



Differentiated Instruction in the Mixed-Ability Classroom

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“What are your greatest concerns or challenges as teachers?” asked by Dr. Susi Long, the presenter of the workshop in Columbia University. It comes to my mind that I have students from diverse background and different levels of English proficiency but in the same class. Some may have never learned English before, while others may already have learned English for years. They learn in various ways and have different interests. How do we respect them in our class? Differentiated instruction is one way we can design and deliver our lessons to meet their needs.

Because of English as a foreign language environment in Taiwan, I’m interested in the topic of differentiated instruction. As a member of New Taipei City Educators Delegation, I was lucky to attend the workshop held in Columbia University where Dr. Heather introduced us the concept of differentiated instruction. In my report, I will discuss differentiated instruction in terms of its theoretical background, lesson planning, and activity designs.

Background

Not all students are alike. Students enter classroom with different readiness, abilities, learning styles, personalities, and interests. Based on this knowledge, differentiated instruction seems a better solution to meet the academic diversity of students.

Introduction

Differentiated instruction is for teachers to recognize students various background knowledge, readiness, language, preferences in learning and interests. In addition, it’s for students to react responsively. Differentiated instruction is a process to approach teaching and learning for students of differing abilities in the same class. The intent of differentiated instruction is to maximize each student’s growth and individual success by meeting each student where he or she is, and assisting in the learning process (Hall, 2002).

Differentiated instruction also relies on three components of content, process, and product (Tomlinson, 2001).

Content

Several elements and materials are used to support instructional content. These include acts, concepts, generalizations or principles, attitudes, and skills. The variation seen in a differentiated classroom is most frequently the manner in which students gain access to important learning. Access to the content is seen as key (Tomlinson, 2001).

Instruction is concept-focused and principle-driven. The instructional concepts should be broad based and not focused on minute details or unlimited facts. Teachers must focus on the concepts, principles and skills that students should learn. The content of instruction should address the same concepts with all students but be adjusted by degree of complexity for the diversity of learners in the classroom (Tomlinson, 2001).

Process

Flexible grouping is consistently used. In a differentiated class, students work in many patterns. Sometimes they work alone, sometimes in pairs, sometimes in groups. Sometimes tasks are readiness-based, sometimes interest-based, sometimes constructed to match learning style, and sometimes a combination of readiness, interest, and learning style. In a differentiated classroom, whole-group instruction may also be used for introducing new ideas, when planning, and for sharing learning outcomes. Classroom management benefits students and teachers. Teachers must consider organization and instructional delivery strategies to effectively operate a classroom using differentiated instruction (Tomlinson, 2001).

Products

Initial and on-going assessment of student readiness and growth are essential. Meaningful pre-assessment naturally leads to functional and successful differentiation. Assessments may be formal or informal, including interviews, surveys, performance assessments, and more formal evaluation procedures. Incorporating pre and on-going assessment informs teachers to better provide a menu of approaches, choices, and scaffolds for the varying needs, interests and abilities that exist in classrooms of diverse students.

Students are active and responsible explorers. Each child should feel challenged most of the time. Teachers vary expectations and requirements for students' responses which may be differentiated for students to demonstrate or express their knowledge and understanding. A well-designed student product allows varied means of



expression, alternative procedures, and provides varying degrees of difficulty, types of evaluation, and scoring (Tomlinson, 2001).

