Do the Science

Northwest Educational Service District 189
Together We Can
Math & Science Collaborative Inquiry Project

Instructional materials (text; kit) *FOSS Magnetism and Electricity*; Inv. 1, Part 3 **Grade Level:** 4-5

Lesson: Investigating Magnetism

Big Idea:
Collaboratively carry out the appropriate kind of investigation to match a given research question and accurately report results based on evidence. 4-5 INQ

Learning Target: Collect and record relevant observations and data while conducting a scientific investigation. 4-5 INQ D & H	**Common Misconceptions:** Children do not see the evidence as being important or of value.
Success Criteria: I can gather, record, and organize data from my investigation.	**Vocabulary:** Observations, data, investigation, evidence
Elicitation Activity*: *FOSS Magnetism and Electricity*; Inv. 1, Part 3, "The Force Investigation," steps 1 through 7.	**Talk structures/Discourse techniques:** Follow the FOSS lesson. However, whenever a question is posed in the lesson, have the students discuss the questions through: • partner talk • group talk • think-pair-share and other similar strategies that encourage student-to-student discourse.
Topic introduction/lesson Activities: "The Inquiry Question," steps 10 through 17.	

Embedded Formative Assessment/s:

Step #12. Make a Data Chart: The students collect, organize, and record data from the investigation on a T-table.
Step #14. Record Data on the Graph: The students transcribe the T-table data onto a graph.
Step #15. Make Predictions Using the Graph

Adjustment Trigger
What level of student performance will necessitate an instructional adjustment?

2.5 or below

Score 4.0	**In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.**	
	3.5	In addition to score 3.0 performance, in-depth inferences and applications with partial success.
Score 3.0	**The student will:** • **display the findings of an investigation using tables, graphs, or other visual means to represent the data accurately and meaningfully** **The student exhibits no major errors or omissions.**	
	2.5	No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content
Score 2.0	**There are no major errors or omissions regarding the simpler details and processes as the student:** • completes a teacher provided table, graph or other visual means of representing data **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.**	
	1.5	Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content
Score 1.0	**With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.**	
	0.5	With help, a partial understanding of the 2.0 content but not the 3.0 content
Score 0.0	**Even with help, no understanding or skill demonstrated.**	

This rubric is a working DRAFT produced in cooperation between the ESD Mathematics/Science Network and Marzano Research Labs.

Instructional Adjustment (if needed):

Students work in mixed ability groups.

Lesson Closure*:

Steps 17- 19 Class discussion and reflection.

* Opportunity for formative assessment