No doubt testing should be given a place as a teacher function in the individual conference. The formalities of testing should not have a prominent part in the program. The fact seems to be established that in the traditional school the blue-book examination tends positively and immediately to emphasize subject-matter mastery as an end when as a matter of fact the most fundamental things in life, habits and attitudes and interest cultivation, are passed over as incidentals. If testing emphasis could be placed on these things, there would be improved means of justification where it is resorted to in a large way. However the emphasis should be on the end and not on the means which is the function of subject-matter, on the outcome and not on the tool. It is unfortunate that the formal testing plan has made teachers generally successful in teaching many boys and girls they are failures. The professional eye scanning the composition paper reflects an inner satisfaction when the misplaced comma is recorded as a subtraction from one hundred. Pupils will always be tested by teachers just as persons in the different walks of life are tested. But it is to be hoped that a more humane way of treating the "failure" will be developed for classroom use. Under any consideration, as between the teacher and the pupil in their conference, testing should be unobtrusive and incidental to the learning process. Whether it should ever be accorded a place within the range of pupil consciousness is a question that is being raised more frequently than before.

R. B. MARSTON

A headquarters staff of 125 members conducts the business of the National Education Association in an office building owned by the Association in Washington, D. C.

A teacher's faith in his procedures is a very potent factor in determining his success.—Walter S. Monroe.

AIRPLANES

A Second Grade Unit in Transportation

I. Generalizations

- A. Airplanes are an important means of transportation today.
- B. Our airplanes are very different from the first ones made.
- C. Success in flying depends to a great extent upon weather conditions.
- D. Some areas are better suited for landing fields than are others.
- E. Some pilots have become famous.

II. Attitudes to be Encouraged

- A. A feeling of joy in independent, original work.
- B. A curiosity about new inventions.
- C. Respect and admiration for air heroes and pioneers.
- D. Friendliness toward people of foreign lands.

III. Pupil Activities or Jobs

- A. They will set up and answer problems about airplanes. The following problem questions are suggestive:
 - 1. In what different ways are airplanes used?
 - 2. What are the different kinds of airplanes?
 - 3. Who made the first successful airplane?
 - 4. How do winds and clouds affect flying?
 - 5. What sort of a place makes a good landing field?
 - 6. Who made the first trip across the Atlantic?
 - 7. How long did it take Dr. Eckner to go round the world in a zeppelin?
- B. They will make trips to landing fields, museums, exhibitions, and demonstrations.
- C. They will make a model landing field:
 - 1. Airplanes and zeppelins.
 - 2. Apparatus of ropes and pulleys for flying airplanes.

- 3. Hangars for the planes
- 4. Hitching masts for zeppelins
- D. They will play with airplanes in their toy aviation field.
- E. They will work out original rhythms based on the movements of zeppelins and airplanes.
- F. They will collect pictures, souvenirs, and interesting bits of information about airplanes. They will preserve some of this in booklets, along with their original stories and poems.
- G. They will use maps to trace mail and passenger airplane routes.

IV. Assimilative Material

- A. Airplanes are an important means of transportation today.
 - 1. Airplanes are used extensively for carrying mail.
 - 2. Airplanes furnish a rapid means of transportation for passengers.
 - 3. Airplanes are used for conveying provisions and other supplies to people in distress in isolated places.
 - 4. Airplanes are necessary in exploring new lands, as in the Byrd Antarctic expedition.
- B. Our airplanes are very different from the first ones made.
 - 1. The Wright brothers' plane.
 - 2. Lindbergh's "Spirit of St. Louis."
- C. Success in flying depends to a great extent upon weather conditions.
 - 1. Heavy winds and dense clouds are unfavorable for flying.
 - 2. Compasses are useful in guiding planes; lights help planes in keeping to a course and in landing; radio is fast coming to be used to direct airships.
- D. Some areas are better suited for landing fields than are others.
 - 1. A smooth level surface is preferable.
 - 2. Extensive ground free from any obstacles is needed.

- 3. Hangars, mooring masts, landing crews, and proper equipment for care of planes are all needed at a good landing field.
- E. Some pilots have become famous.
 - 1. Lindbergh made the first solo flight across the Atlantic Ocean; Amelia Earhart was the first woman to fly across.
 - 2. Byrd made an expedition to the North Pole and to the South Pole.
 - 3. Dr. Eckner guided the Graf Zeppelin in the first rigid airship trip around the world.
- V. Related experiences in other school subjects
 - A. Industrial arts—working with pasteboard, beaverboard, and wood.
 - B. Fine arts—making and decorating planes and zeppelins.
 - C. Reading—using books, stories, poems, bulletin board notices, posters, and titles to pictures.
 - D. Composition—writing words for songs, stories, letters, and poems; telling stories or interesting bits of information. This gave practice in penmanship.
 - E. Number work—finding cost of materials; measuring; estimating mileage and time schedules of airplanes.
 - F. Geography—tracing mail and flight routes; locating landing places.
 - G. Music—singing songs about airplanes; composing melodies for original songs.