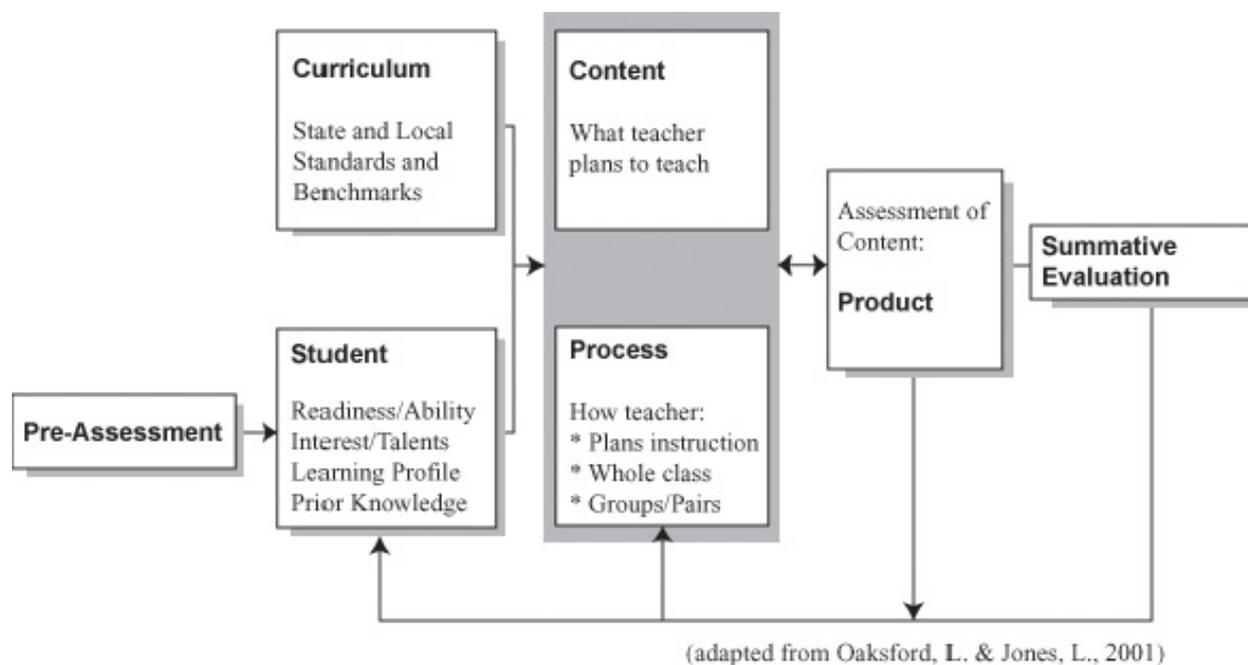


Figure1. Learning cycle and decision Factors used in planning and implementing differentiated instruction (Oaksford, L. Jones, L. 2001)

Essential elements of a tiered lesson plan

1. Tiers are leveled in cognitive complexity.
2. Each tier engaged is matched to the learner’s level of readiness and level of mastery.
3. Each task is respectful and engaging.
4. Each task moves toward the same essential understanding.

Essential elements of tiered activities

1. Begin with the concept.
2. Consider the students’ needs. What are their readiness levels, interests or learning profiles?
3. Create an activity that encourages the students understanding of the concept.
4. Revise the activity to provide different versions at different levels of difficulty.
5. Consider using Blooms Taxonomy.
6. Match students.

7. Consider how you can adjust the activity to meet the needs of your learners.
8. Consider using Blooms Taxonomy whiling planning tired activities.

Essential elements of tiered assessment

1. Select a concept, skills or understanding.
2. Consider students’ readiness, interest or learning profiles.
3. Create one activity that is interesting, requires high-level thinking and is clearly focused on the key concept, skill or generalization.
4. Assessments tasks include pre-assessment, formative assessment, and summative assessment.

Table1. Assessment types

Pre-assessment	<ol style="list-style-type: none"> 1. Any method, strategy, or process used to determine a student’s current level of readiness or interest in order to plan for appropriate instruction. 2. Provide data that can determine options for students to take in information, construct meaning, and to demonstrate understanding of new information. 3. Help teachers anticipate differences before planning challenging and respectful learning experiences. 4. Allow teachers to meet students where they are.
Formative assessment	<ol style="list-style-type: none"> 1. A process of accumulating information about a student’s progress to help make instructional decisions that will improve his/ her understanding and achievement levels. 2. Depicts student’s life as a learner. 3. Used to make instructional decisions/ adjustments. 4. Alert the teacher about student misconceptions. 5. Provides regular feedback. 6. Provides evidence of progress. 7. Aligns with instructional-curricular outcomes.
Summative assessment	<ol style="list-style-type: none"> 1. A means to determine a student’s mastery and understandings of information, skill, concepts, or process. 2. Reflects formative assessment that precedes. 3. Matches material taught. 4. Determines student’s exit achievement. 5. It may be tied to a final decision, grade, or report. 6. Aligns with instructional and curricular outcomes. 7. It may be a form of alternative assessment.



Pre-assessment about time

1. Students draw a clock.
2. Students write anything about time.
3. Teacher can know students' background knowledge by the pre-assessment.

