

Science Grade 4 Shifted Lessons – March 2011

Grade 4 Science			
Teacher(s)	School	Lesson Title	Brief Description of “shift”
Melissa Beyer	Jefferson	Animal and Plant Cells	Set up a wonder wall – What will they look like? How will they be different or the same? Finish lesson by looking at onion and animal cells under microscope.
Meghan Reil and Amy Anderson	Sand Creek	Intro. To Microscopes	To kick off our microscope unit- we covered slides with numbers 1-8 and had the students draw eight boxes on their science journal notebooks. I had them look at the slides and draw a detailed picture, and a description of what it looks like. I unveiled what the objects really were and this brought us to the euglena and paramecium. I did the same thing with the two of those (did not tell them what it was) and we discussed the importance of really good descriptive drawings and writings. From there we did a Venn diagram with specimen e (Euglena) and specimen p (paramecium). After the Venn diagram we watched a short clip on Discovery Ed. Of these specimens up close and where they were found, etc.
Stephanie O’Leary	Lincoln	Small Things	In stage 3 number 13 on protozoa’s, it originally had kids looking at the organisms before they received direct instruction. I took it a step deeper and each student was given a sheet for the paramecium, euglena, and protozoa. I had the students fill them out and put them in their science notebook. I attached two of the documents. After the students completed the sheets, we shared out.
Nicole Wyatt	Franklin	Animal Adaptations (crayfish unit)	In journals, students made a t-chart (I know, I wonder) of everything they have observed so far about the crayfish. <ul style="list-style-type: none"> • I randomly paired them up and without the crayfish in front of them, they talked about what they already know and have seen. Less than 10 minutes later, I let them look at the crayfish and write some other observations. They had to make a list of at least 10 observations. • We came together and they had the opportunity to share and I wrote their responses on the board. Next, I circled the observations that we either physical or behavioral adaptations. Students were not yet aware of this. Based on those few observations, they were to write any questions they had. • Next, students shared their questions. • Finally, I introduced the word adaptations and pointed out the observations they made fall into 2 categories: physical and behavioral. Then we categorized their observations.

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Julie Engelmann, Ken Sonnenfeld	Johnsville	Meet the Paramecium	Shifted questions on a paramecium worksheet.
Shawn Gallagher, Janie Lang, Pamela Jacobson, Bob Barnette	Andover	Introduction to Microscopes/ Small Things	<p>We will be setting out materials for students to use. Their task is to try and magnify letters.</p> <p>In their journal they will answer these questions:</p> <p>What materials worked the best?</p> <p>What shapes worked the best for magnification?</p> <p>Refer to prior knowledge in math/geometry (convex, concave.)</p> <p>Group discussion about observations.</p>

Science Grade 5 Shifted Lessons – March 2011

Grade 5 Science			
Teacher(s)	School	Lesson Title	Brief Description of “shift”
Renee Jaroscak	Madison	Scientists Make astute observations to stimulate formulation and support the accuracy of investigations.	Observe a Picture, Write 20 or more observations (both qualitative and quantitative) and then write one inference, one prediction, and multiple questions with the goal of formulating a scientific investigation from that basis.
Deay Schrempp, Leslie Witucki, Katy Byrnes, Kristin Fritschel	CBPA	Sound (entire unit)	The unit was launched when students explored all sound materials without teacher direction, recorded observations and their questions in the science notebook. From their observations they had to formulate testable questions around ‘sound’ with the materials provided. Teachers guided them in writing investigable questions by using the requirements from UbD. The students did observations – recording any questions they had. Teachers collected all questions and worked to narrow down the questions that would hit on the EU’s from the UbD. Students were given sentence prompts to re-write questions from: “How does A affect B?” “How does X compare to Y?” Students planned for and conducted experiments. They had to include their investigable question, name materials needed, and tell how they would collect and record their data. They had to identify controlled variables as well.
Karen Stong and Kent Parke	Andover	Models and Designs	Shift is having students use notebooks to take notes and create diagrams vs. using the FOSS sheets.
John Spanjers	Johnsville	Humdingers	Students drew a sketch of their humdingers for another group of students to use to try to replicate it.
Sharolyn Carlson	Franklin	Meet our Solar System	Used Diagnostic, but had groups create posters, which are hung up around the room. The students walked around the room and (poster walk) to read and look at posters everyone had made. They formulated questions, which I recorded. We isolated the questions about the planets, stars, and moons. Each group was then given the task to go answer the questions about one of the planets or stars or moons, and make any notes they learned on the way. They shared out their learning...Which I recorded on Poster paper to hang up about each planet, star, and moon. This led to more questions which they recorded what their questions in their notebooks. The students then wanted to hang the posters in order of the planets in the solar system. I did not use any of the worksheets and the students still got to all of the information I wanted them to learn on their own.
Sarah Edmundson	Lincoln	The Great Egg Drop	In my Arts Block Engineering class, students will work in collaborative teams to engage in the engineering process while recording their work in a mini journal and constructing a model to safely drop an egg. I will place constraints on the materials used and allow students to redesign after we share our initial models. Also, students will be asked to reflect on a class EQ: How do my observations help me create a "better" solution?

Grade 5 Science

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Michael Johnson	Crooked Lake	Go Carts	<ul style="list-style-type: none">• specifically have groups gender based• Students generated a list of what they know about go-carts• I notice/ I wonder about the bag of materials
Shane Long and Roger Johnson	Sand Creek	Humdingers	We were very intentional about having students journal their humdinger designs. Sketches were evaluated every day with feedback given to students by the teacher and by peers. On the last day, each student was given another student’s journal and was asked to assemble his humdinger using only his notes.
Janice Wisen	Jefferson	Simple Machines	Gave a description of a real world problem that needed to be solved: I have 22 fence posts buried in the ground sunk with concrete. What simple machines could I use to remove them with the least amount of effort and time? Watched a Discovery Education video on simple machines. Used Science Magnifier to learn more about simple machines that might help.