

Learning Outcomes:

Nature of Science	Students should be able to appreciate the role of science in society; and its personal, social and global importance; and how society influences scientific research
Earth and Space	Students should be able to illustrate how earth processes and human factors influence the Earth's climate, evaluate effects of climate change and initiatives that attempt to address those effects

Formative Assessment in Enquiry Learning in Junior Cycle Science

Throughout these activities, teachers can use evidence to scaffold science learning and improve science teaching to bring about more equitable outcomes, these practices could include:

1. Designing/adapting classroom assessment that is well integrated into instructional activities.
2. Circulating and interacting with students, using a variety of approaches (e.g. questions, comment only, verbal comment by teacher, prompts and traditional tests) to elicit evidence of diverse students' learning.
3. Provides timely, substantive, constructive and highly responsive feedback.
4. Is flexible and responsive in adjusting instruction and using alternative approaches to help all students to learn based on the results of diagnostic assessment.
5. Proactively involves students in the process of setting specific learning goals, and

students are fully aware of the assessment success criteria.

Task

Your class is taking a cross-curricular (science, geography and history) week-long field trip to the Aran Islands, off the West coast of Ireland, the day after tomorrow. Your teacher reminds everyone to dress appropriately for the weather. Your assignment is to collect weather data to determine how you should pack for your field trip.

Brainstorm and list the factors that cause changes in weather.

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- Locate the Aran Islands on a map. Use a weather map to collect data on weather conditions on the Island.

Consider the following questions.

- What are the current weather conditions for the Aran Islands?

- What information do meteorologists use to predict future weather conditions?

- How can you use this information to predict the temperature, humidity, precipitation and wind speed and direction for the park next week?

- Do not use an existing weather forecast. You must collect your own data, by examining a weather map.

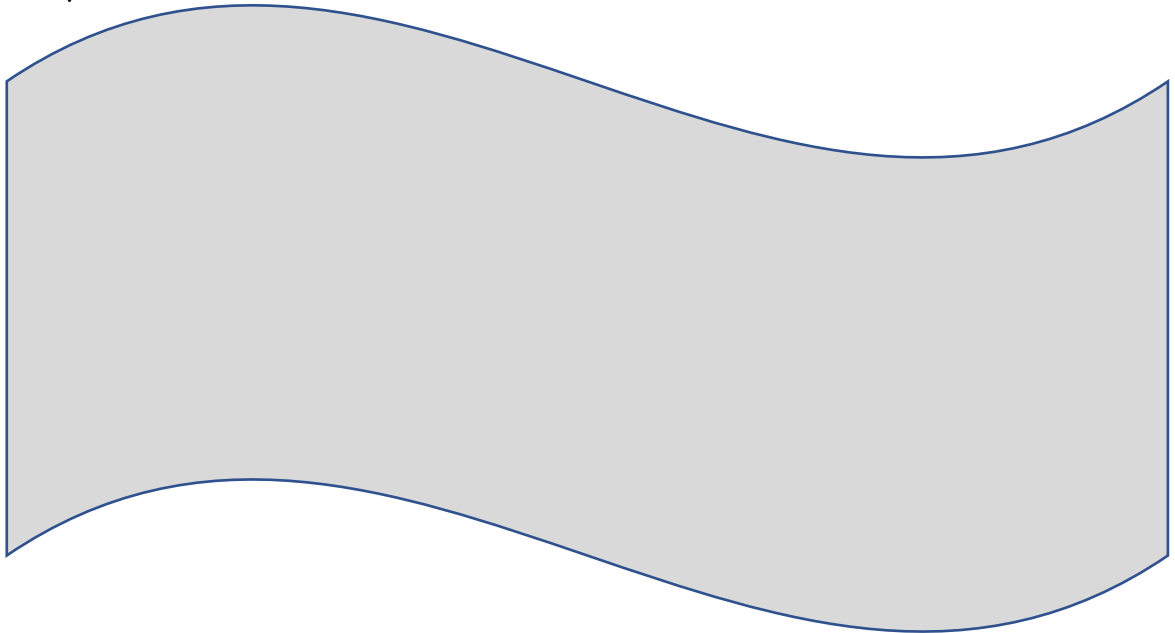
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• Write a weather forecast based on data you collected for the next week. Include the following information for each day of your forecast:

Success Criteria for your forecast

- High and low temperature
- Humidity prediction
- Chance of precipitation and type of precipitation
- Wind speed and direction
- Provide evidence that explains your forecast, such as the motions of fronts or pressure systems.



You will then determine what clothes to pack for the field trip based on your forecast.

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The next week, compare your weather forecast to the actual weather conditions. Did you choose the right clothes for the field trip? Explain your answer using your analysis.

• Which weather data were most helpful for your predictions? Which were least helpful? Explain.

• Do you think weather for the next month can be predicted with great accuracy? Why or why not?

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