Data Driven Differentiation

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Data Driven Differentiation

Student Description

Writing an effective lesson plan for your students begins with you knowing who your students are, their background, interests, perspectives, and academic strengths. This knowledge allows you to differentiate each lesson to meet the needs of all students. Differentiation provides the best chance for all students to learn regardless of their abilities. Table 1 provides brief background information of fifteen fourth grade students from a student interest survey and a pre-assessment.

Table 1

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Student Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaliah</td>
<td>Aaliah is a good student who can work alone or in groups. She loves school and is always one of the first to raise her hand. Aaliah lives with her mother and expresses her sorrow but speaks freely about her father passing away. She is an accomplished gymnast and recently placed second in her league.</td>
</tr>
<tr>
<td>Lily</td>
<td>Lily is one of the leaders in the classroom. She loves taking on classroom duties and she is an avid reader. She lives with her parents and younger sibling and adores her cat.</td>
</tr>
<tr>
<td>Hunter</td>
<td>Hunter is on an IEP because he has trouble reading. We can read to him. Zephyr is at grade level in all subjects. He does have trouble writing numbers, like the number three, he writes backwards. Also, he loves to ski.</td>
</tr>
<tr>
<td>Zephyr</td>
<td>Zephyr is on an IEP because he has trouble reading. He can use speech to text, and we can read to him. Zephyr is at grade level in all subjects. He does have trouble writing numbers, like the number three, he writes backwards. Also, he loves to ski.</td>
</tr>
<tr>
<td>Laiaa</td>
<td>Laiaa is an emergent bilingual, a student of color and meets with the EL teacher once a day. She is slightly below grade level in literacy and math. Laiaa works well in a group setting and benefits from the explanations and support from her peers.</td>
</tr>
<tr>
<td>Hank</td>
<td>Hank is a good student and performs at grade level in math and literacy. Hank does have a short attention span and at times can be disruptive in class. He likes to be the class clown. Hank lives with his parents, younger sibling, dogs, and he loves to ride his bike.</td>
</tr>
<tr>
<td>Hannah</td>
<td>Hannah is very advanced and performs above grade level in math and literacy. She has exceptional leadership qualities and wants to be a Special Education teacher when she grows up.</td>
</tr>
<tr>
<td>Peter</td>
<td>Peter has an IEP, and he has Downs Syndrome and is extremely high functioning. Peter and remains in the main classroom 90% of the time. He works well with others and is supported 100% by his classmates. He completes in Special Olympic activities and has shared his medals with the class. He lives with his parents and younger brother and his grandmother who he is very close too.</td>
</tr>
<tr>
<td>Gretchen</td>
<td>Gretchen is very advanced and excels in literacy and math. She is a leader and helps other students and with classroom duties. She is also part of the school spirit team and works on different projects for that group. Also, her favorite thing to do read.</td>
</tr>
<tr>
<td>Brixton</td>
<td>Brixton is very advanced and excels in literacy and math. He is a classroom leader and likes to work alone or in groups. He loves to talk and share his knowledge and he is a great support to Yaphet and Peter. He encourages their learning and always takes them under his wing.</td>
</tr>
<tr>
<td>Davis</td>
<td>Davis is slightly below grade level in literacy and at grade level in math. Davis is easily distracted and during group work we are careful who we partner him with, or he will not get his work done. Davis loves music, football and doing anything outdoors.</td>
</tr>
<tr>
<td>Berkeley</td>
<td>Berkeley is an excellent student and is at grade level in math and literacy. She is one of the class leaders and she loves to take charge and guide the group she is working in. She wants to be a lawyer when she grows up and she loves animals. She is hoping to volunteer at the Dumb Friends League this summer and her favorite sport is swimming.</td>
</tr>
<tr>
<td>Yaphet</td>
<td>Yaphet has an IEP, is a student of color, and has Down’s Syndrome. He spends about 50% of his day in the traditional classroom with his Para and he does very well. Yaphet thrives in the classroom and is supported 100% by his classmates.</td>
</tr>
<tr>
<td>Aaliyah</td>
<td>Aaliyah is strong student and is at grade level in math and literacy. She loves art class and science, and she loves to cook at home. She told me that she wants to be a chef. Aaliyah is never afraid to share her opinions in class and she loves to volunteer for class duties.</td>
</tr>
<tr>
<td>Gio</td>
<td>Gio has an IEP because he has trouble reading. Gio also has ADD and has a hard time staying focused in class which can lead to behavior that disrupts other students. Working with Gio one on one works well, helps him focus and complete his assignments. Differentiation is essential for Gio, because he understands the material, he just needs different ways to show his content knowledge.</td>
</tr>
</tbody>
</table>
Pre-assessment Data and Learning Targets

