

# Science Department Observation Support Guide

We developed a number of documents that unpack two Teacher Effectiveness Elements that have been identified as high priority areas upon which to focus.

The "proficient" performance levels of these two elements are described below:

- **Element I-A-4: Well Structured Lesson**  
Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping.

AND

- **Element II-A-2: Student Engagement**  
Consistently uses instructional practices that are likely to motivate and engage most students during the lesson.

We "unpacked" the elements to guide you as you observe and reflect upon science instruction.

We included the following:

- What to Look for... from Teacher;
- What to Look for... from Students;
- Observations/Evidence of Successful Practice of this Aspect/Element;
- Observations/Evidence when this Aspect/Element is Lacking;
- Sample Prescriptions; and
- Other Supports.

The "Well Structured Lesson" element is pretty detailed so we broke it down and included information for each of these areas: objectives; strategies; pacing & sequence; activities; materials, resources & technology; and grouping as well.

We have embedded the complete document on the website as an excel file and this document has each aspect of the tool as a "one-pagers" for your use. We hope this helps with the wonderful work of classroom observation in science! You can find them as well as other resources at:

<http://bpsscience.weebly.com/science-classroom-observations---what-to-look-for.html>

Let us know how we can help!

*Pam*

<p><b>Element I-A-4 -- Well Structured Lesson</b> Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping</p>	
<p>Focus area: <b>Objectives</b></p>	
<p>What to Look for...</p>	
<p>From the Teacher</p>	<p>From the Students</p>
<ul style="list-style-type: none"> <li>• Are there both content and language objectives present?</li> <li>• Are objectives standards driven, developmentally appropriate and aligned with curriculum expectations?</li> <li>• Are the objectives measurable?</li> <li>• Are objectives written in student friendly language?</li> <li>• Are objectives reviewed with students at appropriate times?</li> <li>• Is the objective worth learning?</li> <li>• Do the student outcomes/assessments targets drive the objective? (teaching with the end in mind)</li> <li>• Are objectives presented and posed in a way that promotes discovery, scientific thinking and practices?</li> </ul>	<ul style="list-style-type: none"> <li>• Can students articulate the objectives in their own words?</li> <li>• Can students do what the objective asks?</li> <li>• Are students challenged by the work, but not overwhelmed by the target objectives?</li> <li>• Do students understand the value in what they are being asked to do and why they are learning it?</li> </ul>
<p>Observations/Evidence of successful practice of this Element</p>	<p>Observations/Evidence when this Element is Lacking</p>
<ul style="list-style-type: none"> <li>• Objectives are clearly written in student friendly language and articulated to students.</li> <li>• Students are aware of and can explain the objectives.</li> <li>• The lesson matches the objectives on the board.</li> <li>• Students are challenged by the work, but are able to do what the objectives ask them to do.</li> <li>• When the lesson includes science exploration, the content/lesson objective is phrased as a question to encourage student discovery.</li> </ul>	<ul style="list-style-type: none"> <li>• Objectives do not match the lesson observed.</li> <li>• What the students are asked to do does not lead to achieving the stated objective.</li> <li>• Students do not know what to do, how to do what they are asked, or why they are doing the tasks.</li> <li>• Students communicate continued confusion of expectations.</li> <li>• No objectives posted or communicated to students.</li> </ul>
<p>Sample Prescriptions</p>	<p>Additional Supports</p>
<ul style="list-style-type: none"> <li>• Begin lesson planning by defining assessment targets with students expectations that support achievement.</li> <li>• Develop the objectives with the student expectations and outcomes in mind.</li> <li>• Use district identified materials to identify objectives.</li> <li>• Write objectives in student friendly language and plan when and how they will be shared with students.</li> <li>• Review content to be better prepared for teaching the lesson.</li> <li>• Craft questions before class that guide the lesson and challenge students with the main ideas for the day. Be sure to write them down and use them during class. This is especially helpful in science and they do not take the inquiry out of the class.</li> </ul>	<ul style="list-style-type: none"> <li>• Content courses/workshops offered by the BPS Science Department or area universities/partners.</li> <li>• Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- content related to each unit is identified and discussed.</li> </ul>

<p><b>Element I-A-4 -- Well Structured Lesson</b> Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping</p>	
<p>Focus area: <b>Strategies</b></p>	
<p>What to Look for...</p>	
<p>From the Teacher</p>	<p>From the Students</p>
<ul style="list-style-type: none"> <li>• Are strategies aligned with the objectives/outcomes?</li> <li>• Are various strategies employed to meet the objectives?</li> <li>• Do strategies engage students in scientific practices that are appropriate for the lesson?</li> <li>• Are various strategies employed to accommodate diverse student needs?</li> </ul>	<ul style="list-style-type: none"> <li>• Are students familiar with the strategies and do they respond appropriately to the strategies being used?</li> <li>• Are strategies developmentally/age appropriate?</li> <li>• Are there strategy scaffolds in place to support students as needed?</li> <li>• Are students responsive to the strategies employed?</li> </ul>
<p>Observations/Evidence of successful practice of this Element</p>	<p>Observations/Evidence when this Element is Lacking</p>
<ul style="list-style-type: none"> <li>• There is a high level of student engagement evidenced by: e.g., all students working on the assigned task; student talk is on target and all students in a group have the opportunity to speak/share; all students in the group are working collaboratively sharing responsibility for the assignment; body language indicates engagement - head nodding, sitting up and leaning forward, etc.</li> <li>• Strategies incorporated into the lesson lead to desired lesson outcomes.</li> <li>• Appropriate and effective strategies used in the classroom as evidenced by observable student outcomes (list what is observed).</li> <li>• Different strategies are employed to meet the needs of all students (note the strategies observed and how you know students responded well).</li> </ul>	<ul style="list-style-type: none"> <li>• The strategies used do not challenge students in ways that support the stated objectives/outcomes.</li> <li>• Few or inadequate strategies implemented during class.</li> <li>• There is an overreliance on a particular strategy for the entire lesson.</li> <li>• Inappropriate implementation or application of the strategy.</li> <li>• Too many strategies used without getting the desired outcome -- so many shifts in a lesson that the continuity is lost.</li> <li>• Students don't know what to do or how to do what they are asked to do.</li> <li>• Students are disengaged -- they are not focused on the task at hand.</li> </ul>
<p>Sample Prescriptions</p>	<p>Additional Supports</p>
<ul style="list-style-type: none"> <li>• Identify age appropriate strategies to be used to meet desired objectives.</li> <li>• Identify and develop consistent processes/protocols that students are explicitly taught to use and are provided with guidance as to when to use them.</li> <li>• Establish and implement a core set of strategies to use in class to complete certain types of outcomes.</li> <li>• Implement strategies included in the BPS Science instructional materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- appropriate strategies are provided and scaffolds to use them are shared.</li> <li>• Attend PD sessions that teach specific strategies – The Skillful Teacher is an excellent course that is especially helpful in science.</li> </ul>

