### Observation Checklist Part 1

**Science and Engineering Practices**

**Grade 6-8**

Use the Bronze (1), Silver (2), Gold (3), and Platinum (4) proficiency level descriptions, or another assessment scale that is relevant to your school context.

#### Practice 1: I observed students asking questions

- a) to seek more information.
- b) to seek evidence for a claim.
- c) to challenge a claim or interpretation of data.
- d) to identify and understand independent and dependent variables.
- e) that can be investigated in this class.

#### Practice 2: I observed students developing and/or using a model

- a) to explore its limitations.
- b) to explore what happens when parts of the model are changed.
- c) to show the relationship between variables.
- d) to make predictions.
- e) to generate data about what they are designing or investigating.

#### Practice 3: I observed students planning and carrying out investigations

- a) that included independent and dependent variables and controls.
- b) that included appropriate measurement and recording tools.
- c) that tested the accuracy of various methods for collecting data.
- d) to collect data to answer a scientific question or test a design solution.
- e) to test the performance of a design under a range of conditions.

#### Practice 4: I observed students analyzing and interpreting data

- a) by constructing graphs.
- b) to identify linear and non-linear relationships.
- c) to distinguish between cause and effect vs. correlational relationships.
- d) by using statistics and probability such as mean and percentage.
- e) to determine similarities and differences in findings.
- f) to determine a way to optimize their solution to a design problem.

**Notes:**
### Observation Checklist Part 2

**Science and Engineering Practices**  
**Grade 6-8**

Use the Bronze (1), Silver (2), Gold (3), and Platinum (4) proficiency level descriptions, or another assessment scale that is relevant to your school context.

#### Practice 5: I observed students using mathematics and computational thinking

- **a** by including mathematical representations in their explanations and design solutions.
- **b** by using an algorithm to solve a problem.
- **c** by using concepts such as ratio, rate, percent, basic operations, or simple algebra.

#### Practice 6: I observed students constructing explanations and design solutions

- **a** that included quantitative and qualitative relationships.
- **b** that are based on scientific ideas, laws and theories.
- **c** that connect scientific ideas, laws, and theories to their own observations.
- **d** that apply scientific ideas, laws, and theories.
- **e** to help optimize design ideas while making tradeoffs and revisions.

#### Practice 7: I observed students engaging in arguments from evidence

- **a** that compare and critique two arguments on the same topic.
- **b** while respectfully providing and receiving critiques using appropriate evidence.
- **c** while presenting oral or written statements supported by evidence.
- **d** while evaluating different design solutions based on agreed-upon criteria and constraints.

#### Practice 8: I observed students evaluating and communicating information

- **a** when they read scientific text adapted for the classroom.
- **b** when they read or wrote information in combinations of text, graphs, diagrams, and other media.
- **c** when they created presentations about their investigations and/or design solutions.

**Notes:**