This unit on natural disasters, is designed to help students develop their research, speaking and writing skills, which will enable them to inform friends, families, and their community about what to do in the event of a natural disaster. Students will work in groups to research and analyze data about the natural disaster topic they are assigned. Students will gain a deeper understanding of how natural disasters occur and design a public service announcement that will inform and raise awareness on how to stay safe in the event of one. Prior to beginning the unit, students took a pre-assessment to determine their background knowledge on the content area. The results are listed below in Table 2.

### Table 2
Data from pre-assessment

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Key Information</th>
<th>Research Topic Multiple Sources</th>
<th>Analyze Data</th>
<th>Cite Evidence from Sources to support research for PSA</th>
<th>Plan and Develop PSA (Public Service Announcement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaliah</td>
<td></td>
<td>75</td>
<td>90</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>Lily</td>
<td></td>
<td>100</td>
<td>90</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>Hunter</td>
<td>#</td>
<td>75</td>
<td>70</td>
<td>65</td>
<td>80</td>
</tr>
<tr>
<td>Zephyr</td>
<td>#</td>
<td>75</td>
<td>55</td>
<td>55</td>
<td>75</td>
</tr>
<tr>
<td>Laisa</td>
<td>*+</td>
<td>75</td>
<td>65</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>Hank</td>
<td></td>
<td>85</td>
<td>75</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>Hannah</td>
<td>@</td>
<td>100</td>
<td>95</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Peter</td>
<td>#</td>
<td>50</td>
<td>25</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>Gretchen</td>
<td>@</td>
<td>100</td>
<td>90</td>
<td>85</td>
<td>100</td>
</tr>
<tr>
<td>Brixton</td>
<td>@</td>
<td>100</td>
<td>95</td>
<td>85</td>
<td>100</td>
</tr>
<tr>
<td>Davis</td>
<td></td>
<td>80</td>
<td>75</td>
<td>65</td>
<td>85</td>
</tr>
<tr>
<td>Berkeley</td>
<td></td>
<td>100</td>
<td>95</td>
<td>85</td>
<td>90</td>
</tr>
<tr>
<td>Yaphet</td>
<td># +</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Aaliah</td>
<td>+</td>
<td>90</td>
<td>90</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>Gio</td>
<td>#</td>
<td>60</td>
<td>40</td>
<td>50</td>
<td>60</td>
</tr>
</tbody>
</table>

Key: *emergent bilingual  IEP accommodations @gifted +student of color (from historically marginalized community)
Learning Target One: Research Topic from Multiple Sources

The prerequisite for learning target one, is for students to have the ability to gather relevant information from digital and print resources to learn all they can about their assigned natural disaster. From this learning target, students should derive the ability to interpret their data and convey the information to their intended audience, to educate them on how to stay safe and survive a natural disaster. The pre-assessment identified that 53% of the students exhibited the knowledge and necessary skills to master this learning target, while 33% of the students possessed the prerequisite knowledge and proficiency in some areas. Since the students have worked on similar projects requiring research, they possess the prerequisite knowledge for this assignment. Peter and Yaphet, both have Down’s Syndrome. Peter is high functioning and stays with the class 90% of the time. Peter scored in the range of having some prerequisite knowledge and will be able to successfully complete the unit with the proper support. Yaphet does not have the prerequisite knowledge to complete this unit and will complete a different assignment. He spends about 40% of his time in the general classroom and took the test along with his peers as part of our inclusive classroom environment. His paraeducator helped him complete the assessment.

