

## National Science Education Standards Grades 5–8

|  | Science as Inquiry          |  |   |   |
|--|-----------------------------|--|---|---|
|  | CSI 5                       | CSI 6  | CSI 7-8<br>Earth Science  | CSI 7-8<br>Life Science                               |
| <b>NS. 5-8.1</b>                               |                             |  |   | CSI 7-8<br>Physical Science                           |
| Abilities necessary to do scientific inquiry   | 1.1, 1.3, 1.4               | 1.2, 1.3, 3.6, 4.2, 4.3, 5.1, 6.5, 7.1, 7.4, 8.2, 8.4-8.6; | 1.3.2, 1.5.5, 1.5.6, 1.6.3, 2.3.1, 3.1.1, 3.1.3, 3.1.4, 3.1.7, 2.2.1, 2.2.2, 4.1.1, 4.1.5, 4.2.1, 4.2.6, 4.3.3, 5.1.2 | 1.2.4, 2.3.4, 3.2.1, 5.2.2, 7.2.1                     |
| Understandings about scientific inquiry        | 1.2, 1.5                    | 1.2, 1.3, 1.5, 6.6, 8.2                                    | 1.1.2, 1.6.6, 2.2.5, 5.2.2  | 1.1.2, 1.1.3, 1.2.1                                   |
| <b>NS. 5-8.2</b>                               |                             |  |   |   |
|  | Physical Science            |  |   |   |
| Properties and changes of properties in matter | CSI 5                       | CSI 6  | CSI 7-8<br>Earth Science  | CSI 7-8<br>Physical Science                           |
| Motions and forces                             | 6.1-6.3, 8.3                | 6.1-6.6  | 1.5.2, 3.1.1  | 1.3.1, 1.3.6, 1.3.7, 1.5.1                            |
| Transfer of energy                             | 6.4, 6.5, 8.4               | 8.5, 8.6   | 6.1.5   | 4.1.1, 4.1.2  |
|  |                             | 4.1-4.4, 5.1-5.5, 5.7                                      | 4.2.1   | 4.2.1-4.2.3   |
| <b>NS. 5-8.3</b>                               |                             |  |   |   |
|  | Life Science                |  |   |   |
| Structure and function in living systems       | CSI 5                       | CSI 6  | CSI 7-8<br>Earth Science  | CSI 7-8<br>Physical Science                           |
| Reproduction and heredity                      | 2.1, 2.2, 2.5-2.7, 4.1, 4.2 | 2.1, 2.6, 3.1, 3.6, 8.2                                    |   | 1.3.1, 3.1.5, 5.1.1                                   |
| Regulation and behavior                        | 2.4-2.7, 4.3                | 3.1, 3.6   |   | 5.3.6, 6.1.2, 6.1.9                                   |
| Populations and ecosystems                     | 2.3                         | 3.3-3.5, 3.7   | 2.2.6   | 3.2.4, 3.2.5, 5.3.5                                   |
| Diversity and adaptations of organisms         | 5.4, 5.5                    | 3.1, 3.2, 3.5, 3.9   | 1.6.1, 1.6.2, 3.1.5, 3.1.7, 2.2.6, 4.1.5, 4.3.2   | 7.1.2, 7.1.3, 7.1.5, 7.2.1, 7.2.6                     |
|  |                             | 3.1-3.5, 3.8   | 1.6.5, 2.2.1, 2.2.6   | 2.1.3, 2.2.3, 2.3.1, 2.4.3, 3.1.1, 3.2.4, 4.1.1-4.3.8 |
| <b>NS. 5-8.4</b>                               |                             |  |   |   |
|  | Earth and Space Science     |  |   |   |
| Structure of the earth system                  | CSI 5                       | CSI 6  | CSI 7-8<br>Earth Science  | CSI 7-8<br>Physical Science                           |
| Earth's history                                | 6.2                         | 7.1-7.8  | 1.2.1-1.6.6, 2.1.1-2.3.5, 3.1.1-3.2.7, 4.1.1-4.3.3  |   |
| Earth in the solar system                      | 7.6                         |  | 1.5.7, 1.6.4, 1.6.6, 2.1.1, 2.1.2, 3.1.2, 3.1.5, 2.2.4, 6.1.1   |   |
|  | 6.1, 6.3, 6.4               |  | 6.1.1-6.4.4   |   |

