**Reviewer Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade:\_\_7-8th Lesson/Unit Title: Crime Lab Chemistry\_\_\_\_\_**

**I. Alignment to the NGSS**

The lesson or unit aligns with the conceptual shifts of the NGSS:

|  |  |  |
| --- | --- | --- |
| Criteria | Specific evidence from materials and reviewers’ reasoning | Suggestions for improvement |
| A. Grade‐appropriate elements of the science and engineering practice(s),disciplinary core idea(s), and crosscutting concept(s), work together tosupport students in three‐dimensional learning to make sense ofphenomena and/or to design solutions to problems.i. Provides opportunities to develop and use specific elements of thepractice(s) to make sense of phenomena and/or to design solutions toproblems.ii. Provides opportunities to develop and use specific elements of thedisciplinary core idea(s) to make sense of phenomena and/or to designsolutions to problems.iii.Provides opportunities to develop and use specific elements of thecrosscutting concept(s) to make sense of phenomena and/or to designsolutions to problems.iv.The three dimensions work together to support students to make senseof phenomena and/or to design solutions to problems. |  |  |

A unit or longer lesson will also:

|  |  |  |
| --- | --- | --- |
| Criteria | Specific evidence from materials and reviewers’ reasoning | Suggestions for improvement |
| B. Lessons fit together coherently targeting a set of performance expectations.i. Each lesson links to previous lessons and provides a need to engage inthe current lesson.ii. The lessons help students develop proficiency on a targeted set ofperformance expectations.C. Where appropriate, disciplinary core ideas from different disciplines areused together to explain phenomena. D.Where appropriate, crosscutting concepts are used in the explanation ofphenomena from a variety of disciplines.E. Provides grade‐appropriate connection(s) to the Common Core StateStandards in Mathematics and/or English Language Arts & Literacy inHistory/Social Studies, Science and Technical Subjects. |  |  |

**Reviewer Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lesson/Unit Title:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| **Disciplinary Core Ideas (DCIs)** | **Element** | **Evidence** |
| **MS-PS1. A**[**: Structure and Properties of Matter**](http://www.nap.edu/openbook.php?record_id=13165&page=106) | [**Substances are made from different types of atoms, which combine with one another in various ways. Atoms form molecules that range in size from two to thousands of atoms. (MS-PS1-1)**](http://www.nap.edu/openbook.php?record_id=13165&page=106)[**Each pure substance has characteristic physical and chemical properties (for any bulk quantity under given conditions) that can be used to identify it. (MS-PS1-3) *(Note: This Disciplinary Core Idea is also addressed by MS-PS1-2.)***](http://www.nap.edu/openbook.php?record_id=13165&page=106) | **Students use water and chromatography paper to explore a variety of test substances. (Activity 3 Part 1)** |

**Evidence that Disciplinary Core Ideas (DCIs), Science and Engineering Practice (SEP) and Crosscutting Concepts (CCCs) were included in this lesson**

**Reviewer Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lesson/Unit Title:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| **Science and Engineering Practice (SEP)** | **Element** | **Evidence** |
| [ETS1.B: Developing Possible Solutions](http://www.nap.edu/openbook.php?record_id=13165&page=206)[ETS1.C: Optimizing the Design Solution](http://www.nap.edu/openbook.php?record_id=13165&page=208) | * [**A solution needs to be tested, and then modified on the basis of the test results, in order to improve it. (MS-ETS1-4)**](http://www.nap.edu/openbook.php?record_id=13165&page=206)
* [**There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem. (MS-ETS1-2), (MS-ETS1-3)**](http://www.nap.edu/openbook.php?record_id=13165&page=206)
* [**Sometimes parts of different solutions can be combined to create a solution that is better than any of its** predecessors. (MS-ETS1-3)](http://www.nap.edu/openbook.php?record_id=13165&page=206)
* [**Although one design may not perform the best across all tests, identifying the characteristics of the design that performed the best in each test can provide useful information for the redesign process—that is, some of those characteristics may be incorporated into the new design. (MS-ETS1-3)**](http://www.nap.edu/openbook.php?record_id=13165&page=208)[**predecessors. (MS-ETS1-3)**](http://www.nap.edu/openbook.php?record_id=13165&page=206)
 | **Students must determine which solvent (vinegar or alcohol) works best to separate some of the test substances (Activity 3 Part 1)****Students design the best system to separate the test substance. Students choose one test substance that interest them. They will will have three material stations to choose from.** |

**Evidence that Disciplinary Core Ideas (DCIs), Science and Engineering Practice (SEP) and Crosscutting Concepts (CCCs) were included in this lesson**

**Reviewer Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lesson/Unit Title:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Evidence that Disciplinary Core Ideas (DCIs), Science and Engineering Practice (SEP) and Crosscutting Concepts (CCCs) were included in this lesson**

|  |  |  |
| --- | --- | --- |
| **Crosscutting Concepts (CCCs)** | **Element** | **Evidence** |
|  |  |  |