<p><b>Element I-A-4 -- Well Structured Lesson</b> Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping</p>	
<p style="text-align: center;"><b>Focus area: Pacing and Sequence</b></p>	
<p style="text-align: center;">What to Look for...</p>	
<p>From the Teacher</p>	<p>From the Students</p>
<ul style="list-style-type: none"> <li>• Does teacher use formative assessment to plan/guide pacing and sequence before/during class?</li> <li>• Does sequence of the lesson lead to the objectives?</li> <li>• Does pacing allow for completion of activities in the allotted class time?</li> <li>• Does the teacher start on time, implement full use of the class time, and end on time?</li> <li>• Does the teacher use routines to start and end class?</li> <li>• Does the teacher follow BPS Science pacing guides?</li> <li>• Does the teacher communicate to students the reasoning behind the lesson organization/sequence?</li> </ul>	<ul style="list-style-type: none"> <li>• Do students look/feel rushed?</li> <li>• Are students finishing early?</li> <li>• Are students aware of and engaged in the routines of starting class and ending class?</li> <li>• Do students feel like they have the time to do the assignment?</li> <li>• Do students complete the assignment independently when directed and move through tasks efficiently?</li> </ul>
<p>Observations/Evidence of successful practice of this Element</p>	<p>Observations/Evidence when this Element is Lacking</p>
<ul style="list-style-type: none"> <li>• Class starts and ends on time.</li> <li>• Routines are in place and students follow them.</li> <li>• Students are engaged during the entire lesson.</li> <li>• Teacher uses strategies that support students at different paces -- the lesson is differentiated as needed.</li> <li>• Teacher is roughly on district pacing schedule.</li> <li>• The teacher uses formative assessment to determine pacing/sequence decisions, e.g., checking in, asking questions, asking higher level questions.</li> <li>• Teacher's pacing decisions communicate an understanding of the subject content appropriate to the grade level learning demands.</li> </ul>	<ul style="list-style-type: none"> <li>• Students pack up to leave well before the end of class.</li> <li>• The Do Now creeps well beyond the intended time and limits learning/engagement.</li> <li>• Students finish tasks "early" with no additional class assignment to use the "extra" time productively.</li> <li>• The lesson is taught without attention to student disengagement; if students are not "with" the teacher or lesson, little or no action is taken to adjust the lesson.</li> <li>• The trajectory of lessons through a unit do not make sense to the students. They do not understand/cannot communicate how the lessons progress to help them build understanding.</li> </ul>
<p>Sample Prescriptions</p>	<p>Additional Supports</p>
<ul style="list-style-type: none"> <li>• Plan the lesson to use the whole class period so that the students are engaged and productive for the entire class period. Include shifts in the lesson to keep the lesson moving at a pace that students can be challenged, but not overwhelmed.</li> <li>• Plan ahead! Identify additional lesson moves/activities in case things move more quickly than anticipated.</li> <li>• Know what can be cut/shortened in case things take longer than expected.</li> <li>• Anticipate areas where students may become confused and plan for a variety of ways to reach them.</li> <li>• Post a timeline for the unit and agendas for each class.</li> <li>• Plan unit assessments and the formative assessments that will be used to guide instruction ahead of time.</li> <li>• Explicitly teach and implement classroom routines.</li> </ul>	<ul style="list-style-type: none"> <li>• Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- pacing guides are discussed and tips are shared about what can and what should not be eliminated.</li> <li>• Take a workshop on Differentiated Instruction; this will help tremendously with determining strategies to reach students and pacing/sequencing issues.</li> <li>• Trust that the recommended pacing/sequence included in the district science materials is well informed by research and practice by teachers here in BPS.</li> </ul>

