4-04-periapsis-energy-bonus
T4-05	Gravity Still Works Here	Gr. 6–12	HS-PS2-4	KPE-T4-05-gravity-still-works-here
T5-01	Two-Burn Mail	High School	HS-ESS1-4	KPE-T5-01-two-burn-mail
T5-02	Meet the Moving Mailbox	High School	—	KPE-T5-02-meet-the-moving-mailbox
T5-03	Fall Back to Catch Up	High School	—	KPE-T5-03-fall-back-to-catch-up
T5-04	Change the Plane	High School	—	KPE-T5-04-change-the-plane
T5-05	Satellite Rescue and Dock	Gr. 6–12	HS-PS2-2, MS-PS2-1	KPE-T5-05-satellite-rescue-and-dock
C-01	Observatory Builder	High School	—	KPE-C-01-observatory-builder

ID	Lesson	Grades	Standards	Worksheet file
C-02	Interplanetary Mail	High School	—	KPE-C-02-interplanetary-mail
E-01	Push & Pull	Elementary	3-PS2-1	KPE-E-01-push-pull
E-02	Gravity on Other Worlds	Elementary	5-PS2-1	KPE-E-02-gravity-on-other-worlds
E-03	Air Resistance & Parachutes	Elementary	3-PS2-1	KPE-E-03-air-resistance-parachutes
E-04	Day, Night & Solar Power	Elementary	—	KPE-E-04-day-night-solar-power
M-01	Newton's Three Laws	Middle School	MS-PS2-2	KPE-M-01-newton-s-three-laws
M-02	Mass vs Weight	Middle School	MS-PS2-4	KPE-M-02-mass-vs-weight
M-03	Layers of the Atmosphere	Middle School	—	KPE-M-03-layers-of-the-atmosphere
M-04	Energy Conservation	Middle School	—	KPE-M-04-energy-conservation
M-05	Basic Orbit	Middle School	—	KPE-M-05-basic-orbit