Students who demonstrate understanding can:

K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.* [Clarification Statement: Emphasis is on local forms of severe weather.]

The performance expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

**Science and Engineering Practices**

**Asking Questions and Defining Problems**
- Asking questions and defining problems in grades K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.
- Ask questions based on observations to find more information about the designed world.

**Obtaining, Evaluating, and Communicating Information**
- Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.
- Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.

**Disciplinary Core Ideas**

**ESS3.B: Natural Hazards**
- Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.

**ETS1.A: Defining and Delimiting an Engineering Problem**
- Asking questions, making observations, and gathering information are helpful in thinking about problems. (secondary)

**Crosscutting Concepts**

**Cause and Effect**
- Events have causes that generate observable patterns.

**Connections to Engineering, Technology, and Applications of Science**

**Interdependence of Science, Engineering, and Technology**
- People encounter questions about the natural world every day.

**Influence of Engineering, Technology, and Science on Society and the Natural World**
- People depend on various technologies in their lives; human life would be very different without technology.

**Observable features of the student performance by the end of the grade:**

1. **Addressing phenomena of the natural world**
   - Students formulate questions about local severe weather, the answers to which would clarify how weather forecasting can help people avoid the most serious impacts of severe weather events.

2. **Identifying the scientific nature of the question**
   - Students’ questions are based on their observations.

3. **Obtaining information**
   - Students collect information (e.g., from questions, grade-appropriate texts, media) about local severe weather warnings (e.g., tornado alerts, hurricane warnings, major thunderstorm warnings, winter storm warnings, severe drought alerts, heat wave alerts), including that:
     - There are patterns related to local severe weather that can be observed (e.g., certain types of severe weather happen more in certain places).
     - Weather patterns (e.g., some events are more likely in certain regions) help scientists predict severe weather before it happens.
     - Severe weather warnings are used to communicate predictions about severe weather.
     - Weather forecasting can help people plan for, and respond to, specific types of local weather (e.g., responses: stay indoors during severe weather, go to cooling centers during heat waves; preparations: evacuate coastal areas before a hurricane, cover windows before storms).