| NS. 5–8.5                                   |                   | Science and Technology                                    |  |                          |  |
|---|-------------------|---|--|--------------------------|--|
|   |                   | CSI 5   | CSI 6  | CSI 7–8<br>Earth Science | CSI 7–8<br>Life Science                  |
| Abilities of technological design           | 6.7, 8.1, 8.2     | 4.3, 8.8, 8.9   | 3.1.3, 3.1.6, 4.2.1–4.2.3, 6.2.1, 6.4.1  | 6.2.1–6.2.4              | 4.3.4, 4.3.5, 6.1.4, 6.1.6, 6.2.4, 6.2.5 |
| Understandings about science and technology |                   | 1.4, 4.3, 4.4, 5.3, 5.5, 5.7, 7.6, 7.8, 8.1, 8.3, 8.6–8.8 | 1.1.1, 1.6.6, 2.2.4, 2.2.5, 2.2.7, 3.1.6, 4.1.5, 4.2.10, 4.3.3, 5.1.3, 5.1.7, 6.1.2, 6.4.3   | 6.2.1, 6.2.4             | 5.6.3, 6.1.2, 6.1.4, 6.1.5, 6.2.2, 6.2.4 |
| NS. 5–8.6                                   |                   | Personal and Social Perspectives                          |  |                          |  |
| Personal health                             | 2.8, 2.9, 3.1–3.9 | 2.2–2.5, 2.8, 2.9   | CSI 7–8<br>Earth Science   | CSI 7–8<br>Life Science  | CSI 7–8<br>Physical Science              |
| Populations, resources, and environments    | 5.1, 5.2          | 4.3, 4.4, 5.5, 5.6, 7.4                                   | 1.2.5, 1.5.6, 1.6.3, 2.3.4, 3.1.1, 3.1.3, 3.1.6–3.1.8, 2.2.1, 2.2.6, 2.2.7, 4.1.2, 4.1.5, 4.3.1–4.3.3, 5.1.1–5.2.4                                       | 7.2.6, 7.4.1             |  |
| Natural hazards                             |                   | 4.3, 4.4, 5.2, 7.4  | 1.5.4, 2.1.3, 2.2.1–2.2.5, 2.3.1–2.3.5, 3.1.2, 3.1.8, 2.2.2, 2.2.7, 4.1.5, 4.2.8, 4.2.10, 4.3.3  | 7.4.3                    | 5.5.1–5.1.3                              |
| Risks and benefits                          |                   | 2.7, 2.8, 4.3, 4.4, 5.2, 7.4                              | 1.2.5, 1.5.5, 2.2.5, 3.1.6, 3.1.8, 2.2.6, 2.2.7, 4.1.5, 4.2.10, 4.3.3, 5.1.2, 5.1.3, 5.1.7, 5.2.1–5.2.4  | 5.4.3, 5.4.4             | 5.5.4                                    |
| Science and technology in society           | 5.3               | 4.4, 5.5, 7.6, 7.8, 8.1, 8.3–8.8                          | 1.1.5, 1.2.5, 1.6.6, 2.2.4, 2.2.5, 2.2.7, 2.3.5, 3.1.6, 3.1.8, 4.1.5, 4.2.2, 4.2.9, 4.2.10, 4.3.3, 5.1.1, 5.1.3, 5.1.7, 5.2.3, 6.1.2, 6.2.1, 6.4.1–6.4.4 | 6.1.8, 6.2.1–6.2.4       | 5.4.4, 5.4.8, 5.4.11, 5.5.4, 5.6.3       |
| NS. 5–8.7                                   |                   | History and Nature of Science                             |  |                          |  |
| Science as a human endeavor                 | 6.6, 8.5–8.7      | 1.1, 1.5, 5.7, 6.1, 7.2                                   | CSI 7–8<br>Earth Science   | CSI 7–8<br>Life Science  | CSI 7–8<br>Physical Science              |
| Nature of science                           |                   | 1.2, 1.5, 4.2, 6.2, 8.6                                   | 1.1.4, 1.4.1–1.4.3, 1.6.4, 1.6.5, 2.1.2, 2.2.4, 2.2.5, 2.2.7, 4.1.4, 4.2.2, 4.2.5, 4.2.9, 4.3.3, 6.1.1, 6.1.3, 6.2.1, 6.3.4, 6.4.2                       | 1.3.1, 1.4.2             | 2.3.2, 5.4.5                             |
| History of science                          | 6.8               | 2.4, 3.1, 3.2, 4.2, 5.1, 5.7, 6.1, 6.5, 7.7, 8.5          | 1.2.3, 1.6.4, 1.6.6, 2.2.5, 4.3.3  | 1.1.1–1.1.3              | 1.1.2, 1.1.3                             |
|   |                   |   | 1.2.5, 2.2.5, 3.1.1, 4.1.4, 4.2.5, 5.1.5, 6.1.1, 6.1.3, 6.1.4, 6.1.8   | 1.4.1                    | 1.4.1, 1.4.3, 2.1.1, 5.5.1, 5.5.2        |