

# We Teach Them All

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## HOW TO SERVE SLOW STARTERS, CRUISERS, AND HIGH-SPEED LEARNERS

Years ago, Gina observed a sixth-grade class returning from the school library. One student carried the book, *Tale of a Fourth Grade Nothing*. The next student carried a copy of *A Tale of Two Cities*.

That was just one example, but a telling one, of the wide range of reading abilities and interests among students in a fairly homogeneous school community.

Let's face it, whether a class consists of students who have similar or divergent test scores or students who live in similar or different neighborhoods, we can't teach them well by offering only one version of the lesson plan. All students — learning disabled, average, or academically gifted — deserve both challenge and support. And the intellectual and emotional help we provide must vary from student to student and from activity to activity. With more middle schools shifting from highly stratified to more heterogeneous groupings, we need to find ways to improve and expand our instructional strategies.

During a sabbatical in 1998, Gina volunteered her services as a gifted education specialist by spending two months collaborating with a team of seventh-grade teachers at Noe Middle School, located a short distance from the University of Louisville campus. Noe operates the Jefferson County Public School district's gifted and talented magnet for middle grades students. In addition, Noe has an English as a Second Language (ESL) program for students who speak 12 different native languages; an Exceptional Child Education program for students with mild to profound mental and physical disabilities; and a large number of students from the surrounding neighborhoods, including census tracts with some of the city's highest poverty rates and lowest educational levels. The diverse student population creates a rich environment for learning, but it also presents instructional challenges for teachers.

To expand the differentiated options on one seventh-grade team, we decided to identify students' readiness for learning, their preferred learning styles, and their interest in various topics. We used the Differentiation Options Planning Sheet (see page 20) to brainstorm ways to vary the presentation of the content (what students learn), the process (how students think), and the product (how students demonstrate their understanding).

In her language arts classes, Kim developed a list of assignment options for the Accelerated Reader program required by the school. Students who received a passing grade on their first computerized multiple choice reading test could choose other activities to show their understanding of the second required book. Some of the options included setting up self-directed literary circles; outlining a sequel to the book; writing a different ending for the book; writing a comparison of another book by the same author; and recording an audio-taped version of the book. One student who chose the latter option used such advanced comprehension and analytical skills in her oral interpretation that she became a reader for the Kentucky School for the Blind books on tape program.





A second example of differentiation was a jigsaw activity in social studies. We created six heterogeneous groups and assigned each student in a group to research a different Roman emperor. Students who chose the same emperors gained support from meeting with each other in “expert” sessions where they shared information and probed their understanding of the selected rulers. The challenge came from using resources about each emperor that varied in reading level and sophistication. Students read their material individually, discussed the findings in the expert groups, then shared the information with their original groups so they could determine which emperor had the biggest impact on the Roman Empire. These discussions helped students appreciate different perspectives and engage in higher-level thinking that prepared them for the final assignment, an individual essay defending the student’s choice for most influential emperor.

For a unit on nutrition, we developed a variety of activities to show students how they could use their knowledge to make changes in their own eating habits and persuade others to do the same. For the culminating project, we asked students to design and write a brochure, but let them choose their audience: their peers; younger students; people with diabetes; different ethnic groups; vegetarians; or recent immigrants. The challenge level increased as the gap between the students and the target audience grew; students had to identify foods appropriate for their chosen audience, research the nutritional content of the foods, and create appealing menus. In addition to requiring students to use print and electronic resources, we also arranged for students in the ESL program to serve as advisors for students who were designing brochures for particular ethnic groups.

Instead of using the typical three- or four-level rubric for the nutrition brochure, we designed one with six levels: Not acceptable, Improvement needed, Expected performance, Above and beyond (which gifted students often can do with little effort), Exceptional (which should cause gifted students to stretch themselves), and Professional. The last level let students know what a skilled professional would be expected to produce, even though it was unlikely that any student would reach this bar. We evaluated students on the accuracy of their information; the consistency of their cultural references; the application of their food pyramid choices; the quality of their sample menus and exercise recommendations; and the appropriateness of their choices for the audience.

