

Name _____

Weather Wizards: How Do Meteorologists Predict the Weather?

Open-Ended Response Answer Key

1. Accurate weather predictions are vital for farmers to plan planting and harvesting seasons, for airlines to ensure safe flights, for outdoor event planners to schedule activities, and for individuals to make everyday decisions about clothing, travel, and outdoor plans.
2. (Research required) Answers will vary depending on the chosen recent extreme weather event.
3. Challenges meteorologists face include the complexity of the atmosphere, the need for advanced technology, and the unpredictability of certain weather phenomena. Advancements in technology, such as supercomputers and improved satellite technology, have enhanced data collection and modeling capabilities, leading to more accurate forecasts.
4. (Practical exercise) Answers will vary based on the weather symbols and patterns observed on a specific weather map. Students can use symbols for clouds, precipitation, temperature, and wind to create a simple forecast for their local area.

