**Instructional Design Project: Nutrition Unit**

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**Rationale/ Statement of Purpose**

In the world of ever-shrinking school budgets, health is a subject sometimes under fire since it is not a “tested” subject. However, findings by many respected medical associations point to a need for health curriculum in our schools. Among those findings are ones specifically about obesity. The Journal of the American Medical Association points to the fact that a significant increase in the obesity rate for our nation took place from 1980-2008; in fact, the year 2007-2008 saw a United States population with a third of its members being obese. (Curtin, Flegal, Carroll, & Ogden , 2010)

In the area of health education, the Ohio Department of Education does not have any set standards, so it is kind of up to me as the educator to hit on subject matter that will be useful and impactful upon the students. As the overwhelming majority of today’s research shows, obesity is a huge problem in our country. Therefore I address this in the two areas students can actually do something about, activity or exercise level and nutrition. The latter is the unit used for the design project.

I will use the basic lesson planning model for two simple reasons. First, it is how I already do my lesson plans so it is familiar and easier to work with than the other forms. As expressed in my groups weekly discussion when looking at Bloom’s and the other possible models to use in that realm, we like to stick with what we know. Second, I feel that this model allows me the most flexibility in my planning. I could bring in different aspects of the other models, though not necessarily all of a model, in different lessons. I could even use different models in the same lesson if I felt so inclined. With this model I also have the flexibility to address the needs of different learners and knowledge levels. Differentiation is key as research indicates that many of the emotional or social difficulties gifted students experience disappear when their educational climates are adapted to their level and pace of learning (Niehart, 2002).

**Works Cited**

Curtin, L, Flegal, K, Carroll, M, & Ogden , C. (2010). Prevalence and trends in obesity among us

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**Subunit Learner Outcomes**

High School Health: Nutrition Unit

Subunit 1: Calories

* Students will know be able to define a calorie. (Knowledge)
* Students will comprehend why they need calories. (Comprehension)
* Students will be able to understand why certain factors affect their individual caloric needs. (Comprehension)
* Students will analyze what they can do to alter their caloric needs. (Analysis)
* Students will be able to apply knowledge of factors effecting caloric intake to fashion diets to both get increase size and to decrease size. (Application)

**Pre-assessment**

I would use a KWL chart to pre-assess me students’ knowledge prior to beginning the unit on nutrition. I would first hand the students a KWL sheet with the subject of the KWL of nutrition at the top (my students have done them before so they will know they need to write what they know about nutrition and what they want to know on the sheet). After allowing about 5 minutes to work on this, I would put the worksheet up on the Smartboard in my room and ask for examples of things people wrote down. I find this to be a useful activity because some kids have their mind triggered by something another student says.

**KWL: Nutrition**

 **K W L**

**Lesson Plans**

**Lesson Plan Day One**

Learning Outcomes: Students will be able to define a calorie.

 Students will be able to understand why they need calories.

Procedures:

*Introduction-*

* Ask the students what they think a calorie is and write them on either the white or Smartboard. (5 minutes)

*Developmental Activity-*

* Play clip from “Super-Size Me” documentary where a dietician gives the scientific definition and then Morgan Spurlock puts the definition into useable terms. (10 minutes)
* Review the examples written on the board. Place the students into groups of 3-4. Instruct the kids they are to alter as few words as possible to make the examples fall in line with how they now understand a calorie to be defined. After about 5 minutes, go around the room to each group and have them state how they made the example fall in line with the definition. Note any different tactics used by the different groups with the class. (15-20 minutes)
* Ask the students why they need calories (which they should know from definition, if they have difficulty answering this question then re-teaching is necessary). Then have them provide examples of how they would take in calories. (Push them to say more than “eating food”, give more specific examples including drinks and snacks etc.) (5 minutes)

*Conclusion-*

* Students will complete an exit card defining a calorie and explaining why they need calories. (2-3 minutes)

Assessment/ Evaluation: Students will complete an exit card defining a calorie and explaining why they need calories.

Materials: Super-size Me DVD, 3 X 5 notecards for exit cards, Smartboard/ white board, scratch paper for group work



**Lesson Plan Day Two**

Learning Outcomes: Students will be able to identify the different factors that affect caloric needs.

Procedures:

*Introduction-*

* Ask students for some of their favorite famous people, athletes, actors, musicians, politicians, health teacher, whomever, and write them on the Smartboard. (5 minutes)

*Developmental Activity-*

* Place the students into groups of 3-4 and have them come up with the differences between the examples that they think could affect how many calories they need in a day. After a couple of minutes to work in their groups, ask for the differences they came up with. (5-10 minutes)
* Have them read Ch. 19, lesson 2 in the textbook that explains the different factors used to determine caloric need and complete lesson review questions 1-4 and 6. ( 15-20 minutes)

*Conclusion-*

* Review answers to the lesson review questions. Answer any questions posed by the student. (10 minutes)

Assessment/ Evaluation: The students will complete exit cards explaining the different factors that affect caloric needs.

Materials: Glencoe Health Textbook, Smartboard

**Lesson Plan Day Three**

Learning Outcomes: Students will be able to be able to express how much physical activity it takes to work off a typical fast food meal.

Procedures:

*Introduction-*

* Review of what calories are, why we need them, and what factors influence the amount of calories we need. Emphasize that physical activity is the only way to burn off excess calories. (5-8 minutes)

*Developmental Activity-*

* Ask the students how many of them eat out at least once a week (most hands will go up). Ask them how many of them think they take in more calories than they should in those meals. Pass out handout which explains fast food activity. (See next page) Tell the students to grab a laptop from the laptop cart in the library and begin working. (20 minutes)

*Conclusion-*

* Have the student put laptops away. Ask them how many of them were surprised how many calories they took in during their fast food meals. Then ask how much exercise it took them to burn off the calories taken in during those meals. Get students to connect calorie intake and physical activity to body composition and appearance. (10-15 minutes)

Assessment/ Evaluation: Students will be evaluated on the accuracy of their handouts and their observations and connections made in class.

Materials: Handout, laptops

**Fast Food Meal Activity**

A majority of people eat out at fast food restaurants at least once a week or more. In this activity you will find out how many calories are in a typical meal you eat at your favorite fast food restaurant. Then you will calculate how long you will have to exercise to burn off those calories using this website (http://www.nutristrategy.com/caloriesburned.htm).

*Tips: Most fast food places have nutritional info. on their website, you just have to find it. Also please use an activity you would actually do, do not pick using a rowing machine vigorously for an hour if you do not have a rowing machine and would not be able to do it at a high intensity for an hour.*

Fast Food Restaurant:

Your meal:

|  |  |
| --- | --- |
| Menu Item | Calories |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Total Calories ---------------------------------------------🡪 |  |

Activity chosen:

How many hours to burn off fast food meal:

Any observations on your meal or exercise requirements?

**Post-assessment**

The post-assessment will come at the end of the entire unit on both calories and nutrients subunits. The post-assessment will be a project where the kids will put together a diet for day that meets their daily needs for both food groups and calories as compiled by the Myplate.gov website. The students will do so in the form of a menu for a prospective restaurateur. They can have whatever theme that they want for the restaurant (Mexican, Chinese, 50’s diner, Amish-inspired, etc.) and have to have one breakfast, one lunch, and one supper on the menu. The students will be graded on the actual healthiness of the foods chosen, meeting their personal food group requirements exactly, and coming within 150 calories either way of their daily caloric requirements.