<p><b>Element I-A-4 -- Well Structured Lesson</b> Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping</p>	
<p><b>Focus area: Activities</b></p>	
<p>What to Look for...</p>	
<p>From the Teacher</p>	<p>From the Students</p>
<ul style="list-style-type: none"> <li>• Are activities aligned to meet objectives?</li> <li>• Do activities address the needs of different types of learners?</li> <li>• Are activities safe and age appropriate?</li> <li>• Has teacher instructed students in protocol (safety and/or material management) to complete activity?</li> <li>• Do activities assist students in engaging in scientific practices?</li> <li>• Do activities promote scientific reasoning/thinking?</li> <li>• Do activities require speaking, listening, reading, and/or writing in science?</li> <li>• Do activities enable students to engage in some aspects of the 5Es in science? (or another science appropriate learning model?)</li> <li>• Does the teacher engage students in "making-sense" of what they did, why they did it, and what they learned?</li> <li>• Does the teacher use the language of argumentation and explanation as common practice in the classroom?</li> </ul>	<ul style="list-style-type: none"> <li>• Does the lesson include engaging activities?</li> <li>• Can students communicate what they are expected to do in the activity and why it is important?</li> <li>• Are students challenged by the activity/task?</li> <li>• Do students know their roles while engaging in the tasks/activities?</li> <li>• Are student employing safe practices in "doing" science?</li> <li>• Can the students explain what they learned by completing the task/activity?</li> <li>• Do students typically share their claim about their thinking, the evidence for that claim and the reasoning that they used to link that evidence to the claim (age appropriate)?</li> </ul>
<p>Observations/Evidence of successful practice of this Element</p>	<p>Observations/Evidence when this Element is Lacking</p>
<ul style="list-style-type: none"> <li>• There is evidence of differentiation of activities to meet diverse students' needs (cite the variation in content expectation, process, or product noted in the activity).</li> <li>• Students are "doing" science -- actively engaged in science practices.</li> <li>• Learning is structured to explore content in a variety of ways that are developmentally/age appropriate.</li> <li>• Explicit instruction regarding safety is in evidence (safety contracts, safety reminders before/during lab, safety notes included in handout, notebook, etc.)</li> <li>• Students can articulate what they are doing, how they are doing it, and why they are doing it.</li> <li>• Activities are well-planned with materials prepared and organized before the lesson begins.</li> <li>• Activities/tasks serve the stated lesson objectives.</li> <li>• Activities employ aspects of the 5Es (or another appropriate learning cycle, i.e., workshop) in science.</li> <li>• Activities incorporate reading, writing, speaking, and/or listening to "make sense" or communicate understanding of the science content.</li> <li>• Students use the language of argumentation and explanation readily as part of their classroom discourse.</li> </ul>	<ul style="list-style-type: none"> <li>• Students are not active in the practices of science.</li> <li>• Unsafe conditions exist - no goggles, rough-housing, inappropriate use of flames, students cannot explain safety practice, etc.</li> <li>• The activities/tasks do not align or support the stated objectives.</li> <li>• There is no evidence of a learning model/progression established for the sequence of tasks/activities.</li> <li>• The materials for the lesson are not prepared ahead of time or ready for use.</li> <li>• There is evidence that the teacher is not prepared for or does not understand the content being presented.</li> <li>• Students cannot explain the rationale or value in doing the activity.</li> <li>• Students do not learn new content/reinforce content by doing the activities.</li> <li>• Science talk is limited and students have little or no experience in scientific argumentation or explanation.</li> </ul>

Well Structured Lesson: **Activities**

<p><b>Element I-A-4 -- Well Structured Lesson</b> Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping</p>	
<p>Focus area: <b>Activities</b></p>	
Sample Prescriptions	Additional Supports
<ul style="list-style-type: none"> <li>• Write out your plan and fully explain the activity.</li> <li>• Plan activities that are aligned with objective(s).</li> <li>• Write down safe practices for activities and an implementation plan for explaining them.</li> <li>• Develop a written plan for activities with annotations including, but not limited to: materials needed, questions to pose to students, formative assessment strategies, key content targets to be realized through the activity/task, etc.</li> <li>• Articulate the alignment of the activity to the 5Es (or learning model present in the instructional materials).</li> <li>• Plan for differentiation of an activity - carefully note the variations in practice for content, process, or product.</li> <li>• Have material prepared before the beginning of class, and plan out the numbers/counts.</li> <li>• Prepare key questions ahead of time that will be used to guide students to big ideas or main learnings of the activity. Write them down and use them in your teaching to keep the lesson on target and moving well.</li> <li>• Create sense-making opportunities within the activity/task and be certain to have students make these new learnings explicit.</li> <li>• Create opportunities for science argumentation and explanation, and use scientific language with students everyday.</li> </ul>	<ul style="list-style-type: none"> <li>• Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- activities and sense-making strategies are explored.</li> <li>• Take a course/workshop on differentiation of content, processes, and products.</li> <li>• Observe colleagues within and across disciplines looking for promising practices that can be included in instruction.</li> <li>• Participate in a Collaborative Coaching and Learning in Science (CCLS) cycle.</li> </ul>

<b>Element I-A-4 -- Well Structured Lesson</b>	
Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping	
<b>Focus area: Materials, Resources, and Technology</b>	
What to Look for...	
From the Teacher	From the Students
<ul style="list-style-type: none"> <li>• Are BPS district-supported materials being used?</li> <li>• Are all students given the opportunity to use materials appropriate to the lesson?</li> <li>• Are materials prepared before the lesson begins?</li> <li>• Are procedures in place for distributing and collecting materials efficiently during the class?</li> <li>• Have students been taught how to use materials appropriately?</li> <li>• Are safety issues addressed in the classroom?</li> <li>• Is technology integrated to make the learning more effective and efficient?</li> </ul>	<ul style="list-style-type: none"> <li>• Can students appropriately use materials for the lesson?</li> <li>• Do students know the procedure for getting and returning materials in the class?</li> <li>• Are students aware of safe practices?</li> <li>• Do students use technology to complete their work?</li> </ul>
Observations/Evidence of successful practice of this Element	Observations/Evidence when this Element is Lacking
<ul style="list-style-type: none"> <li>• There is a dedicated space where materials are organized and accessed.</li> <li>• All students have opportunities to use materials as appropriate.</li> <li>• Distribution and collection of materials is a smooth efficient process.</li> <li>• All students employing safe practices in their use of materials.</li> <li>• Technology is used to enhance student efficiency and broaden and deepen student learning.</li> </ul>	<ul style="list-style-type: none"> <li>• Students not working with appropriate materials for lesson.</li> <li>• Lesson flow is disjointed or interrupted by students using the materials in ways they are not intended to be used.</li> <li>• Unsafe practices are observed.</li> <li>• Only a "select few" use the materials.</li> <li>• Technology, although accessible in the classroom, is not utilized.</li> <li>• There is no evidence of attempts to integrate resources to strengthen the lesson.</li> </ul>
Sample Prescriptions	Additional Supports
<ul style="list-style-type: none"> <li>• Implement district provided materials with fidelity.</li> <li>• Prepare all materials before the class.</li> <li>• Establish procedures for distribution and collection of materials.</li> <li>• Demonstrate proper use of materials when appropriate.</li> <li>• Establish safe practices in classroom and review with students periodically.</li> <li>• Explore additional resources that would strengthen the lesson or engage students in different ways during instruction.</li> </ul>	<ul style="list-style-type: none"> <li>• Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- materials, resources, and opportunities for technology integration are shared or provided.</li> <li>• Explore resources and opportunities offered by OIIT.</li> <li>• Sign up to receive instructional units from the BPS Science Department.</li> </ul>

