# Science – All and Basic 5-12

Name:

Email:

## Options for Science endorsements

Your coursework may provide several options for teaching science grades 5-12. Your official analysis may provide feedback on your progress toward one or both options and additional endorsements.

**Option 1: Science - Basic**

Requirements for the endorsement #1541 Science - Basic include:   
Completion of 24 semester hours in science that includes 6 semester hours in each earth and space science, life science/biological science, physics/physical science, and chemistry covering the essential concepts and skills outlined below.

## Option 2: Science - All

Requirements for the endorsement #185 Science - All include:   
Completion of 36 semester hours in science that includes 9 semester hours in each earth and space science, life science/biological science, physics/physical science, and chemistry covering the essential concepts and skills outlined below.

## Additional Endorsements

Endorsements in specific content areas are granted if at least 15 semester hours are earned in that content area *and* requirements to All or Basic have been met.

To view the subject/courses you can teach with these endorsements, visit the [Board of Educational Examiners website, BEDS information](https://boee.iowa.gov/beds-information).

Please indicate below the coursework you have completed in the following categories. Coursework must appear on your transcript for each institution.

### Earth and space science

* Understand and apply knowledge of energy in the earth system
* Understand and apply knowledge of geochemical cycles

| Course Number | Course Title | Institution | Semester Hours | Semester and Year Completed |
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### Life science/biological science

* Understand and apply knowledge of the cell
* Understand and apply knowledge of the molecular basis of heredity
* Understand and apply knowledge of the interdependence of organisms
* Understand and apply knowledge of matter, energy, and organization in living systems
* Understand and apply knowledge of the behavior of organisms

| Course Number | Course Title | Institution | Semester Hours | Semester/Year Completed |
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### Physics/physical science

* Understand and apply knowledge of the structure of atoms
* Understand and apply knowledge of the structure and properties of matter
* Understand and apply knowledge of motions and forces
* Understands and applies knowledge of interactions of energy and matter

| Course Number | Course Title | Institution | Semester Hours | Semester and Year Completed |
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### Chemistry

* Understand and apply knowledge of chemical reactions
* Design and conduct scientific investigations

| Course Number | Course Title | Institution | Semester Hours | Semester and Year Completed |
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