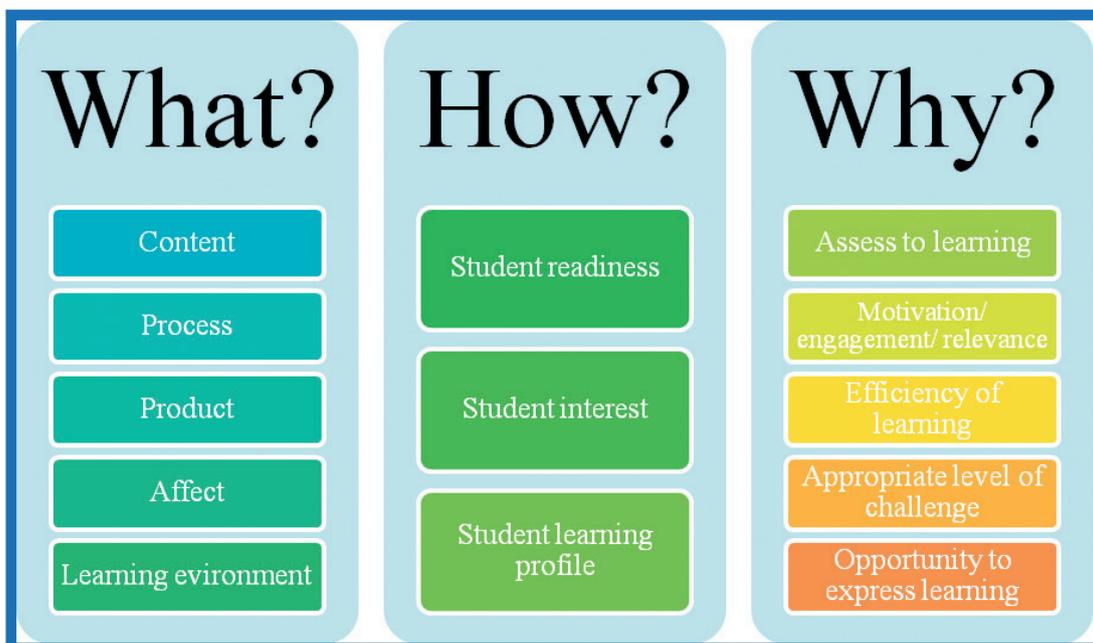
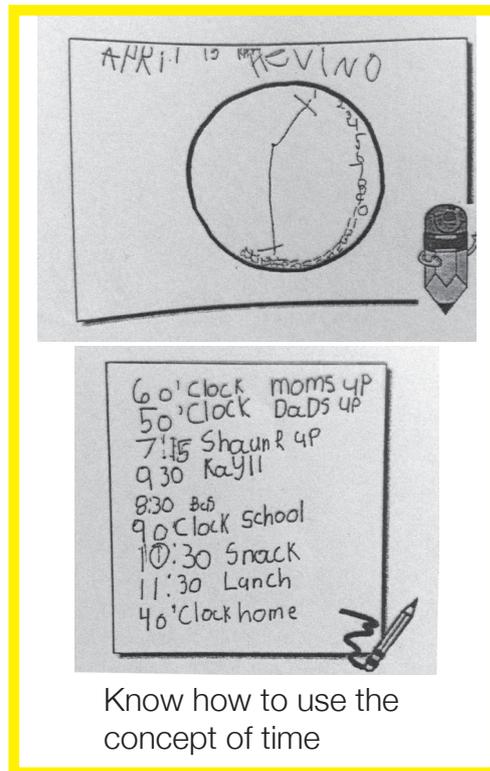
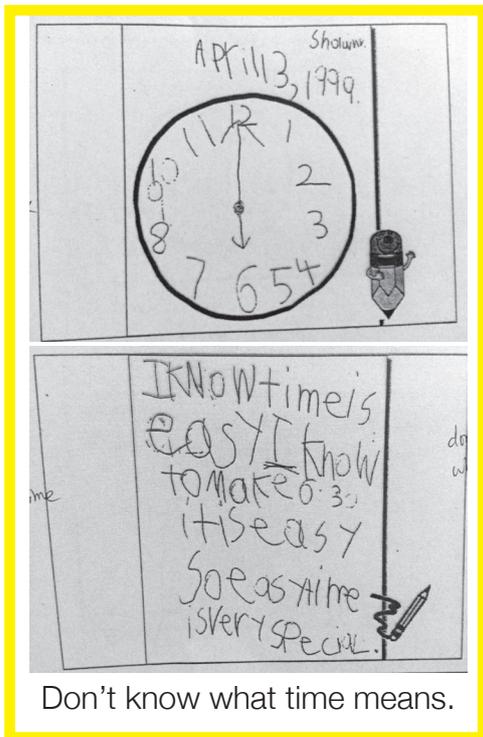


Figure2. How to plan for differentiated instruction
How to plan for differentiated instruction (Hall, 2002)

Know your students

1. Determine the ability level of your students

This can be done by surveying past records of student performance to determine capabilities, prior learning, past experiences with learning, etc.