<p><b>Element I-A-4 -- Well Structured Lesson</b> Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping</p>	
<p><b>Focus area: Grouping</b></p>	
<p>What to Look for...</p>	
<p>From the Teacher</p>	<p>From the Students</p>
<ul style="list-style-type: none"> <li>• Is grouping the "best" means to accomplish the objective(s)?</li> <li>• Is grouping purposefully organized by the teacher to accomplish the task (ability vs. heterogeneous groups)?</li> <li>• Are structures in place to enable groups to reach objectives? (roles, etc.)</li> <li>• Does the grouping structure and tasks assigned promote student-to-student discourse?</li> <li>• Are groups small enough to ensure student participation by all members of the group?</li> <li>• Did the teacher structure the group task so there is a need for students to collaborate to complete the work?</li> <li>• Does the teacher monitor the work of groups?</li> <li>• Does the teacher provide feedback to individuals/groups?</li> <li>• Do groups have appropriate material to do the work?</li> </ul>	<ul style="list-style-type: none"> <li>• Do students understand why they are in groups? Are the tasks and the expectations clear to each student?</li> <li>• Do students understand how the groups were formed?</li> <li>• Can students identify their role within a group?</li> <li>• Do students participate in student-to-student discourse in a group?</li> <li>• Do student participate in their groups?</li> <li>• Do student use their group to answer questions and address issues?</li> <li>• Do the students work collaboratively and do each of them contribute to the completion of the task?</li> <li>• Does the groups' work foster independence/confidence amongst students?</li> </ul>
<p>Observations/Evidence of successful practice of this Element</p>	<p>Observations/Evidence when this Element is Lacking</p>
<ul style="list-style-type: none"> <li>• The purpose/task of the group is clearly articulated to students and is obvious to the observer.</li> <li>• Grouping varies (heterogeneous, homogeneous) based on the task/lesson.</li> <li>• Student-to-student interaction is maximized in groups.</li> <li>• Students are engaged in the group's activity/task.</li> <li>• Grouping is used appropriately to meet the lesson objectives.</li> <li>• Students have roles, can communicate the expectations for the work, and choose to participate in their groups.</li> <li>• Students can articulate their role and the task of the group.</li> <li>• Groups are small enough that all members are required to participate to accomplish tasks.</li> <li>• Groups have what they need to accomplish the task.</li> <li>• Students are assigned to groups as appropriate; the work is purposeful and best accomplished in groups.</li> <li>• Teacher models appropriate behavior/roles for students in groups</li> <li>• Teacher monitors the work of the group, pushing them forward as needed.</li> <li>• Teacher provides feedback to groups and individual students in the groups.</li> <li>• Students groups take on more responsibility over time.</li> </ul>	<ul style="list-style-type: none"> <li>• Students are just placed together; there is no differentiation of tasks/roles in the group.</li> <li>• There is no evidence of planning for the work of groups, prior to the beginning of class.</li> <li>• One or some of the students in the group are doing all of the work and there is no structure in place to keep this from happening.</li> <li>• There are no/few student-to-student interactions while they do the group assignment.</li> <li>• Students within the group do not have differentiated roles/tasks.</li> <li>• There are not adequate materials for all groups to do their work.</li> <li>• There is no "interdependency" built into the task/assignment, making it too easy for students to work without group cooperation/collaboration..</li> <li>• The teacher doesn't engage groups in ways that keep them on task and pushing forward through the work as a team.</li> <li>• Students do not receive feedback on their success as a group and on their performance as individuals contributing to their group's success.</li> </ul>



Element I-A-4 -- Well Structured Lesson	
Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping	
Focus area: <b>Grouping</b>	
Sample Prescriptions	Additional Supports
<ul style="list-style-type: none"> <li>• When designing lessons, carefully assign students to groups to strengthen learning opportunities. Include a diversity of learners/skill sets.</li> <li>• Teacher/students should be able to explain why students are in a group; tasks and responsibilities need to be clearly defined. Be clear in planning and share reasoning with students. It helps them understand expectations for them.</li> <li>• Prepare all materials before class; planning needs to be carefully done to make groups successful.</li> <li>• Lesson plans need to articulate the nature of the groups, what the expectations are and what the outcomes should be.</li> <li>• Groups are assigned for specific activities -- not every activity. Know why you are using group work and what learning goals you intend to accomplish with them.</li> <li>• Assign students to groups deliberately to balance out their skills/abilities. Each student brings something different to the work. Leverage these differences in ways that enhance outcomes.</li> <li>• Identify roles for students in groups and define expectations carefully and clearly. Include assignments that require student-to-student discourse within groups. Student talk is critical to develop deep understanding.</li> <li>• Develop a long-range plan for groups that help individuals become more collaborative, more responsible to their peers, and less dependent on the teacher.</li> <li>• Help students understand the expectations by modeling appropriate behaviors and/or roles in groups.</li> <li>• Assigning work in groups requires the teacher to carefully monitor each student within the group.</li> <li>• Develop a strategy for observing and recording individual student performance within the work of the group.</li> <li>• Be sure to provide feedback to individuals and the group as a whole.</li> </ul>	<ul style="list-style-type: none"> <li>• Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- each session includes strategies for grouping students as well as opportunities to discuss challenges in doing so.</li> <li>• Attend PD sessions on or read about research and practices on grouping strategies and cooperative learning.</li> <li>• Carefully read the Teacher Guides that accompany the BPS Science Materials. They include many ideas for scaffolding and organizing groups/group work.</li> </ul>

