

Curriculum Area: Science		Lesson Length: One Week	
Grade Level: 4th Grade			
GLO: 4.1 - Investigate the nature of things, demonstrating purposeful action that leads to inferences supported by observations. 4.5 - Recognize that human activity can lead to the production of wastes and identify alternatives for the responsible use and disposal of materials.			
SLO: - Identify and classify wastes that result from human activity. - Describe alternative methods of disposal and identify possible advantages and disadvantages of each. - Identify kinds of wastes that may be toxic to people and to the environment.			
Student Groupings: Class will be divided by the level of capability Groups of 2 or 3 or working individually		Materials: -Newspaper articles -Magazine articles -Internet searches -video clips of actual press releases -R.A.F.T.S brainstorming sheet - http://www.writingfix.com/WAC/RAFT.htm	
How will you differentiate? Content Process Product			
The students will be in groups of achievement, those that can understand the concept right away, and those that will need a little more time to process the information and work with others to get an outcome. The students will then break off into smaller groups of 2 to 3 peers, or individually if they so choose and if some of the higher end students are not feeling comfortable, they can move to the other group for more guidance and help.			

How will you differentiate? Readiness Interest Learning Style

- Pretesting of knowledge
- Application of knowledge from unit, gained knowledge, knowledge already received.
- What areas concern the students the most, which areas of the unit they want to focus and cover
- Multiple intelligences for presentation of the RAFT assignment.
- Students will have these following options to choose from to present their press release to their peers.
 - Video recording
 - tape/sound recording
 - podcast
 - live in front of the class

As a result of this lesson, students will:

- Conduct a press release on the subject of the ozone layer and what needs to be done in order to protect it in one of the following formats; either a video recording, sound recording, live speech in front of the class.

Know: (Important vocabulary, definitions, rules dates, names, places, information, etc)

- Ozone layer, advantages, disadvantages, climate change, strong verbs, persuasion, action, plan

Understand: (Key or big ideas, essential understandings, important generalizations, etc).

- Global warming, climate change, causes of damage, role of community, of self, of government.
- How waste affects the world, destroys the ozone layer, the importance of the ozone layer.
- How it affects the environment, climate, plants, animals, humans

Do (skills): (What experts in the discipline know what do; basic skills, communications skills, basic skills, etc)

- Speak clearly, be firm, demand attention, spark interest, spark controversy, raise awareness
- Scientific proof of facts and causes

Steps in the lesson: (whole group activities and use of targeted differentiation strategy)

Introduction:

Explanation of RAFT assignment, importance of writing across the curriculum, final project for the Waste and Our World Unit. Use Smart Board group maker or popsicle sticks to make groups, make sure they are equal. The theme for this RAFT is that the students are news writers and they will be creating a press release for the public on the implications of waste and how it is affecting the ozone layer in the atmosphere.

Body:

Begin creating RAFT assignment sheet, filling in the sections of Role, Audience, Format and Topic.

Students will brainstorm for 15 to 20 minutes amongst themselves of what they already know on the topic and the direction they want to take.

By the end of class students will have completed a brainstorming sheet and know which type of media they will be using for their presentation.

Closure: Focus on use of strong verbs, suggest watching press releases on the news at home for ideas and hints on how to speak, mannerisms, rate of speech.

Assessment: RAFT brainstorming sheet
Final assessment: presentation and RAFTS rubric

Rationale for use of differentiation strategy:

The reason for incorporating a RAFT assignment into another subject instead of just in Language Arts is to get students more comfortable with the act of writing. They will be able to process and think critically about a topic but at the same time be learning about that topic in a new/different way. They will be required to teach/convince someone else and it will depend heavily on their use of language. It is a good tool for differentiated learning because it allows you to start at the student's level and gradually grow from there. It will allow them to dig a little deeper and try a little harder. This format works as a stepping stone, a form of scaffolding and the more you incorporate this way of learning and writing, the more you will see confident writers in your classroom. It gives their writing a purpose and they will emerge more creative as well as develop more critical thinking skills on their own. You will see great confidence and creativity in their assignments.