2. Survey student interests

It is also important to get to know your students informally. This can be done by an interest inventory, an interview/ conference, or asking students to respond to an open-ended questionnaire with key questions about their learning preferences (depending on the age group).

3. Is behavior management a problem?

This is the key when planning for activities that require less structure. However, it is still important to determine learning styles and preferences for students who may have a hard time controlling their behaviors. Sometimes knowing preferences can help to motivate students to attend to any tasks that are presented.

4. Have a repertoire of teaching strategies

Because “one size does not fit all,” it is imperative that a variety of teaching strategies be used in a differentiated classroom.

Identify a variety of instructional activities

Engaging students in the learning process using activities that motivate and challenge students to remain on task is probably one of the most frustrating events in the teaching- learning process. But if you know your students’ profiles, you have a better chance at keeping them on task to completion of any given assignment or activity. In a differentiated classroom, activities are suited to the needs of students according to the mixed ability levels, interests, backgrounds, etc. For example, if you have English language learners in your class, you need to provide activities that are bilingual in nature or that provide the necessary resources for students to complete the activity with success. Good activities require students to develop and apply knowledge in ways that make sense to them and that they find meaningful and relevant.

Identify ways to assess or evaluate student progress

Once again, we cannot assume that “one size fits all.” As a result, varying means of student assessment is necessary if students are to be given every opportunity to demonstrate authentic learning. Authentic assessment has been around for a long time and is now taking the limelight as we attempt to measure students’ progress in a fair

and equitable way. A variety of assessment techniques can include portfolios, rubrics, performance-based assessment, and knowledge mapping.

Strategies for managing a differentiated classroom (Tomlinson, 2001)

Among instructional strategies that can help teachers manage differentiation and help students find a good learning “fit” are the following:

- use of multiple texts and supplementary materials;
- use of computer programs;
- interest centers;
- learning contracts;
- compacting;
- tiered sense-making activities and tiered products;
- tasks and products designed with a multiple intelligence orientation;
- independent learning contracts;
- complex instruction;
- group investigation;
- product criteria negotiated jointly by student and teacher;
- graduated task and product rubrics.

Options for children

Before the class, we can have a pre-assessment or the interest inventory to get to know more about our students.

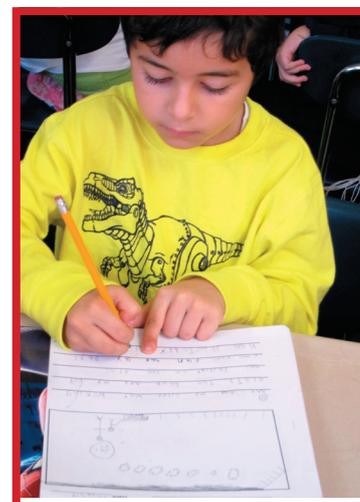
During or after class, the students have options to choose if they finish earlier. The teachers always prepare extra work for effective learners as in the following figures 3-8.



Figures3.
Read to self



Figures4.
iPad/ Chrome book



Figures5 .
Extra worksheet



Figures6.
Remedial instruction



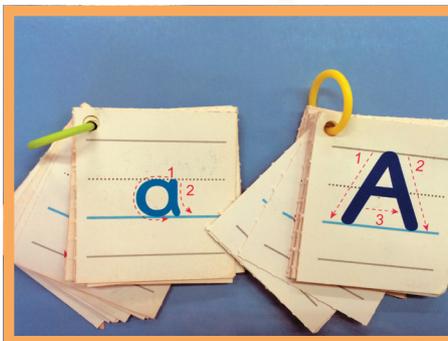
Figures7.
Interest survey



Figures8.
Cube

Activities designed for differentiated instruction

1. Alphabet differentiated instruction



Poker cards



Board game: Spot it



Remedial instruction

2. Vocabulary differentiated instruction

Instruction choices		
Match the picture card with the word card.	Spell the words.	Brainstorm other words with the same topic.