Learning Target Two: Analyze Data

The prerequisite for learning target two is for students to have the ability to analyze and organize their data and make it manageable so that they can effectively plan and produce a public service announcement about their natural disaster. For learning target two, eight students, including the three gifted students, all have mastered the skills to successfully complete this lesson. Five students have prerequisite knowledge and
proficiency in certain areas, and two students have some knowledge on the subject. The two students, Peter and Gio, will require additional support to complete this learning target.

**Learning Target Two: Cite Evidence from Sources to Support Research**

For learning target three, the prerequisite is for students to focus on citing text evidence. This learning target requires students to look back into the text for evidence that will then answer a question, support an idea or a claim. Citing evidence requires students to think more critically about the text and the source. The preassessment data identified that 73% of the students have all or some of the prerequisite skills to complete the learning target. For Peter and Gio, additional support such as one on one work with the teacher or group work, where they are strategically paired with certain students, will enable them to complete the assignment. During this time Yaphet will leave the general classroom to work in his alternate classroom. Yaphet is our only African American student.

**Learning Target Four: Plan and Develop a Public Service Announcement (PSA)**

The prerequisite for this learning target is that the students will be able to plan and create a public service announcement that raises awareness of how to stay safe in the event of a natural disaster. The intended learning for students is to create a PSA that will show the importance of a problem, convey information, and persuade their target audience to act. After reviewing the preassessment data for this learning target we ascertain that 80% of the students have all or some of the prerequisite skills to accomplish the task. Three of the students, Brixton, Hannah, and Gretchen scored 100 on this portion of the assessment. All three of these students are on the school student council and have worked on this type of assignment before. What’s more, these three students are gifted students. Once again, Peter will receive extra support and Yaphet will go to his alternate classroom during the lesson. Laissa is the only emergent bilingual in the classroom and works at grade level on all assignments. Should she need additional support with spelling or grammar, it will be available to her.
Differentiation Strategies

Differentiation is a response to the cognitive, affective, social, and physical characteristics that distinguish what and how students learn (Winebrenner & Brulles, 2018). Additionally, it may be necessary to deliver the lessons at varying degrees of difficulty based on the ability of each student. Academic conversations are powerful ways to develop students content understandings, thinking skills, and language (Zwiers, 2019). Conversations between students who are from culturally different backgrounds and are at different levels of learning offer an excellent window into what students know and can do. Modifying and adapting lessons to include culturally relevant information and examples enhances student motivation (Echevarría & Graves, 2015).

The following sections will discuss four differentiation strategies that will make the content and learning of these lessons accessible to all students, while continuing to challenge them and encourage a growth mindset.

Flexible Grouping

Culturally responsive teachers can apply cultural knowledge and skills to understand, encourage, and support all students (Fairbairn & Jones-Vo, 2019). In my classroom we use flexible grouping because it is a way to honor learner variability. Flexible grouping is a highly effective teaching strategy which promotes an inclusive classroom culture. When students work in groups, they all work toward the same learning goal, however the work addresses each students learning needs. Flexible grouping is data driven, and teachers can use the data they have to group and regroup students based on their everchanging needs. Students thrive working in groups because they feel valued, they can share their knowledge, talents, skills, and life experiences with their fellow students. In my classroom group work has helped students develop a sense of ownership in their learning, and they can see firsthand how all student’s ideas and opinions add value to a lesson.

Differentiate Through Assessment

Respect for individual differences among and between learners is key, as is the belief that heterogeneity rather than homogeneity is the norm in any teaching and learning environment (Winebrenner & Brulles, 2018). Students learn and demonstrate their knowledge in different ways. Therefore, it is imperative that as teachers do regular checks for understanding, they assess students in different ways when appropriate. Assessments do not
always have to look the same for all students. Teachers can differentiate a formative assessment in a variety of ways. Perhaps, you look for student collaboration in a project, or students complete a graphic organizer or collage. Maybe, it is written responses or an oral conference or presentation. The important take away is that variation in formative assessments allows you to differentiate your instruction as you progress and move forward in the lesson.