## Science Department Observation Support Guide

### Student Engagement

What to Look for...	
From the Teacher	From the Students
<ul style="list-style-type: none"> <li>• Do instructional practices incorporate various methods for student engagement?</li> <li>• Are engagement strategies appropriate to the lesson objectives?</li> <li>• Do engagement techniques address the needs of all learners?</li> <li>• Do students have the opportunity to engage with each other as part of the lesson?</li> <li>• While teaching, does the teacher adjust the lesson to keep students engagement high?</li> <li>• Do students stay with the lesson through instructional transitions?</li> </ul>	<ul style="list-style-type: none"> <li>• Are the students actively engaged?</li> <li>• Do students have opportunities to do science and communicate ideas through speaking and writing?</li> <li>• Do students have the opportunity to work independently, in pairs or small groups and with whole class?</li> <li>• Are the tasks challenging enough to motivate students, but not so difficult that they overwhelm them?</li> </ul>
Observations/Evidence of successful practice of this Element	Observations/Evidence when this Element is Lacking
<ul style="list-style-type: none"> <li>• Students are engaged throughout the lesson (Cite evidence that showed that -- on task and completing products, accountable talk with others, sharing responsibility for completing work, etc.)</li> <li>• Teacher adjusts strategies of the lesson to keep engagement high (note where in the lesson the teacher shifted and what was done).</li> <li>• Students can explain what they are expected to know and do.</li> <li>• Seamless transitions throughout the lesson as evidenced by students shifting from one thing to the other as asked.</li> <li>• Students effectively communicate with other students about the work and their learning.</li> </ul>	<ul style="list-style-type: none"> <li>• The teacher keeps teaching as intended, without adjusting strategies to keep students engaged and "with them."</li> <li>• Students are not engaged in the lesson -- there are disruptive behaviors or apathy toward to the work.</li> <li>• Students cannot communicate understanding about what they are doing or why it is important to their learning.</li> <li>• The expectations are too low or too difficult for students.</li> </ul>
Sample Prescriptions	Additional Supports
<ul style="list-style-type: none"> <li>• During planning, identify primary strategies for student engagement.</li> <li>• During planning, identify backup strategies to re-invigorate or re-engage students.</li> <li>• Develop lessons that include meaningful student-to-student interaction with opportunities for speaking, doing and writing about science.</li> <li>• Be attentive to student level of engagement and ready to shift strategies for increase student engagement.</li> </ul>	<ul style="list-style-type: none"> <li>• Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- student engagement and differentiation strategies are shared.</li> <li>• Register for courses/workshops on differentiated instruction.</li> <li>• Explore the wealth of technology-related resources available through OIIT, the web, etc.</li> </ul>

Observation Guide: What to Look for in Science Instruction

This tool is intended to support administrators as they gather evidence, engage in instructional discussions, and provide feedback to teachers. It is also intended to provide clear expectations for teachers on two priority elements, I-A-4 (Well-structured lessons) and II-A-2 (Student Engagement).