3. Phonic differentiated instruction

Instruction choices			
Pull-out remedial instruction.	Letter-sound correspondence.	Sound the words out.	Brainstorm the words with the same phonic rules.

4. Sentence differentiated instruction

Instruction choices		
Pull-out remedial instruction.	Work in pairs to do substitution drill.	Make a new sentence and write them down.



5. Dialogue differentiated instruction

Instruction choices			
Pull-out remedial instruction.	Practice the dialogues in pairs or in groups.	Rewrite the dialogue.	Reader Theater.

6. Song and chant differentiated instruction

Instruction choices			
Pull-out remedial instruction.	Sing the song in pairs or in groups.	Act the song out.	Rewrite the song.

Randing: how reading is carrying out

- 3~4 students are assigned to a group by level.
- Students work on the same novel but differentiated tasks based on their diverse ability.

Table2. Novel reading class

Group Task	Group 1	Group 2	Group 3
	(low)	(average)	(high-achiever)
Content	Picture book	reader	novel
Process	Group discussion + Teacher's scaffolding		
Product	Yes/ No questions	Reading comprehension	Rewrite the plot

Literature circle

- Students are given different tasks with different reading strategies to be a good reader.
- The aim is to love reading and encourage thoughtful thinking.

Table3. How literature circle goes

Task	Reading strategies
Divine Discussion Director	<ol style="list-style-type: none"> 1. Write down some questions that you think your team would like to talk about. 2. Try to think of “fat” questions that can’t be answered with a “yes” or “no”.
Powerful Passage Picker	Pick parts of the story and read aloud to your team.
Wonderful Word Finder	Find delicious words.
Amazing Artist	<ol style="list-style-type: none"> 1. Create a picture related to the reading. 2. Your team will guess what your picture is about.

Jigsaw reading

1. Read a short paragraph and discuss in your expert group.
2. Go back to your home group and share what you have learned with your home group.

Choice board reading

1. Teachers design a variety of activities based on the different learning goals.
2. Students choose what they can do from the choice boards to meet their needs.

Table4. Choice boards on reading (Chien, 2013)

Design a game based on the subject’s facts and trivia.	Write a song that includes the important information.	Create raps, rhymes, or riddles using the vocabulary terms
Write and illustrate a mini book based on the facts.	Write a front-page news article that includes important facts and details of an event.	Dramatize the procedures, stages, steps, or events in a passage.

Reading differentiated instruction

The question–answer relationship (QAR) strategy helps students understand the different types of questions.

There are four types of questions: (1) Right There questions have only one answer that can be found at one place in the reading text; (2) Think and Search



questions have answers that can also be found in the text, but because there may be more than one correct answer, students must put different parts of a story together in order to answer them; (3) Author and You questions are not answered directly in the text and require the reader to read between the lines, using prior knowledge and information from the text to make inferences; and (4) On Your Own questions are related to students' experiences and feelings on a topic and can be answered without reading the text (Raphael 1982, 1984, 1986). It is important to note that the answers to question types 1 and 2 can be found in the book, while answers to question types 3 and 4 are based on what the learner knows (Chien, 2013).

