

Assignment 3

Ch. 5.1, "Newton, Einstein, & Gravity,"
pp. 75-82.
How/know? 11.1: "Theories and Proof", p. 215
How/know? 14.1: "Checks on Fraud...", p. 295
How/know? 18.2: "A System of Knowledge" p. 380
How/know? 19.2: "Courteous Skeptics", p. 419

Due date: _____

Q. 1,3-5,9; P. 1,2; D. momentum, mass, acceleration,
inverse square law
list 3 significant points
list 3 significant points
list 3 significant points + optional personal response
list 3 significant points

Historical Supplement Assignment

Historical Supplement Note Set

Due date: _____

Question sheets (download, if not handed out.)

TEST 1 **Date:** _____

Assignment 4

Sagan article: "Why We Need to
Understand Science" (handout)
How/know? 1.1: "The Scientific Method...", p. 8
How/know? 2.1: "Scientific Models", p. 17
How/know? 2.2: "Pseudoscience", p. 25
How/know? 2.4: "Sci Arguments", p. 28
What Are We?: "Basic Scientists", p. 522

Due date: _____

Question sheet (download)
list 3 significant points
list 3 significant points
list 3 significant points + optional personal response
list 3 significant points
list 3 significant points

Foundational Assignment

Introductory Course Note Set

Due date: _____

Question sheets (download from Course Downloads page, if not handed out.)

Assignment 5

Ch. 1, "The Scale of the Cosmos", pp. 1-9
Ch. 19.2, "A Survey of the Solar System",
pp. 401-407
Ch. 19.1, "Origin of Solar System," pp. 396-400,
Ch. 19.3, "Story of Planet Building," pp. 407-414

Due date: _____

Q. 2,6,9; P. 1,2,5,6 (solve for #sec); D. light-year
P. 4 (Show how you got # ½ lives, then give answer in years)
Q. 5,7,17; P. 5 (Book says to see Table, not Figure, 19.2);
D. differentiation, planetesimal
Q. 12, 14

Assignment 6N

Ch. 25, "Meteorites, Asteroids, and Comets"
pp. 551-578
How/know? 25.1: "Selection Effects", p. 555
Ch. 3, "Cycles of the Moon", pp. 31-47
How/know? 17.1: "Statistical Evidence," p. 357
How/know? 22.2: "Present is Key to Past"

Due date: _____

Q. 1,5-7; P. 6,11; D. selection effect, coma, Apollo-Amor objects
Trojan asteroids,
list 3 significant points
Q. 2,6,8; D. spring and neap tides
list 3 significant points
list 3 significant points (read online on Course Documents page)

TEST 2 **Date:** _____

Assignment 7

Ch. 19.4, "Planets Orbiting...Stars", pp. 414-421
Ch. 20, "Earth", pp. 424-439

How/know? 19.1: "Evolution/Catastrophe", p. 400

Due date: _____

Q. 16,18
Q. 2,5,10-13; P. 3 (HINT: This is a $d = r \times t$ problem.); D. dynamo effect, albedo, Van Allen radiation belts
list 3 significant points

Assignment 8

Ch. 26.1, "Nature of Life" and 26.2, "Origin of Life", pp. 581-594

How/know? 26.1: "Scientific Explanation" p. 583

Ch. 21.1, "The Moon", pp. 442-455

How/know? 21.1: "How...Unify the Details", p. 448

Due date: _____

Q. 3,6-8,10; D. Cambrian period

list 3 significant points

Q. 1,2,5,6,8; D. terminator, limb, regolith, tidal coupling

list 3 significant points

Assignment 9N

Ch. 21.2, "Mercury", pp. 455-461

Ch. 22.1, "Venus", pp. 464-476

How/know? 24.1: "Scientific Discoveries", p. 528

Due date: _____

Q. 9,11,13,14; D. lobate scarp

Q. 1,3,4; P. 1 (HINTS: distance = rate x time; radio waves are low energy light waves so they travel at 300,000 km/s; Ignore orbital eccentricities—just use semi-major axes values.)

list 3 significant points

TEST 3 Date: _____

Assignment 10

Ch. 22.2, "Mars", pp. 476-488

Ch. 22.3, "Moons of Mars", pp. 489-490

Ch. 23, "Jupiter and Saturn", pp. 493-522

How/know? 23.1: "Who Pays for Sci?", p. 516

Due date: _____

Q. 2,5,6,8-10

Q. 1 (Give 2 reasons.),4,5,7,9; D. Roche limit, tidal heating

list 3 significant points

Assignment 11N

Ch. 24, "Uranus, Neptune, and Pluto, pp. 525-548

Due date: _____

Q. 4,7,8,9,11,12,13; D. occultation

TEST 4 Date: _____

Assignment 12

"Afterword", pp. 602, 603

Due date: _____

list 6 significant points—hand in with Test 4 (but not tested upon)