

	Date	Objective	Class	HW
1	9/13	Clarify Class Objectives	Intro/Class Questions	Thinking as Doing (see handout)
2	9/15	Problem Solving Template	March Madness, Hanging String	#5, #6 Show Work, Individual Work only; See homework Policy Hand out
3	9/18	Fermi Problems	Making Estimates Tennis Ball Problem HW Evaluation	Read Fermi: Pg 19-20 Pg 20 # 2 (answer in terms of Slices; Pg 22 #10
4	9/20	Concept Maps	HE Evaluation Intro Concept Maps	Pg 22 #8 complete individually Read Pgs 32-39 Probs Pg 39 # 2 and 3 Must use program bubbl.us with concept maps printed-out
5	9/25	Algorithms Self Evaluation	Number Sort Problem Solving Evaluation	Pg 21 # 2 individual Self evaluation Pg 7-11 (use on-line book) Follow Instructions Pg 7. Make an improvement plan Print out 2 copies
6	9/27	Complete Heuristics Rocket Project	Identify useful heuristics Newton's Laws	Heuristic Problems 1-27 beginning o On Pg 14. Use answer sheet. Due M\ Monday, Individual work. Read pgs 130-134 for Friday
7	9/29	Newton's Laws	Group work Newton worksheet Homework Review	Rea Pgs 135-138 for Monday, Complete above Assgn.
8	10/2	Engineering Design Cycle	Pg 26 Simulator operation Pg 136- 137 Newton Law worksheet review	Run Simulator and answer questions on pg 137 on a separate sheet. Complete Newtons Law Work sheet
9	10/4	Stability Cg,Cg Quantitative Analysis Strategy of Exp	Pg 141-43 Pg 63, Narrative for 10 individual trials	Read Article on Experimental Design Pg 188-92. 1 page response, using section headings as prompts Due to DOE internet issues, assignment 10-2 will be reviewed on Friday
10	10/6	Project Steps PROJECT SCHEDULE ON WEB SITE TAB	Project Overview: Rubric, Launch Procedures, Construction	Strategy of Experiment Pg 65 Rocket Project Concept Map: Technical and Engineering Design Cycle.
11	10/11	Science/Engineering Strategy of Experiments	Pg 30-31 Pg 60-61	10 Individual Trials with narratives due Friday Read Pg 145-47 Physics of Rocket Quiz Monday—See web site for topics
12	10/13	Physics of Rockets Simulation Equations	145-147 144	Class: work through diagrams and apply Newton's Laws, 3 forces, design criteria (cp, cg, Cd) fins, Nosecone etc in preparation for quiz.
13	10/16		Quiz Group Design	
14	10/18	Graphics	Pg 54-57	Pg 58 #2 and 3
15	10/20			EXAM TOPICS ON ROCKET SCHEDULE SHEET
16	10/23			EXAM
17	10/25	No class		

18	10/27	Rocket Review	Intro to Risk Management	
19	10/30	Risk Management	Pg 66-71	Read article Pg 193, 1 page typed response
20	11/1	Risk Management	Team interactions NASA Lost Problem	Pg 74 # 3, # 6
21	11/3	Decision Making,Bias Brainstorming	Pg 41,45 Newspaper Tower	Complete report
22	11/6	Heating Project Heat Fundamentals	Pg 110-111 Pg 101-102	Rocket Report Due
23	11/8	Ethics	Case Study # 1 and 2 Pg 95-100	
24	11/10	Salt Selection/Heat Releas Strategies for Selection	Pg 110-12	Salt Selection Spreadsheet due Monday
25	11/13	Heat Transfer Conduction, Convection, Estimates	Pg 113-16	Complete Spreadsheet
26	11/15	Calculation Day	Problem Handout	Project Heat Transfer Calculations Determine Amount of Salt
27	11/17	Contingency Planning	Calculation Hand-out Complete Project Calculations 119-123	Salt Quantity and calculations due Monday
28	11/20	Calculations	Calculations Pg 119-123 Schedule: Salt and amount	Quiz Preparation:—Heating Topics only Questions: Review Pg 127 1-4, Problems:Heating Project handout (on web site)
29	11/22			QUIZ
30	11/27	Decision Making: Biases Lab Procedures	Bias Pg 41 Pugh Pg 45 Lab Safety Pg 124, Contingency Pg 125	Pugh College Matrix due
31	11/29		Calculation Review	See Revised Planning Guide and Exam Review Guide on the Web Site
32	12/1	Prototype to Production		
33	12/4			EXAM
34	12/6	Introduction to Bridges	Pg 150,151,153	End of Year Planning Guide on Class Page
35	12/8	Forces on a bridge	Examples Pg 156-158	Due Wed Simulator Problems Hand in # 2,3
36	12/10	Bridge Testing Demo	Pg 167 # 1 Support Forces (continued on Wednesday)	HEATING REPORT DUE Due Wed Simulator Problems Hand in # 2,3
37	12/13	Bridge Construction		See handout for support problems on web
38	12/15	Complete Support Forces Bridge Design	Support Forces Pg 167 #2	No Quiz next week Homework is Bridge Design and Construction
39	12/18	Bayes Introduction	Pg 78-83 Bridge work	Bridge Work
40	12/20	Bayes Problems	Pg 85 # 4 See handout on web Bridge Work	Bridge Work Wood weight 0.12 g/inch Bayes Pg 85 #5, 7
41	12/22		Revised Planning Schedule Bridge Construction	
42	1/3	Review Support Forces and Stability Bridge Construction	Worked Examples: Forces Pg 167 #2 Stability Pg 173, first two	Exam Details on Project Planning Page on web. Review:Work bridge hand-out problems without looking at solutions, then compare.

				Bridge Handout is on web
43	1/5	Bayes Theorem Review Bridge Construction	Worked Examples Pg 85 #5, #7	Review: Work Bayeshand-out problems without looking at solutions, then compare. Bayes Handout is on Web
44	1/8			Exam 3
45	1/10		Exam Topics Complete Construction	Exam Topics on Revised 1/8 Planning Guide on We
46	1/12			Bridge Testing