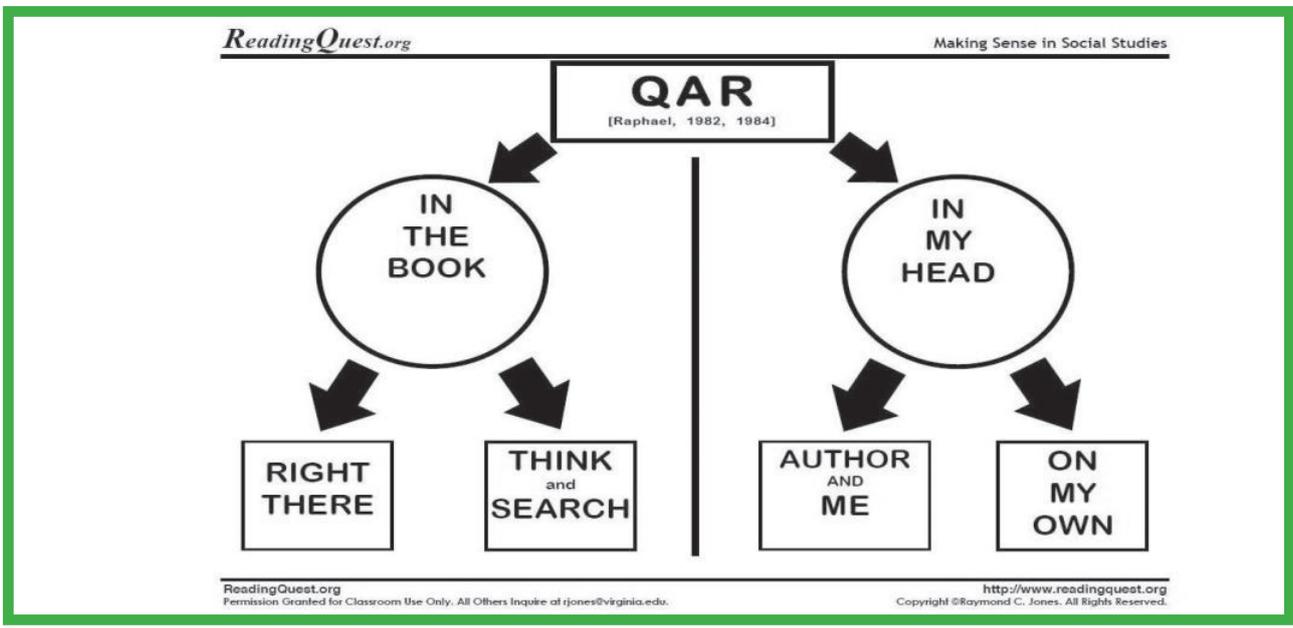


Figure 9. Taffy E. Raphael's Question- Answer Relationship

All learners must answer Right There and On Your Own questions. They can work independently or with other classmates. Learners with higher English proficiency levels easily answer questions in worksheet 1 and 2 and then answer Think and Search and Author and You and try to answer all the questions as in the following tables 5-8. (Chien, 2013)

Table5. The question–answer relationship worksheet1 for David Goes to School

Question Type	Question	Answer	How did you find the answer?
Right There	1. What did David do in the library/ cafeteria?		
	2. What did David do on his desk?		
	3. What did the teacher ask David to do after school?		

Table6. The question–answer relationship worksheet2 for David Goes to School

Question Type	Question	Answer	How did you find the answer?
Think and Search	1. What did David do at school?		
	2. Where has David been?		
	3. How did David’s neighbor classmate feel? Why?		

Table7. The question–answer relationship worksheet3 for David Goes to School

Question Type	Question	Answer	How did you find the answer?
On My Own	1. Are you a good boy or girl in your class?		
	2. Have you ever been late for school?		
	3. Do you like school?		

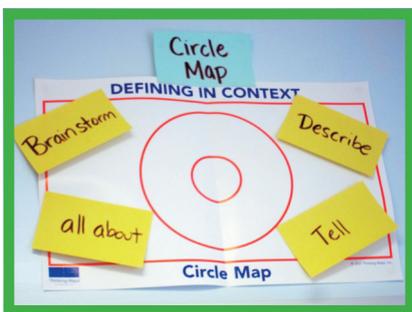
Table 8. The question–answer relationship worksheet 4 for *David Goes to School*

Question Type	Question	Answer	How did you find the answer?
Author and Me	1. Do you think the teacher is angry at David?		
	2. Do you want to make friends with David? Why?		

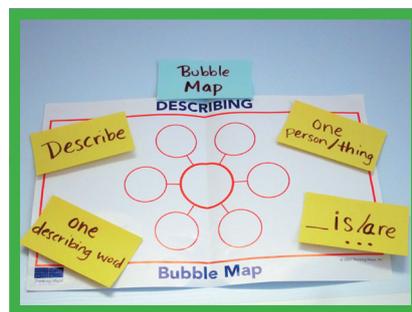
Writing differentiated instruction

Instruction choice			
Leaflet	Small book	Post card	A journal
Dialogue writing	A letter	A diary	Pull-out remedial instruction.