Priority Element and Rubric Language	Target area of the Element	What to Look for...		Observations/Evidence of Successful Practice of this Aspect/Element	Observations/Evidence when this Aspect/Element is Lacking	Sample Prescriptions	Additional Supports
		from the Teacher	from the Students				
I-A-4 Well Structured Lesson Develops well-structured lessons with challenging, measurable objectives and appropriate student engagement strategies, pacing, sequence, activities, materials, resources, technologies, and grouping.	Objectives	<ul style="list-style-type: none"> <li>Are there both content and language objectives present?</li> <li>Are objectives standards driven, developmentally appropriate and aligned with curriculum expectations?</li> <li>Are the objectives measurable?</li> <li>Are objectives written in student friendly language?</li> <li>Are objectives reviewed with students at appropriate times?</li> <li>Is the objective worth learning?</li> <li>Do the student outcomes/assessments targets drive the objective? (teaching with the end in mind)</li> <li>Are objectives presented and posed in a way that promotes discovery, scientific thinking and practices?</li> </ul>	<ul style="list-style-type: none"> <li>Can students articulate the objectives in their own words?</li> <li>Can students do what the objective asks?</li> <li>Are students challenged by the work, but not overwhelmed by the target objectives?</li> <li>Do students understand the value in what they are being asked to do and why they are learning it?</li> </ul>	<ul style="list-style-type: none"> <li>Objectives are clearly written in student friendly language and articulated to students.</li> <li>Students are aware of and can explain the objectives.</li> <li>The lesson matches the objectives on the board.</li> <li>Students are challenged by the work, but are able to do what the objectives ask them to do.</li> <li>When the lesson includes science exploration, the content/lesson objective is phrased as a question to encourage student discovery.</li> </ul>	<ul style="list-style-type: none"> <li>Objectives do not match the lesson observed.</li> <li>What the students are asked to do does not lead to achieving the stated objective.</li> <li>Students do not know what to do, how to do what they are asked, or why they are doing the tasks.</li> <li>Students communicate continued confusion of expectations.</li> <li>No objectives posted or communicated to students.</li> </ul>	<ul style="list-style-type: none"> <li>Begin lesson planning by defining assessment targets with students expectations that support achievement.</li> <li>Develop the objectives with the student expectations and outcomes in mind.</li> <li>Use district identified materials to identify objectives.</li> <li>Write objectives in student friendly language and plan when and how they will be shared with students.</li> <li>Review content to be better prepared for teaching the lesson.</li> <li>Craft questions before class that guide the lesson and challenge students with the main ideas for the day. Be sure to write them down and use them during class. This is especially helpful in science and they do not take the inquiry out of the class.</li> </ul>	<ul style="list-style-type: none"> <li>Content courses/workshops offered by the BPS Science Department or area universities/partners.</li> <li>Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- content related to each unit is identified and discussed.</li> </ul>
	Strategies	<ul style="list-style-type: none"> <li>Are strategies aligned with the objectives/outcomes?</li> <li>Are various strategies employed to meet the objectives?</li> <li>Do strategies engage students in scientific practices that are appropriate for the lesson?</li> <li>Are various strategies employed to accommodate diverse student needs?</li> </ul>	<ul style="list-style-type: none"> <li>Are students familiar with the strategies and do they respond appropriately to the strategies being used?</li> <li>Are strategies developmentally/age appropriate?</li> <li>Are there strategy scaffolds in place to support students as needed?</li> <li>Are students responsive to the strategies employed?</li> </ul>	<ul style="list-style-type: none"> <li>There is a high level of student engagement evidenced by: e.g., all students working on the assigned task; student talk is on target and all students in a group have the opportunity to speak/share; all students in the group are working collaboratively sharing responsibility for the assignment; body language indicates engagement - head nodding, sitting up and leaning forward, etc.</li> <li>Strategies incorporated into the lesson lead to desired lesson outcomes.</li> <li>Appropriate and effective strategies used in the classroom as evidenced by observable student outcomes (list what is observed).</li> <li>Different strategies are employed to meet the needs of all students from the strategic objectives.</li> <li>Class starts and ends on time.</li> <li>Routines are in place and students follow them.</li> <li>Students are engaged during the entire lesson.</li> <li>Teacher uses strategies that support students at different paces -- the lesson is differentiated as needed.</li> <li>Teacher is roughly on district pacing schedule.</li> <li>The teacher uses formative assessment to determine pacing/sequence decisions, e.g., checking in, asking questions, asking higher level questions.</li> <li>Teacher's pacing decisions communicate an understanding of the subject content appropriate to the grade level learning demands.</li> </ul>	<ul style="list-style-type: none"> <li>The strategies used do not challenge students in ways that support the stated objectives/outcomes.</li> <li>Few or inadequate strategies implemented during class.</li> <li>There is an overreliance on a particular strategy for the entire lesson.</li> <li>Inappropriate implementation or application of the strategy.</li> <li>Too many strategies used without getting the desired outcome -- so many shifts in a lesson that the continuity is lost.</li> <li>Students don't know what to do or how to do what they are asked to do.</li> <li>Students are disengaged -- they are not focused on the task at hand.</li> <li>Students pack up to leave well before the end of class.</li> <li>The Do Now creeps well beyond the intended time and limits learning/engagement.</li> <li>Students finish tasks "early" with no additional class assignment to use the "extra" time productively.</li> <li>The lesson is taught without attention to student disengagement; if students are not "with" the teacher or lesson, little or no action is taken to adjust the lesson.</li> <li>The trajectory of lessons through a unit do not make sense to the students. They do not understand/cannot communicate how the lessons progress to help them build understanding.</li> </ul>	<ul style="list-style-type: none"> <li>Identify age appropriate strategies to be used to meet desired objectives.</li> <li>Identify and develop consistent processes/protocols that students are explicitly taught to use and are provided with guidance as to when to use them.</li> <li>Establish and implement a core set of strategies to use in class to complete certain types of outcomes.</li> <li>Implement strategies included in the BPS Science instructional materials.</li> </ul>	<ul style="list-style-type: none"> <li>Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- appropriate strategies are provided and scaffolds to use them are shared.</li> <li>Attend PD sessions that teach specific strategies -- The Skillful Teacher is an excellent course that is especially helpful in science.</li> </ul>
	Pacing/Sequence	<ul style="list-style-type: none"> <li>Does teacher use formative assessment to plan/guide pacing and sequence before/during class?</li> <li>Does sequence of the lesson lead to the objectives?</li> <li>Does pacing allow for completion of activities in the allotted class time?</li> <li>Does the teacher start on time, implement full use of the class time, and end on time?</li> <li>Does the teacher use routines to start and end class?</li> <li>Does the teacher follow BPS Science pacing guides?</li> <li>Does the teacher communicate to students the reasoning behind the lesson organization/sequence?</li> </ul>	<ul style="list-style-type: none"> <li>Do students look/feel rushed?</li> <li>Are students finishing early?</li> <li>Are students aware of and engaged in the routines of starting class and ending class?</li> <li>Do students feel like they have the time to do the assignment?</li> <li>Do students complete the assignment independently when directed and move through tasks efficiently?</li> </ul>	<ul style="list-style-type: none"> <li>There is evidence of differentiation of activities to meet diverse students' needs (cite the variation in content expectation, process, or product noted in the activity).</li> <li>Activities are "doing" science -- actively engaged in science practices.</li> <li>Learning is structured to explore content in a variety of ways that are developmentally/age appropriate.