**Sentence Stems**

Language and vocabulary development in content areas is an important part of differentiated instruction for students who are learning English (Echevarría & Graves, 2015). Sentence stems are scaffolds for all students because they help them get their sentences started. When English learners use sentence stems, it helps them progress in their language proficiency. While it is important to provide sentence stems for English learners it is necessary to note that all students benefit when sentence stems are available to them. I provide sentence stems, for all my students, for selected lessons in English Language Arts, because some students struggle with communicating, especially when writing is involved. Sentence stems are valuable tools because they help students with vocabulary and good sentence structure, something they may not be able to produce on their own. However, teachers need to be careful to not overuse sentence stems or make them mandatory for all students. If students rely too much on sentence stems, this can inhibit their creativity and critical thinking.

**Visual Supports**

Using visual supports when teaching a lesson is a good strategy. Visual aids grab the attention of your students and can make concepts easier to explain and easier for students to understand when a picture or drawing is available. All my IEP students, and two other students, Hank and Davis are visual learners. They benefit from the cutouts and manipulatives, anchor charts and poster-size graphic organizers that are part of our classroom learning environment. Visual supports are extremely helpful when teaching math lessons. Videos and online websites are examples of multimedia that can enhance comprehension for all students including English learners (Echevarría & Graves, 2015). I use videos and hands-on activities like math games to strengthen
students understanding of multiplication and division. Anchor charts with different multiplication and division strategies hang in our classroom to help reinforce concepts continually over time.

**Conclusion**

In conclusion, to design an effective lesson plan that will address the needs of all students, the teacher needs to clearly define to students what the learning expectation is. The lesson should contain teaching and learning activities that will help all students gain a deeper understanding of concepts contained in the lesson.
# Lesson Plan

<table>
<thead>
<tr>
<th>Name: Lillian Meyers</th>
<th>Date: 4/27/2022</th>
<th>Grade Level/Content: 4th ELA</th>
</tr>
</thead>
</table>

## I. Pre-Assessment Data
What do students already know about this topic? What data (formal or informal) is available?

The students took a pre-assessment about different natural disasters including Volcanoes, Tornadoes, Hurricanes, and Tsunamis. The assessment focused on students’ knowledge of natural disasters, how to prepare for them and what you can do to raise awareness. The assessment also measured student interest in the natural disasters which 100% of the students were excited about the topic and the lessons.

## II. Content and Language Objective *Must be conveyed to students*
What will students be able to do at the end of today’s lesson? How will this support language development?

- Describe
- Explain
- Apply
- Analyze
- Compare
- Evaluate
- Defend
- Create
- Interpret
- Formulate

Students will be able to:
- I can cite evidence from a source to support answers to my research questions. (W.5.7, W.5.8)
- I can plan, write, and design a PSA that raises awareness how to stay safe during a natural disaster. (W.5.2.a, W.5.2.b, W.5.4, W.5.5)

**Key Vocabulary:** Natural Disasters, Awareness, Evidence

## III. Rationale * Must be conveyed to students
Why is this important to students? How is this related to unit goals and essential questions? How does this connect to students’ real lives?

In this lesson, students continue to focus on working to contribute to a better world as they apply their learning to help their school and community by educating them about preparing for natural disasters. Students make connections to real life natural disasters such as Hurricane Katrina and the Marshall Fire.

## IV. Assessment * Must be conveyed to students
How will you measure students’ progress toward the objective? Will the data you gather allow you to differentiate future instruction?

- Review student’s graphic organizer and PSA announcement introduction
- Have students complete a stars and stairs exit ticket stating one thing that went well and one thing they can work on

## V. Differentiation
How will you use data to intentionally group students according to skills/readiness? What choice will students have in the process or product associated with this lesson?

