

## Are Students Progressing Toward Scientific Understanding?

### Notice Ideas

Shares a new **idea** related to the learning goal. This could be a claim, prediction or explanation.

Science Lens

### Analyze Reasoning

Supports idea with **everyday experience** or **imagined situations**

Makes sense of **data** (notices patterns and anomalies, interprets data)

Supports an idea with **evidence** and/or **scientific ideas** from investigations

**Critiques** or **merges** own and other's ideas

**Applies** relevant scientific ideas to new contexts

The order of the lens tags is not significant.

### Explanation of each tag:

1. Shares a new **idea** related to the learning goal. This could be a claim, prediction or explanation.
2. Supports an idea with **everyday experience** or **hypothetical situations**
  - a. Draws on prior experience or hypothetical situations to explain an idea.
  - b. Or, draws on prior learning to explain an idea.
3. Supports an idea with **evidence** or **scientific principles** from investigations
  - a. Observations, measurements from classroom investigations
  - b. Relevant scientific principles, models, or concepts from this or prior investigations
  - c. Reference to drawings or diagrams to explain their ideas
4. Makes sense of **data**
  - a. Notices patterns and anomalies in data and observations.
  - b. Interprets data in relation to the goal.
5. **Critiques** and **merges** own and others' ideas (co-constructs ideas)
  - a. Builds on others' ideas
  - b. Provides a counter-argument.
  - c. Defends idea by adding additional evidence.
  - d. Revises own thinking in light of new evidence.
  - e. Raises question related to an idea.
  - f. Considers whether there is enough evidence.
6. **Applies** relevant scientific ideas to new contexts
  - a. Explains similar situations from the classroom or everyday life.