</li> <li>Explicit instruction regarding safety is in evidence (safety contracts, safety reminders before/during lab, safety notes included in handout, notebook, etc.)</li> <li>Students can articulate what they are doing, how they are doing it, and why they are doing it.</li> <li>Activities are well-planned with materials prepared and organized before the lesson begins.</li> <li>Activities/tasks serve the stated lesson objectives.</li> <li>Activities employ aspects of the 5Es (or another appropriate learning cycle, i.e., workshop) in science.</li> <li>Activities incorporate reading, writing, speaking.</li> </ul>	<ul style="list-style-type: none"> <li>Students are not active in the practices of science.</li> <li>Unsafe conditions exist -- no goggles, rough-housing, inappropriate use of flames, students cannot explain safety practice, etc.</li> <li>The activities/tasks do not align or support the stated objectives.</li> <li>There is no evidence of a learning model/progression established for the sequence of tasks/activities.</li> <li>The materials for the lesson are not prepared ahead of time or ready for use.</li> <li>There is evidence that the teacher is not prepared for or does not understand the content being presented.</li> <li>Students cannot explain the rationale or value in doing the activity.</li> <li>Students do not learn new content/reinforce content by doing the activities.</li> <li>Science talk is limited and students have little or no experience in scientific argumentation or explanation.</li> </ul>	<ul style="list-style-type: none"> <li>Plan the lesson to use the whole class period so that the students are engaged and productive for the entire class period. Include shifts in the lesson to keep the lesson moving at a pace that students can be challenged, but not overwhelmed.</li> <li>Plan ahead! Identify additional lesson moves/activities in case things move more quickly than anticipated.</li> <li>Know what can be cut/shortened in case things take longer than expected.</li> <li>Anticipate areas where students may become confused and plan for a variety of ways to reach them.</li> <li>Post a timeline for the unit and agendas for each class.</li> <li>Plan unit assessments and the formative assessments that will be used to guide instruction ahead of time.</li> <li>Explicitly teach and implement classroom routines.</li> </ul>	<ul style="list-style-type: none"> <li>Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- pacing guides are discussed and tips are shared about what can and what should not be eliminated.</li> <li>Take a workshop on Differentiated Instruction; this will help tremendously with determining strategies to reach students and pacing/sequencing issues.</li> <li>Trust that the recommended pacing/sequence included in the</li> </ul>
	Activities	<ul style="list-style-type: none"> <li>Are activities aligned to meet objectives?</li> <li>Do activities address the needs of different types of learners?</li> <li>Are activities safe and age appropriate?</li> <li>Has teacher instructed students in protocol (safety and/or material management) to complete activity?</li> <li>Do activities assist students in engaging in scientific practices?</li> <li>Do activities promote scientific reasoning/thinking?</li> <li>Do activities require speaking, listening, reading, and/or writing in science?</li> <li>Do activities enable students to engage in some aspects of the 5Es in science? (or another science appropriate learning model?)</li> <li>Does the teacher engage students in "making-sense" of what they did, why they did it, and what they learned?</li> <li>Does the teacher use the language of argumentation and explanation as common</li> </ul>	<ul style="list-style-type: none"> <li>Does the lesson include engaging activities?</li> <li>Can students communicate what they are expected to do in the activity and why it is important?</li> <li>Are students challenged by the activity/task?</li> <li>Do students know their roles while engaging in the tasks/activities?</li> <li>Are students employing safe practices in "doing" science?</li> <li>Can the students explain what they learned by completing the task/activity?</li> <li>Do students typically share their claim about their thinking, the evidence for that claim and the reasoning that they used to link that evidence to the claim (age appropriate)?</li> </ul>	<ul style="list-style-type: none"> <li>There is a dedicated space where materials are organized and accessed.</li> <li>All students have opportunities to use materials as appropriate.</li> <li>Distribution and collection of materials is a smooth efficient process.</li> <li>All students employing safe practices in their use of materials.</li> <li>Technology is used to enhance student efficiency and broaden and deepen student learning.</li> </ul>	<ul style="list-style-type: none"> <li>Students not working with appropriate materials for lesson.</li> <li>Lesson flow is disjointed or interrupted by students using the materials in ways they are not intended to be used.</li> <li>Unsafe practices are observed.</li> <li>Only a "select few" use the materials.</li> <li>Technology, although accessible in the classroom, is not utilized.</li> <li>There is no evidence of attempts to integrate</li> </ul>	<ul style="list-style-type: none"> <li>Write out your plan and fully explain the activity.</li> <li>Plan activities that are aligned with objective(s).</li> <li>Write down safe practices for activities and an implementation plan for explaining them.</li> <li>Develop a written plan for activities with annotations including, but not limited to: materials needed, questions to pose to students, formative assessment strategies, key content targets to be realized through the activity/task, etc.</li> <li>Articulate the alignment of the activity to the 5Es (or learning model present in the instructional materials).</li> <li>Plan for differentiation of an activity - carefully note the variations in practice for content, process, or product.</li> <li>Have material prepared before the beginning of class, and plan out the numbers/counts.</li> <li>Prepare key questions ahead of time that will be used to guide students to big ideas or main learnings of the activity. Write them down and use them in your teaching to keep the lesson on target and moving well.</li> <li>Create sense-making opportunities within the activity/task and be certain to have students make these new learnings explicit.</li> <li>Create opportunities for science argumentation and explanation, and</li> </ul>	<ul style="list-style-type: none"> <li>Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- activities and sense-making strategies are explored.</li> <li>Take a course/workshop on differentiation of content, processes, and products.</li> <li>Explore colleagues within and across disciplines looking for promising practices that can be included in instruction.</li> <li>Participate in a Collaborative Coaching and Learning in Science (CCLS) cycle.</li> </ul>
Materials, Resources, & Technology	<ul style="list-style-type: none"> <li>Are BPS district-supported materials being used?</li> <li>Are all students given the opportunity to use materials appropriate to the lesson?</li> <li>Are materials prepared before the lesson begins?</li> <li>Are procedures in place for distributing and collecting materials efficiently during the class?</li> <li>Have students been taught how to use materials appropriately?</li> </ul>	<ul style="list-style-type: none"> <li>Can students appropriately use materials for the lesson?</li> <li>Do students know the procedure for getting and returning materials in the class?</li> <li>Are students aware of safe practices?</li> <li>Do students use technology to complete their work?</li> </ul>	<ul style="list-style-type: none"> <li>There is a dedicated space where materials are organized and accessed.</li> <li>All students have opportunities to use materials as appropriate.</li> <li>Distribution and collection of materials is a smooth efficient process.</li> <li>All students employing safe practices in their use of materials.</li> <li>Technology is used to enhance student efficiency and broaden and deepen student learning.</li> </ul>	<ul style="list-style-type: none"> <li>Students not working with appropriate materials for lesson.</li> <li>Lesson flow is disjointed or interrupted by students using the materials in ways they are not intended to be used.</li> <li>Unsafe practices are observed.</li> <li>Only a "select few" use the materials.</li> <li>Technology, although accessible in the classroom, is not utilized.</li> <li>There is no evidence of attempts to integrate</li> </ul>	<ul style="list-style-type: none"> <li>Implement district provided materials with fidelity.</li> <li>Prepare all materials before the class.</li> <li>Establish procedures for distribution and collection of materials.</li> <li>Demonstrate proper use of materials when appropriate.</li> <li>Establish safe practices in classroom and review with students periodically.</li> <li>Explore additional resources that would strengthen the lesson or engage students in different ways during instruction.</li> </ul>	<ul style="list-style-type: none"> <li>Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- materials, resources, and opportunities for technology integration are shared or provided.</li> <li>Explore resources and opportunities offered by OIT.</li> </ul>	
