

GRANT PARK HIGH SCHOOL: A Commitment to Excellence

2007 – 2008

Science Department Improvement Plan

Department Head: Mike Patenaude

| Outcome: | To improve assessment for learning by developing and using rubrics for lab reports | To introduce and extend the use of technology in science classes and labs | To introduce and extend the use of field work where possible in science classes |
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| Rationale: | <p><i>Assessment for learning is a school-wide PD emphasis. The use of quality rubrics will give better feedback to students than simply a "mark", and will offer opportunities for self and peer assessment - all of which should reinforce learning</i></p> | <p><i>Our department has had the good fortune of acquiring a wide range of technology and will have access next year to a mobile wireless lab of laptop computers. Technology widens the scope of possible laboratory experiences and should offer richer learning opportunities for students.</i></p> <p><i>With added help of a support teacher with extensive experience with technology and labs, this is a great opportunity to take this step!</i></p> | <p><i>Field work offers students the chance to apply their science skills in the real world, outside of the classroom and laboratory walls. Connecting students to the world outside should offer valuable enrichment for all students.</i></p> <p><i>Whereas we recognize that there are challenges and obstacles to overcome in implementing quality field work, there are already examples of this in several science courses. This outcome seeks to extend these experiences within the department.</i></p> |
| Strategies: | <ul style="list-style-type: none"> <input type="checkbox"/> Share articles and/or web resources on the construction and use of rubrics <input type="checkbox"/> Devote meeting time to the development and/or sharing of rubrics that can be used by students or teachers, for specific labs or generic rubrics | <ul style="list-style-type: none"> <input type="checkbox"/> Examine Vernier lab manuals for different grade levels and pick at least ONE appropriate experiment use in the first semester <input type="checkbox"/> Devote time at a meeting to share with each other the labs that were used and reflect on the pro's and con's | <ul style="list-style-type: none"> <input type="checkbox"/> Brainstorm ideas for field work appropriate at different grade levels and in different content areas <input type="checkbox"/> Assemble a folder/binder of field work resources and information <input type="checkbox"/> Encourage multi-grade, multi-program activities |

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| Strategies, Cont'd: | <ul style="list-style-type: none"> <input type="checkbox"/> Explore and share online resources for rubric construction <input type="checkbox"/> Explore and share ways to integrate rubrics with the use of grade book technology such as Easy Grade Pro and/or MarkBook | <ul style="list-style-type: none"> <input type="checkbox"/> Make use of D. Kuzenko to offer advice in selecting appropriate labs and in setting up and running the lab with technology <input type="checkbox"/> Research grants available for technology and do grant writing to acquire new science technology | <ul style="list-style-type: none"> <input type="checkbox"/> Conduct the Total Talent Portfolio with students to determine field experiences they have had and would like to do <input type="checkbox"/> Devote time at dept meeting to share and reflect on experiences |
| Data Sources: | <ul style="list-style-type: none"> <input type="checkbox"/> Dept discussion & reflection on the use and success of rubrics <input type="checkbox"/> Student achievement on labs, tracked through the semester <input type="checkbox"/> Survey of students at end of term or semester | <ul style="list-style-type: none"> <input type="checkbox"/> Incorporate a "technology" indicator on the lab sign-in sheets to record the # of labs using technology <input type="checkbox"/> At a department meeting, complete and collect reflection forms on the new technology we used in our labs | <ul style="list-style-type: none"> <input type="checkbox"/> Reflection and/or evaluation forms could be completed and collated for different field work experiences <input type="checkbox"/> Incorporate a "field work" indicator on lab sign-in sheets to record # of field work activities |
| Indicators of Success: | <ul style="list-style-type: none"> <input type="checkbox"/> Rubrics will be collected, developed and shared at different grade levels <input type="checkbox"/> Quality of student lab reports will improve, as measured by rubrics <input type="checkbox"/> Student and/or parent survey at end of semester or term will express perceptions of fairness, ease of use and increased learning | <ul style="list-style-type: none"> <input type="checkbox"/> All science courses will have incorporated at least one technology-based lab experience <input type="checkbox"/> Students' experience with technology will facilitate its use in subsequent years <input type="checkbox"/> Teacher reflections on the use of technology will generally reflect positive experiences and willingness to continue | <ul style="list-style-type: none"> <input type="checkbox"/> Most (75% or more) science teachers will have incorporated a new field experience in at least one course this year <input type="checkbox"/> As indicated by a teacher survey, teachers will express a desire to repeat or extend their use of field work |
| Supports Needed: | <ul style="list-style-type: none"> <input type="checkbox"/> We may approach the science consultant to organize PD in rubric construction <input type="checkbox"/> Subscription (\$200 USD per year) to SurveyMonkey | <ul style="list-style-type: none"> <input type="checkbox"/> \$1100 to acquire 12 Vernier Go! Link cables for use with younger grades, to simplify the use of probes <input type="checkbox"/> Install Logger Pro software on middle school laptops | <ul style="list-style-type: none"> <input type="checkbox"/> Access greenhouse in the courtyard <input type="checkbox"/> \$250 to offset costs for transportation* <input type="checkbox"/> Ideas, resources from the science consultant and support teacher <input type="checkbox"/> SurveyMonkey subscription |

* Perhaps \$500 could be dedicated from local program grant budget to support field work/trips. This might be combined with \$250 from "gifted and talented" budget, as this could be classified as "enrichment". Teachers must apply before Sept 30th, limit of one trip per class, maximum \$100 per trip