**Failure: Seeds of Innovation**
Lesson focuses on how failure is part of the engineering process. Students work in teams and learn about many inventions and advances in engineering were brought about after a mistake or failure. Students research an example of such an innovation and develop a presentation related to how the tenacity of the engineer allowed him or her to move past a failure and into the realm of innovation. Students reflect on the value of moving on after a failure or setback, present the results of their research to the class, and provide examples of how the innovation they researched has impacted society -- only because the engineer didn't give up.

| Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Chemistry | Physics |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Strand: Scientific Investigation and Reasoning*** |
|  |  |  |  |  |  | 3.BCommunicate and apply scientific information extracted from various sources such as current events, news reports, published journal articles and marketing materials. | 3.B Communicate and apply scientific information extracted from various sources such as current events, news reports, published journal articles and marketing materials. |
| 3.D Connect grade level appropriate science concepts with the history of science, science careers and contributions of scientists. | 3.D Connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists. | 3.D Connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists. | 3.D Relate the impact of research on scientific thought and society including the history of science and contributions of scientists as related to the content. | 3.D Relate the impact of research on scientific thought and society, including history of science and contributions of scientists as related to the content. | 3.D Relate the impact of research on scientific thought and society including the history of science and contributions of scientists as related to the content. | 3.DEvaluate the impact of research on scientific thought, society, and the environment. | 3.D Explain the impacts of the scientific contributions of a variety of historical and contemporary scientists on scientific thought and society. |
|  |  |  |  |  |  | 3.EDescribe the connection between chemistry and future careers. | 3.E Research and describe the connections between physics and future careers. |