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Public High Schools Offering Chemistry in Iowa

By JAMES W. KERCHEVAL

In a Report on a Survey of Science Instruction in the High Schools of Iowa¹, the author presented data based upon reports from 390 or 46% of the 852 senior high schools in Iowa in 1951-52. Since that time further effort has brought additional data from all but 38 of the present 849 high schools. This leaves but 4.5% unreported at this time.

The following report covers data collected over the years 1951 through 1954. The information at hand shows that one semester or more of chemistry is offered either on alternate years or is offered each year in 334 of the Iowa public high schools. This constitutes 39.4% of the present 849 high schools.

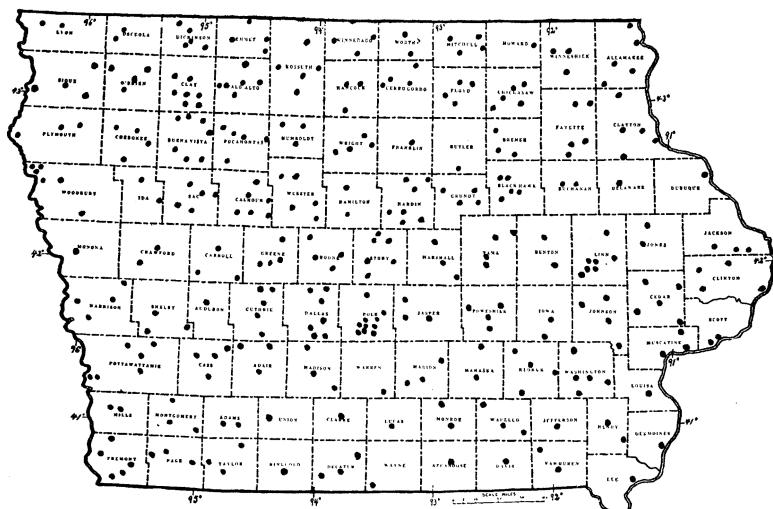


Fig. 1 Location of Schools Offering Chemistry

The map shown in Figure 1 indicates the approximate location and geographical distribution of these schools over the state. Several generalizations can be observed. Chemistry is offered in at least one high school in every county. The three tiers of southern counties have the lowest average number of schools offering the course

¹Kercheval, J. W. A Report on a Survey of Science Instruction in the High Schools of Iowa. Proceedings of the Iowa Academy of Science 60:62-73. 1953.

Table I.
Enrollments in all Iowa High Schools
and in those offering Chemistry

High School Enrollment	Total of all Iowa High Schools (849) ³ Number	%	High Schools Offering Chemistry (334) ⁵ Number	%	Percent of Total Iowa H.S. that Offer Chemistry	Percent of H.S. of each size Offering Chem.
1-24	29	3.4	0	0	0	0
25-49	189	22.2	24	7.2	2.8	12.8
50-74	198	23.4	38	11.4	4.5	19.2
75-99	139	16.4	55	16.5	6.5	39.6
100-149	117	13.8	61	18.3	7.2	52.5
150-199	52	6.1	36	10.8	4.2	69.5
200-299	39	4.6	39	11.7	4.6	100.0
300-399	35	4.1	32	9.6	3.8	91.5
400 or more	51	6.0	49	14.6	5.8	96.1
	849	100.0	334	100.1	39.4	

the number of schools, by enrollment, that are offering chemistry and the per cent of the total (334) which each size group constitutes. In general the impression has been that small high schools do not offer chemistry. That this is true is shown in the last column. Only a small per cent of the small schools offer chemistry, but the fact that at least 62 of these schools of enrollments of 74 or less indicate that they offer it is encouraging⁵. Further the data shows that nearly all of our high schools of 200 or larger offer the course. The lack of offering in our smaller schools probably is responsible for Iowa's low enrollment in high school chemistry. In 1949 only 3.9% of our total four year high school enrollment were in chemistry classes⁶. The national average that same year was 7.6% or over twice as great as Iowa's⁷.

As mentioned in the first paragraph the data presented in this report is not complete for the entire state. Table 2 shows the number and size of the schools from which no reports were received. However the basis of the size of enrollment it seems unlikely that more than one or two of these schools would be offering chemistry. As a consequence the list of schools presented in Table 3 may be assumed to be essentially complete for the period covered.

⁵Enrollment based upon the Iowa Educational Directory for 1953-4.

⁶Federal Security Agency: Biennial Survey of Education in the United States 1948-50: Chap. 5; Offerings and Enrollments in High School Subjects; p. 102.

⁷Ibid., p. 102.

