

Lecture Syllabus

(subject to revision)

<u>DATE</u>	<u>CLASS</u>	<u>TOPIC</u>	<u>Readings in Science K-8</u>	<u>Readings in TSTC</u>
Aug. 25	1	Introduction	2-16 (skim)	
27	2	Beginnings of Science	(Science Unlimited 1-43)	
29	3	Emergence of Science	7-44 (skim)	
3	4	Atomic Theory	418-429	43-52
5	5	Atoms and Molecules	429-437	52-58
8	6	Chemical Bonding		58-68
10	7	Heat and Temperature I	456-460	69-83
12	8	Demonstration 1		
15	9	Heat and Temperature II	460-475	83-91
17	10	Static Electricity I	503-508	102-112
19	11	Learning Center – Set Up		
22	12	Learning Center -Critique		
24	13	Static Electricity II		
26	14	Demonstration 2		
29	15	Test 1* (Classes 1-14)		
Oct 1	16	Current Electricity I	508-515	112-128
3	17	Current Electricity II	515-523	
8	18	Current Electricity III		
10	19	Demonstration 3		
13	20	Magnetism I	499-503	92-101
15	21	Magnetism II	516-523	
17	22	Waves I	476-479	
20	23	Waves II	480-485	129-149
22	24	Waves III	486-490	150-169
24	25	Demonstration 4		
27	26	Waves IV	490-498	169-177
29	27	Mechanics I	438-450	178-186
31	28	Demonstration 5		
Nov. 3	29	Test 2 * (classes 16-28)		
5	30	Mechanics II	450-455	186-193
7	31	Mechanics III		
10	32	Mechanics IV		193-200
12	33	Weather I	212-220	201-215
14	34	Demonstration 6		
17	35	Weather II	241-288	227-247
19	36	Planet Earth	205-212	
21	37	Plate Tectonics I		282-295
24	38	Demonstration 7		
Dec. 1	39	Plate Tectonics II	220-240	295-301
3	40	Flight and Space Travel		215-226
5	41	Planets	174-196	248-265
8	42	Stars	196-204	266-281
10	43	Science and Science Teaching II	Read Entire SW (on reserve)	

* Copies of some previous tests are on reserve in the Library.

All Ed 228 students should enroll themselves in the EDUC 228 Blackboard site and in the Merrill TeacherPrep web site, www.prenhall.com/teacherprep.

Final exam is not comprehensive. It is given when scheduled by the Registrar.

Cell phones and beepers should be turned off in the classrooms.

Plagiarism: Matters of plagiarism in this course are governed by the definitions, policies, and procedures given on the appropriate pages of the latest edition of the *Moravian College Student Handbook*.

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LABORATORY SYLLABUS
(subject to revision)

Date	Class	Topic	Assignment
Aug. 27 & 28	1	Principles of Science Teaching	TSTC xi-xiii; xiv-xv
Sept. 3 & 4	2	Exploratorium Workshop Approaches	TSTC 1-26 (skim)
10 & 11	3	Curriculum Projects: SAPA and ESS	SCIENCE 4-8 (read); 45-61 (skim)
17 & 18	4	Curriculum Projects: SCIS and InSights	SCIENCE 62-93 (skim)
24 & 25	5	Curriculum Projects: FOSS	SCIENCE 113-171 (skim)
Oct. 1 & 2	6	In-school 1	
8 & 9	7	Curriculum Supplements: AIMS	
15 & 16	8	In-school 2	
22 & 23	9	Piagetian Interview Population Connection and others	
29 & 30	10	In-school 3	
Nov. 5 & 6	11	Curriculum Supplements: various	
12 & 13	12	In-school 4	
19 & 20	13	In-school 5	
Dec. 3 & 4	14	Microcomputers in Science Ed. and Inquiry Science	SCIENCE 94-112 (skim); TSTC 27-42 (skim)

TEXTS: (SCIENCE) Science K-8: An Integrated Approach, 11th ed, Victor, Kellough and Tai, 2008
(TSTC) Teaching Science to Children: An integrated Approach, 6th ed., Friedl and Koontz, 2005
(SU) Science Unlimited-Pennsylvania's Resource Guide for Elementary Science

READINGS ON RESERVE: (CC) The Child's Conception of Physical Casuality, Jean Piaget
(SW) A Sense of Wonder, Rachel Carson
Learning Center Activities: Science K- 2, Deborah Candleora
Science Learning Centers for the Primary Grades, Poppe & Van Matre

ATTENDANCE POLICY:

Attendance will be taken in each class period. Unexcused absences in excess of four will reduce the final average of a student at a rate of one percentage point per absence. Students have the responsibility to present the evidence of the nature of an excused absence.

FINAL GRADE:		
	EXAM 1	15%
	EXAM 2	15%
	EXAM 3	15%
	Learning Center	10%
	Classroom Demonstration	10%
	Piagetian Interview	15%
	In-school experience grade	20%

COURSE OBJECTIVES: Students will successfully and safely do the following:

- demonstrate knowledge of the major principles of the physical, chemical, and Earth sciences.
- use the methodology of scientific inquiry with peers and children.
- use hands-on techniques to teach science concepts to peers and children.
- employ a range of techniques, approaches, and curricular materials that support science education.
- become familiar with a broad range of curricula, supplements, and software that promote science education.
- develop an understanding of the child's way of perceiving nature and his/her place within it.