To encourage risk-taking, we set a grade of A for the top three levels on the rubric, relying on the intrinsic motivation of challenge and interest to inspire students to aim higher. Although some students will choose less challenging assignments at certain times, depending on their other priorities, most students will choose what interests them.

What did we learn from our work together? Planning for differentiated instruction takes time initially because you must provide options that address readiness, learning styles, and interests. But you often can use or modify something developed for one activity in subsequent activities.



Differentiated instruction doesn't always meet the needs of very bright or struggling students. After the jigsaw activity, for example, one academically gifted student sighed as she contemplated reading about all five emperors at home in order to complete her essay. She didn't get sufficient information from her group to do the quality essay she wanted and was prepared to gather the resources herself. "That's okay," she said. "I'm used to doing this. I've been doing it for years."

Sometimes gifted students have higher standards than their peers, and it doesn't feel right encouraging them to settle for less. Other times gifted students don't trust the contributions of their peers, which probably reflects the tradition of school reward systems that affirm only a limited range of abilities. In *Designing Groupwork: Strategies for the Heterogeneous Classroom* (Teachers College Press, 1986), Elizabeth Cohen advocates assignments in which a variety of abilities are needed to complete tasks. She says teachers should consistently communicate that "everyone is good at some of these abilities; no one is good at all of them."

Students in a multi-ability classroom usually have different expectations for each other based on program labels and other experiences that have identified some as smart and some as slow. It's important to challenge these perceptions by giving all students opportunities to demonstrate their expertise in front of their peers. Recognize what they do well, whether it's acting, making things by hand, bringing a group to consensus, or playing a musical instrument.

How can you begin to differentiate your instruction? Build a scaffold to higher levels of learning. Start by offering two or three activities of equal difficulty, which can help students become more comfortable with making choices. Next, offer three assignments, with the least challenging level being what is expected of students and the other levels providing challenges in content, processes, or products. Let students choose the assignments, but nudge those who aim too low and support those who reach higher than usual.

Start by using Bloom's Taxonomy to evaluate where your assignments fit (lowest to highest): knowledge; comprehension; applications; analysis; synthesis; and evaluation. When we did this a few years ago, we realized that most of the team's assignments fell at the lower levels. On reflection, we discovered some ways to stretch the activities. For example, instead of listing the nutritional elements in a poster or speech (knowledge) or explaining bodily functions through a flow chart or role play (comprehension), students could recommend or criticize a commercial diet plan through an editorial (evaluation).

Our collaboration continues, albeit not as intensely. Our rewards for the extra planning time: More engaged students; greater interaction among peers; students trusting their own instincts; students beginning to appreciate each others' different talents; and a safer, more supportive classroom atmosphere. With a variety of assignments, and variety within assignments, students learn that everyone can be successful.



## Differentiation Options Planning Sheet

### INITIAL LESSON

**Content:** food Pyramid (food groups, number of servings of each recommended)

**Process:** application

**Product:** brochure for students about what they should be eating

**Resources used by students:** health/ science text, chart, information gathered by teacher

### CURRICULUM COMPACTING

**Pre-assessment:** (in)formal pretest (explain food pyramid, create a day's menu; ask students about their prior knowledge or experience with this topic)

**Alternate activities:** see below

### OPTIONS FOR CONTENT DIFFERENTIATION

**Abstractness (connect to abstract theme):** Systems, Wellness

**Possible themes:**

- Change
- Community
- Conflict
- Exploration
- Force
- Order
- Interdependence

**Complexity (multiple abstractions):** vegetarian/vegan, religious laws, medical conditions

**Variety (different aspects of the content):** connotations of food, cost, time to prepare

**Methods of inquiry (how to):** Interviewing, data gathering and analysis, qualitative research techniques, making inferences (from cookbooks), garbage can archaeology

**Real-world applications:** Self, peers, special groups, school cafeteria, home

**Connections to other disciplines:**

*Mathematics:* computing Calories, fat, fiber, vitamins, minerals; eating patterns across cultures/ countries, e.g. stomach cancer related to eating patterns or race; statistical analysis of data.