VI. Materials

- A. For Teacher and Children
 - 1. Aeronautics. Aeronautical Publishers, Inc., 608 S. Dearborn Street, Chicago, Ill.
 - 2. Aerodigest. Aeronautical Publishing Company, New York City. \$2.00.
 - 3. Aircraft Radio Equipment. Radio

- Corporation of America, Washington, D. C.
- 4. Air Travel. Air Travel News Corporation, 1500 Buhl Building, Detroit, Michigan. \$2.00.
- Connecticut and Aviation. Connecticut Guard, Brainard Field, Hartford, Conn.
- 6. How to Build and Fly Model Airplanes. Ideal Aeroplane Supply Company, New York City.
- 7. Modern Mechanics and Invention. Fawcett Publications, Inc., 501 Seventh Ave., S., Minneapolis, Minnesota. \$2.50.
- 8. My Weekly Readers. 40 S. Third Street, Columbus, Ohio. 75 cents.
- 9. Nation's Business. Chamber of Commerce of the United States, Washington, D. C. \$3.00.
- Popular Mechanics Magazine.
 200 E. Ontario Street, Chicago,
 Ill. \$2.50.
- 11. Popular Science. Popular Science Publishing Company, Inc., 381 Fourth Ave., New York City.
- 12. Science and Invention. Experimenter Publications, Inc. 184-10 Jamaica Ave., Jamaica, New York City.
- 13. The New York Times. The New York Times Company, New York City.
- 14. *U. S. Air Services*. Air Service Publishing Co., Inc., Washington, D. C. \$3.00.
- B. For Teacher Only
 - Heroes of the Air. Fraser, C. C.—T. Y. Crowell Co., New York City. \$2.00.
 - How the World Rides. Fox, Florence C.—Charles Scribner's Sons, New York City.
 - 3. In the Land of Make Believe. Smith, E. Boyd—Henry Holt and Co., New York City. 1916.
 - 4. Our Living World. Downing— Longmans, Green and Co., New York City. \$2.00.

- 5. Science and Everyday Life. Smith, and Van Bushkirk— Houghton Mifflin Company, Boston. \$1.60.
- Skyward. Byrd, Richard E.—G.
 P. Putman's Sons, Putman Bldg.,
 New York City. \$3.50.
- 7. Story of Transportation. Eaton, Jeanette—Harper and Brothers, New York City. \$1.25.
- 8. The Boy's Aeroplane Book. Collins—F. A. Stokes Co., New York City. \$2.00.
- 9. Universal Cyclopoedia. Bufton— Bufton Publishing Co., Kansas City, Mo.
- 10. We. Lindbergh, C. A.—G. P. Putnam's Sons, Putnam Bldg., New York City.
- 11. West. West, James A.—John C. Winston Co., Philadelphia, Pa.
- 1. An Airplane Ride. Reid, Helen S.—Chas. Scribner's Sons, New York City. 60 cents.
- 2. Aviation Alphabet. Jones, Paul—Smith and Sale Co., 45 Exchange Street, Portland, Me. \$2.00.
- 3. Beginning to Fly. Hamburg, Merill—Houghton Mifflin Co., Boston, Mass. \$1.75.
- 4. Dick Bird, Air Explorer. Green, Fitzhugh Appleton and Co., New York City. \$1.75.
- 5. Pioneers of the Air. Gravatt, Lila—Mentzer Bush and Co., Chicago, Ill.
- 6. Play Fellows. Gecks, Skinner, Withers Johnson Publishing Co., Richmond, Va.
 - 1. Balloonspage 87
 - 2. Fly, Kite, Fly!....page 85
 - 3. Jack's Kitepage 86
 - 4. Jack Makes an Air-
 - planepage 95 5. Making Balloonspage 90
 - 6. The Airplanepage 93
- 7. Trips to Take. Gecks, Skinner, Withers Johnson Publishing Co., Richmond, Va.

- 1. The Airplane Ride....page 9
- 8. The Classroom Teacher. The Classroom Teacher, Inc., Chicago, Ill.
 - 1. Aviation-Drawings of Airships, original illustrations, Vol. 7, 17-19.
 - 2. Story-"Away-She-Go." Dixon, Maynard. Vol. 3, 377-379.
 - 3. Play-Play for the Fun of Playing, original. Vol. 3, 252.
- 9. The Study Readers. (Book II) Walker and Summy-Charles E. Merrill Co., New York City.
 - 1. A Long Ride.....page 135
 - 2. Other Ways to
 - Ridepage 133
 - 3. Taking Care of His Airplanepage 138.

D. Songs

- 1. The Airplane. Churchill-Grindell Book 7, page 54. Churchill-Grindell Co., Plattesville, Wis.
- 2. The Airplane. The Progressive Music Series. Silver, Burdett and Co., New York City.
- 3. Flying. Bryant, Songs for Children. American Book Co., New York City.
- 4. The Airplane. The Music Hour, Book I, page 79. Silver, Burdett and Co., New York.
- 5. The Aeroplane. Universal Music Series, Book I, page 63. Hinds, Hayden and Eldridge, New York City.
- 6. Balloon Song. Universal Music Series, Book I, page 115. Hinds, Hayden and Eldridge. New York City.
- 7. My Kite. Hollis Dann, Book II. American Book Co., New York City.
- 8. The Airship. Progressive Music Series, Book I, page 51. Silver, Burdett and Co., New York City.
- 9. The Aeroplane. Music Education

- Series, Book V. Ginn and Co., Boston, Mass.
- 10. The Airplane. Elementary Music Education Series, page 55. Ginn and Co., Boston, Mass.

CALLIE G. HYATT

SOME NEW READERS FOR CHILDREN

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- Good Reading. By John M. Manly and co-workers. Chas. Scribner's Sons. Primer through third reader.
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- 4. My Work Book. By Annie H. Sutton. Ginn and Company.
- An excellent book for the beginner in reading, made up largely of action sentences and suggestions for expression through hand work.
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- 8. THE STUDY READERS. By Walker and Summy. Charles E. Merrill Company. Primer through sixth reader.
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- 9. Roller Bears and the Safeway Tribe. By Edith Fox. Macmillan Company.

 An account of a fourth grade which organized itself into a safety council. It is very readable.
- 10. New Stories. By Marjorie Hardy. Wheeler Pub. Co.