Students will work together in the initial phases of the lesson as they watch videos on PSA planning. The students will continue to work in their specific natural disaster groups. Students will work together and complete PSA Planner graphic organizer and will use the sentence stems provided by the teacher to help them begin drafting their PSA audio recording, poster, or performance skit. Extended time is available for students who need it, and extension activities are available for students who complete their performance task early. Additionally, exemplars of all three types of PSA announcements will be available for students to review and use as a guide.

## VI. Lesson Components

- ✓ Active Engagement Strategies
- ✓ Oral language development
- ✓ Cooperative learning
- ✓ Critical thinking
- ✓ Arts Integration
- ✓ Checks for understanding
- ✓ Frequent feedback
- ✓ Student voice and choice
- ✓ Scaffolding
- ✓ Strategies to support ELLs
  - o Visual supports
  - o Explicit vocabulary
  - o Realia
  - o Native language support
A. **Management:** Explain your expectations and the consequences if expectations are not met
   - Precise Directions
   - Positive Narration
   - Whole-class Incentives
   - Individual Consequences
   - Students will come up audience style to review CLO and lesson expectations
   - Review consequence ladder if work expectations are not met
   - Review Three before me policy. Students should ask three other students for help before asking the teacher
   - Students will review guidelines for working in groups
   - Students will be expected to work with their groups to complete graphic organizer
   - Students will work to with their group to complete the introduction to the PSA performance task of their choice
   - Level 2 table talk voices
   - When I say go students return to assigned group worktables
   - Positive narration as students begin to work and follow directions

B. **Lesson Introduction:** ‘Hook’ students into content. Explain objective, rationale, and assessment

Students will engage in a “Would you Rather” activity stating their opinions about natural disasters. They will stand up, pair up, go back-to-back, then after hearing the “would you rather” question, turn around, face their partner, and discuss. This will activate their critical thinking skills for the lesson while having fun.

C. **Body of Lesson:** I Do, We Do, You Do: model, guided practice, independent practice

<table>
<thead>
<tr>
<th>Teacher Does...</th>
<th>Students Do...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review learning targets, have all students read learning targets together</td>
<td>Students read learning target</td>
</tr>
<tr>
<td>Warm Up - Teacher shows students a graphic organizer they will complete as a class to break down the vocabulary word awareness</td>
<td>Students’ popcorn out definitions, facts, synonyms, and antonyms about the word awareness</td>
</tr>
<tr>
<td>Teacher shows student videos about different types of PSA’s</td>
<td>Students watch video</td>
</tr>
<tr>
<td>Teacher guides classroom discussion and prompts students to share their thoughts about the video, uses popsicle sticks to call on students</td>
<td>Students share their thoughts about the video and how they will create their PSA</td>
</tr>
<tr>
<td>Teacher reviews vocabulary words</td>
<td>Students ask questions about vocabulary words</td>
</tr>
<tr>
<td>Teacher models how students should fill out graphic organizer</td>
<td>Students fill out first section on their graphic organizer with the teacher (I do, we do, you do)</td>
</tr>
<tr>
<td>Students will begin working on the assignment</td>
<td>Students will return to assigned work areas and begin working</td>
</tr>
<tr>
<td>Teacher will circulate and review student work</td>
<td>Students will complete exit ticket</td>
</tr>
<tr>
<td>Teacher will provide support to each group as needed</td>
<td>Teacher will do periodic checks for understanding</td>
</tr>
</tbody>
</table>

D. **Closing:** Review progress toward objective (may include student self-assessment)

Students and teacher will circle up on the carpet. Students will sit with their group members and after a brief turn and talk, one student from each group will share out what their group accomplished for the day, and each student will have time to share out one thing they accomplished with group

**Materials and Resources Needed**
- Student Binders with Unit 3 packet (they have used this binder for the entire unit)
- Chromebooks for research
- Art supplies – colored pencils, paper, tape, scissors, etc.

**Extension of Learning (e.g., homework)**
- Any student that completes the assignment early can work on the ALL-BLOCK extension activity for their natural disaster
References