Grouping	<ul style="list-style-type: none"> <li>Is grouping the "best" means to accomplish the objective(s)?</li> <li>Is grouping purposefully organized by the teacher to accomplish the task (ability vs. heterogeneous groups)?</li> <li>Are structures in place to enable groups to reach objectives? (roles, etc.)</li> <li>Does the grouping structure and tasks assigned promote student-to-student discourse?</li> <li>Are groups small enough to ensure student participation by all members of the group?</li> <li>Did the teacher structure the group task so there is a need for students to collaborate to complete the work?</li> <li>Does the teacher monitor the work of groups?</li> <li>Does the teacher provide feedback to individuals/groups?</li> <li>Do groups have appropriate material to do the work?</li> </ul>	<ul style="list-style-type: none"> <li>Do students understand why they are in groups? Are the tasks and the expectations clear to each student?</li> <li>Do students understand how the groups were formed?</li> <li>Can students identify their role within a group?</li> <li>Do students participate in student to student discourse in a group?</li> <li>Do student participate in their groups?</li> <li>Do student use their group to answer questions and address issues?</li> <li>Do the students work collaboratively and do each of them contribute to the completion of the task?</li> <li>Does the groups' work foster independence/confidence amongst students?</li> </ul>	<ul style="list-style-type: none"> <li>The purpose/task of the group is clearly articulated to students and is obvious to the observer.</li> <li>Grouping varies (heterogeneous, homogeneous) based on the task/lesson.</li> <li>Student-to-student interaction is maximized in groups.</li> <li>Students are engaged in the group's activity/task.</li> <li>Grouping is used appropriately to meet the lesson objectives.</li> <li>Students have roles, can communicate the expectations for the work, and choose to participate in their groups.</li> <li>Students can articulate their role and the task of the group.</li> <li>Groups are small enough that all members are required to participate to accomplish tasks.</li> <li>Groups have what they need to accomplish the task.</li> <li>Students are assigned to groups as appropriate; the work is purposeful and best accomplished in groups.</li> <li>Teacher models appropriate behavior/roles for students in groups</li> <li>Teacher monitors the work of the group, pushing them forward as needed.</li> <li>Teacher provides feedback to groups and individual students in the groups.</li> </ul>	<ul style="list-style-type: none"> <li>Students are just placed together; there is no differentiation of tasks/roles in the group.</li> <li>There is no evidence of planning for the work of groups, prior to the beginning of class.</li> <li>One or some of the students in the group are doing all of the work and there is no structure in place to keep this from happening.</li> <li>There are no/few student-to-student interactions while they do the group assignment.</li> <li>Students within the group do not have differentiated roles/tasks.</li> <li>There are not adequate materials for all groups to do their work.</li> <li>There is no "interdependency" built into the task/assignment, making it too easy for students to work without group cooperation/collaboration.</li> <li>The teacher doesn't engage groups in ways that keep them on task and pushing forward through the work as a team.</li> <li>Students do not receive feedback on their success as a group and on their performance as individuals contributing to their group's success.</li> </ul>	<ul style="list-style-type: none"> <li>When designing lessons, carefully assign students to groups to strengthen learning opportunities. Include a diversity of learners/skill sets.</li> <li>Teacher/students should be able to explain why students are in a group; tasks and responsibilities need to be clearly defined. Be clear in planning and share reasoning with students. It helps them understand expectations for them.</li> <li>Prepare all materials before class; planning needs to be carefully done to make groups successful.</li> <li>Lesson plans need to articulate the nature of the groups, what the expectations are and what the outcomes should be.</li> <li>Groups are assigned for specific activities -- not every activity. Know why you are using group work and what learning goals you intend to accomplish with them.</li> <li>Assign students to groups deliberately to balance out their skills/abilities. Each student brings something different to the work. Leverage these differences in ways that enhance outcomes.</li> <li>Identify roles for students in groups and define expectations carefully and clearly.</li> <li>Include assignments that require student-to-student discourse within groups. Student talk is critical to develop deep understanding.</li> <li>Develop a long-range plan for groups that help individuals become more collaborative, more responsible to their peers, and less dependent on the teacher.</li> <li>Help students understand the expectations by modeling appropriate behaviors and/or roles in groups.</li> <li>Assigning work in groups requires the teacher to carefully monitor</li> </ul>	<ul style="list-style-type: none"> <li>Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- each session includes strategies for grouping students as well as opportunities to discuss challenges in doing so.</li> <li>Attend PD sessions on or read about research and practices on grouping strategies and cooperative learning.</li> <li>Carefully read the Teacher Guides that accompany the BPS Science Materials. They include many ideas for scaffolding and organizing groups/group work.</li> </ul>	
II-A-2 Student Engagement Consistently uses instructional practices that are likely to motivate and engage most students during the lesson.	<ul style="list-style-type: none"> <li>Do instructional practices incorporate various methods for student engagement?</li> <li>Are engagement strategies appropriate to the lesson objectives?</li> <li>Do engagement techniques address the needs of all learners?</li> <li>Do students have the opportunity to engage with each other as part of the lesson?</li> <li>While teaching, does the teacher adjust the lesson to keep students engagement high?</li> <li>Do students stay with the lesson through instructional transitions?</li> </ul>	<ul style="list-style-type: none"> <li>Are the students actively engaged?</li> <li>Do students have opportunities to do science and communicate ideas through speaking and writing?</li> <li>Do students have the opportunity to work independently, in pairs or small groups and with whole class?</li> <li>Are the tasks challenging enough to motivate students, but not so difficult that they overwhelm them?</li> </ul>	<ul style="list-style-type: none"> <li>Students are engaged throughout the lesson (Cite evidence that showed that -- on task and completing products, accountable talk with others, sharing responsibility for completing work, etc.)</li> <li>Teacher adjusts strategies of the lesson to keep engagement high (note where in the lesson the teacher shifted and what was done).</li> <li>Students can explain what they are expected to know and do.</li> <li>Seamless transitions throughout the lesson as evidenced by students shifting from one thing to the other as asked.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher keeps teaching as intended, without adjusting strategies to keep students engaged and "with them."</li> <li>Students are not engaged in the lesson -- there are disruptive behaviors or apathy toward the work.</li> <li>Students cannot communicate understanding about what they are doing or why it is important to their learning.</li> <li>The expectations are too low or too difficult for students.</li> </ul>	<ul style="list-style-type: none"> <li>During planning, identify primary strategies for student engagement.</li> <li>During planning, identify backup strategies to re-invigorate or re-engage students.</li> <li>Develop lessons that include meaningful student-to-student interaction with opportunities for speaking, doing and writing about science.</li> <li>Be attentive to student level of engagement and ready to shift strategies for increase student engagement.</li> </ul>	<ul style="list-style-type: none"> <li>Attend PD sessions on curriculum implementation offered by BPS Science Department for each unit/course taught -- student engagement and differentiation strategies are shared.</li> <li>Register for courses/workshops on differentiated instruction.</li> <li>Explore the wealth of technology-related resources</li> </ul>	