Table 2
 Enrollments in High Schools for which there is no Data

High School Enrollment	Number	Percent Total of all Iowa High Schools
1-24	5	0.6
25-49	9	1.1
50-99	18	2.1
100-149	4	0.5
150-199	2	0.2
200-299	0	0
300-399	0	0
400 or more	0	0
	38	4.5

Table 3
 Iowa High Schools Offering Chemistry

Ackley	Calamus	Lincoln	Gilman
Adair	Calmar	North	Gilmore City
Adel	Carroll	Roosevelt	Glenwood
Ainsworth	Cedar Falls	Des Moines	Gowrie
Akron	Cedar Falls	Twp.	Graettinger
Albert City	Campus	De Sota	Grand Junction
Albia	Cedar Rapids	Dike	Gray
Albion	Franklin	Dolliver	Greenfield
Algona	McKinley	Dow City	Greenville-Rossie
Alleman	Roosevelt	Dubuque	Grinnell
Alta	Wilson	Dunlap	Grundy Center
Altoona	Charles City	Durant	Gruver
Ames	Chariton	Dysart	Guthrie Center
Anamosa	Centerville	Eagle Grove	Guttenberg
Anita	Central City	Earlham	Hamburg
Ankeny	Cherokee	Early	Hampton
Arlington	Clarinda	Eddyville	Hancock
Armstrong	Clarion	Edgewood	Harlan
Arthur	Clear Lake	Eldon	Hartley
Ashton	Clermont-Elgin	Eldora	Havelock
Atlantic	Clinton	Elk Horn	Hawarden
Audubon	Colfax	Elkader	Hedrick
Aurelia	Coon Rapids	Elliott	Holstein
Avoca	Cornell	Emmetsburg	Hubbard
Bagley	Corning	Essex	Hudson
Bedford	Council Bluffs	Estherville	Humboldt
Belmond	A. Lincoln	Everly	Huxley
Bettendorf	T. Jefferson	Fairfield	Independence
Bloomfield	Cresco	Farnhamville	Ionia
Bode	Creston	Farragut	Iowa City
Bondurant	Cylinder	Floyd	Iowa Falls
Boone	Dallas	Fonda	Jefferson
Boxholm	Dallas Center	Forest City	Johnson Twp.
Boyden	Davenport	Fort Dodge	Kanawha
Brighton	Dayton	Fort Madison	Knoxville
Britt	Decorah	Fredericksburg	Keokuk
Brooklyn	Delmar	Garnavillo	Keosauqua
Buffalo	Denison	Garner	Keota
Buffalo Center	Denver	Garden Grove	Lacona
Burlington	Des Moines	Geneseo Twp.	Lake City
Burt	East	Gillette Grove	Lake Park

Table 3—Continued

Iowa High Schools Offering Chemistry

Lake Mills	Mingo	Prescott	Story City
Lakota	Missouri Valley	Preston	Stuart
Lamoni	Mondamin	Primghar	Taber
Lansing	Monona	Radcliff	Tama
Laurens	Montezuma	Red Oak	Thurman
Lawler	Monticello	Remsen	Tipton
Lehigh	Mount Ayr	Reinbeck	Titonka
LeMars	Mount Pleasant	Riceville	Thornburg
Lenox	Muscatine	Ridgeway	Toledo
Leon	Nashua	Ringsted	Traer
Lester	Nevada	Riverton	Truro
Lineville	Newell	Rockford	Underwood
Linn Grove	Newhall	Rock Rapids	Union
Livermore	New Albin	Rockwell City	Van Meter
Lloyd Twp.	New Hampton	Roland	Ventura
Lohrville	New London	Rowan	Villisca
Lone Tree	New Market	Royal	Vinton
Lost Nation	New Providence	Ruthven	Walford
Lovilia	New Sharon	Sac City	Wall Lake
Lowden	Newton	Saint Ansgar	Wapello
Luther	North English	Selma	Washta
Lytton	Northwood	Seneca	Washington
McCallsburg	Oakland	Sergeant Bluff	Washington Twp.
McIntire	Odebolt	Shelby	Waterloo
Malcom	Oelwein	Sheldon	East
Mallard	Ogden	Shenandoah	West
Malvern	Okoboji Twp.	Sibley	Waterville
Manchester	Onawa	Sigourney	Waukon
Manly	Orange City	Silver Lake Twp.	Waverly
Manson	Osage	Sioux Center	Webb
Maquoketa	Osceola	Sioux City	Webster City
Marathon	Oskaloosa	Central	Wellsburg
Marble Rock	Ottumwa	East	Wellman
Marcus	Oxford	Leeds	West Branch
Marshalltown	Panora	Sioux Rapids	West Chester
Mason City	Parkersburg	Smithland	West Des Moines
Massena	Paton	Solon	West Union
Maynard	Paullina	Somers	Williamsburg
Mechanicsville	Pella	Spencer	Wilton Junction
Menlo	Perry	Spirit Lake	Winterset
Milford	Plainfield	Springville	Wiota
Milford Twp.	Plymouth	Stanhope	Woodbine
Miles	Pocahontas	Stanley	Woodside
Minden	Postville	Storm Lake	Woodward

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