*Science:* nutrients, phytochemicals, antioxidants; land use and resources related to different foods.

*Social Studies:* cultural variations in food, geography: economics, political science (government food support policies), history and anthropology; eating patterns of the past.

*Language Arts:* descriptive writing, analytical writing (restaurant reviews), cookbooks as a form of writing (especially if they include memoirs), debate, awareness of audience, oral and written communication. *Art:* graphic design, layout, illustration



### OPTIONS FOR PROCESS DIFFERENTIATION

#### Higher levels of Bloom's Taxonomy

**Analysis:** Analyze a food diary, the school cafeteria's menu, or restaurant's menu with respect to healthy eating habits

**Synthesis:** creating a better eating guideline than the food pyramid

#### Creativity

**Fluency:** Brainstorm types of food within each category of the pyramid

**Flexibility:** Replace foods in the traditional pyramid with those typical of another culture.

**Originality:** Create advertising that will persuade people to eat more healthy foods

**Elaboration:** Within categories of the food pyramid, arrange foods from most to least healthy based on factors such as amount of fat, fiber, vitamins, etc.

**Morphological analysis:** foods from the various groups on one axis; ways foods can be prepared (steamed, boiled, baked, broiled, fried, roasted, raw) on the other

**Cross-impact matrix:** Health concerns, preferences, advertising, economic factors

**Metaphors/analogies:** Create metaphors and/or analogies for: each of the food groups; nutrition; healthy eating; elements of nutrition (e.g. fat, fiber, vitamins)

#### Problem solving

*Problem finding:* Starvation, malnutrition, eating disorders, resource preservation

*Creative problem solving:* Nutritional deficiencies among peers, recent immigrants, poor people, vegetarians

*Problem-based learning (role, situation):* Cafeteria manager, criticism of menus based on nutrition, preferences, and cost

**Original research:** What are the eating habits of the average student in our school? Do eating habits differ across racial, ethnic and/or socioeconomic status subgroups of students (descriptive)? How consistent were the eating habits of colonial Americans with the food pyramid (historical)? Does a mini-course in nutrition change the short- and long-term eating habits of students on our team (quasi-experimental)? How could we persuade peers to adopt and maintain more healthy eating habits (action)?

### OPTIONS FOR PRODUCT DIFFERENTIATION

#### Transformations (rather than summaries)

**Different perspective:** Other cultures, vegetarian, vegan, Kosher, Muslim, weight loss, diabetes; eater, cook; restaurant owner

**Different time period:** Colonial America, pre-historic, any historical period, future

**For a particular purpose:** Inform, persuade, describe, communicate experience, humor

**Audiences:** Recently arrived immigrants, agencies serving immigrants



**Purpose:** Help them maintain/initiate healthy eating patterns in a new country with native and new foods that are available

**Product mode:**

**Written:** Brochure (in English and/or native language)

**Oral:** Speech about food pyramid, guided tour of a grocery store about the food groups

**Visual:** Chart showing food pyramid and number of servings

**Kinesthetic:** Play, role-play, mobile, demonstrate, model of ideal day's menu

**OPTIONS FOR DIFFERENTIATED RESOURCES**

**(More complex, sophisticated, higher level) print (non-fiction, fiction, reference):**

Nutrition textbooks, cookbooks of various ethnic groups, fat/calorie/fiber reference books, menus from ethnic restaurants

**Electronic:** Menu planning and analysis software, CD-ROMS, Internet

**Human:** ESL Students, agency personnel working with immigrants, dietitians, medical personnel, members of target audience

**Visual:** Videos of cooking shows, photographs, paintings, food ads (magazines, TV)

**Auditory:** Songs about food; music suggestive of various types of food; Schoolhouse Rock tape/CD; audiotapes of nutritionists, chefs, others

**Kinesthetic/tactile:** Participate in cooking healthy food

**Source:** Gina Schack, 1998 gina.schack@louisville.edu

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