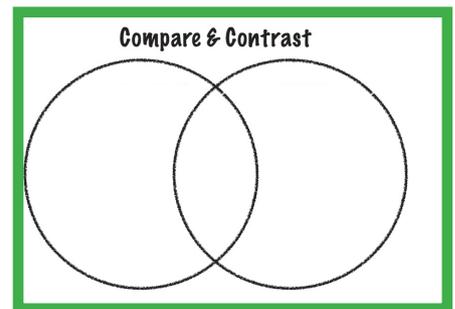
Mind map differentiated instruction



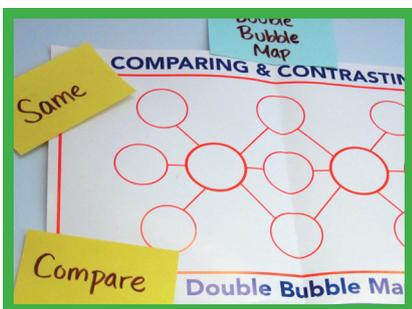
Circle map



Bubble map



Venn diagram



Double Bubble map



Tree map

Science differentiated instruction

1. Station designed by student's interest.
2. 3~4 students are assigned to a group by level.
3. 3 groups with different materials and tasks.

Table9. Science Station Learning

Station	Station1	Station2	Station 3
Group by interest	Computer	Watch the weather forecast report	Collect the data
	Group discussion + Teacher's scaffolding		

Lab stations

1. 2 students are in a group.
2. Fill in matter graphic organizer.
3. With a lab partner, visit each lab station and record the observation.

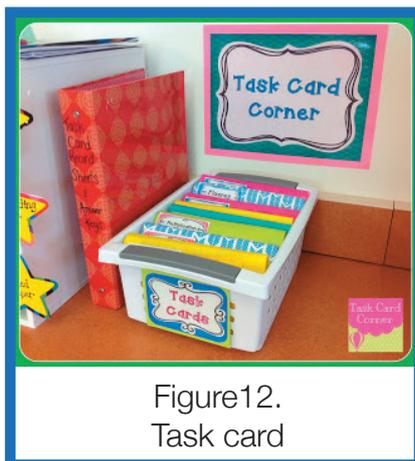
	Physical or Chemical Change	Explain observation	Is the change reversible
Station A	Nail Polish Halloween	1. apply nail polish to clean piece of paper 2. Take me and blend it	
Station B	Tart Warmer	1. observe the tart before 2. " " after 3.	
Station C	leaves	1. observe the leaf before 2. " " after 3.	
Station D	pumpkin	carve Station D: pumpkin 1. observe the pumpkin 2. record your observation	
Station E	Strike the match		
Station F	Alka Seltzer	1. Take a piece of Alka- and place in water	

Figure10.
Lab stations

Self-assessment as in the following figures 11~16

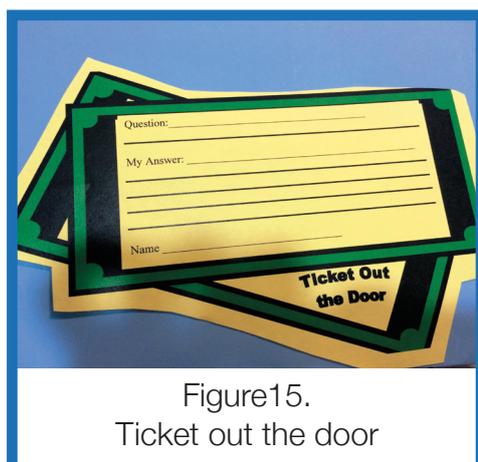
	A new learning opportunity today was...
	Today I confirmed that...
	I still wonder about...

Figure 11.
Exit card



Reflecting on myself as a reader...		GREEN FLAG	RED FLAG
Do I ...			
Read and Log everyday?	✓		
Read 45 minutes or more everyday?	✓		
Read at least 1 page per minute (35-45 pages in 45 minutes)?			✗ I spend too much time stopping and jolting. I need to do this only 1 or 2 times.
Finish a book in 2-3 days?			✗
Read a variety of genres?	✓		

Figure 14.
Self-reflection



Conclusion

Teacher has to care about the students with varied learning needs. All children have passion and potential. They are active explorers. How student's background knowledge influences their classroom experience is the reason for teachers to concern. We should provide students with comfortable challenges to create a responsive teaching and an active learning environment.

Differentiated instruction is about using effective teaching strategies that lead students to positive learning outcomes. It's flexible and provides motivating, challenging, and meaningful experiences for students. Let them be aware of their own learning and feel valued for having knowledge. The teacher serves as a facilitator or

a guide and the classroom moves toward a student-centered learning. So respect our class with differentiate instruction!

Reference

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