

## Field Study

	<b>Keep Working</b>	<b>Getting There</b>	<b>Got It</b>	<b>In The Flow</b>
<b>Skillful Observation</b>	Observations are frequently inaccurate or miss key attributes of ecosystem	Observes only superficial or very obvious attributes of ecosystem	Makes accurate observations of key attributes of ecosystem	Meticulous observation of detail that escapes the notice of most observers
<b>Data Collection</b>	<p>Unable to describe and explain steps for data collection: where, when, why</p> <p>Sampling is inconsistent and unsystematic</p>	<p>Can describe steps for data collection, but may be unable to explain the steps clearly</p> <p>Collects samples for varying populations, times or locations with some consistency</p>	<p>Can describe and explain the steps for data collection</p> <p>Consistent collection of samples for varying populations, times or locations</p>	<p>Can persuade others that the chosen steps for data collection will yield optimum insight into the ecosystem</p> <p>Collection of samples is consistent, and can explain the importance of this consistency</p>
<b>Measurement</b>	<p>Takes minimal measurement, or misses many key measurements over time, location and population</p> <p>Does not understand different scales and instruments required for measurement</p>	<p>Some key measurements may be missing, or some may be inappropriate</p> <p>Unsystematic approach to measurement calls accuracy into question</p> <p>Some confusion about the appropriate use of scales and instruments</p>	<p>Key measurements over time, location and population are appropriate and largely complete.</p> <p>Gaps in measurement do not call overall accuracy into question</p> <p>Uses all scales and instruments accurately and appropriately</p>	<p>Makes multiple measurements over time, location or population to improve system representation</p> <p>Individual measurement is repeated if necessary to improve data accuracy</p> <p>Fluent use of appropriate scales and measures</p>

Recording	<p>Field notes and sketches are disorganized and lack detail</p> <p>Technology such as digital cameras and other recording devices are not used appropriately</p> <p>It would not be possible for someone following procedures outlined in notes to replicate the measurements, observations or conclusion</p>	<p>Field notes and sketches lack extensive detail</p> <p>Limited use of digital recording devices</p> <p>It would be difficult for someone to use the same procedures to replicate the measurements, observations or conclusions</p>	<p>Takes careful notes and organizes them appropriately.</p> <p>Uses appropriate digital recording technology to capture salient detail</p> <p>It would be possible for someone to use the same procedures to replicate the measurements, observations or conclusions</p>	<p>Notes are meticulous, detailed and extensive</p> <p>Creative use of digital recording technology to capture a wide range of salient detail</p> <p>Someone using the same procedures could be confident in replicating the measurements, observations or conclusions</p>
Interpretation and Analysis of Data	<p>Makes sketchy, superficial or inaccurate connections between field data and other sources of information gained through research</p>	<p>Makes appropriate connections between field data and other sources of information gained through research</p> <p>Analysis is accurate, but incomplete in some regards</p>	<p>Makes accurate and interesting connections between field data and other sources of information gained through research</p> <p>Analysis indicates some insight into the complexity and interdependence of variables within the system</p>	<p>Makes sophisticated and insightful connections between field data and other sources of information gained through research</p> <p>An elegant and thorough explanation of the complexity and interdependence of elements in the system</p>
Justification	<p>Restricts analysis to the presentation of information, or does not justify conclusions or interpretations</p>	<p>Some attempt to provide reasons, support or justification for conclusions</p> <p>Arguments may not be consistently persuasive</p>	<p>Consistent support, justification and verification of conclusions</p>	<p>Conclusions are fully supported, verified and justified.</p> <p>Goes well beyond the presentation of information</p>
Identification of Issues for further study	<p>Identifies no issues or questions for further study that arose from the analysis of field data</p>	<p>Identifies limited but appropriate issues or questions for further study that arose from the analysis of field data</p>	<p>Issues or questions identified for further study are interesting and appropriate</p>	<p>Issues or questions identified for further study are intriguing and worth serious consideration for follow-up</p>

<b>Collaboration With Others</b>	<p>Requires teacher intervention or frequent supervision to remain on task and engaged</p> <p>Interferes with the learning of others</p> <p>Does not build on, extend or challenge other's ideas</p> <p>Is frequently unprepared for team meetings or working sessions</p> <p>Cannot clearly identify his or her contribution to the group effort</p>	<p>Inconsistent use of available collaborative environments</p> <p>May contribute by doing his or her own work, but seldom offers assistance to others in problem-solving situations.</p> <p>Does most of his or her work when the deadline is near, or when teacher supervision is required.</p>	<p>Uses a variety of collaborative environments to keep in touch with group members and to build knowledge.</p> <p>Remains engaged with others through the developing work rather than through teacher supervision.</p> <p>Is consistently helpful to others.</p>	<p>Depends on collaborative environments to push thinking and work forward.</p> <p>Offers leadership that builds group cohesion and effectiveness.</p> <p>Makes connections that build on and extend ideas.</p>
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