

Additives Used in Food Lesson Plan

SUBJECTS: Technology and Enterprise, English

TIME: 3 sessions @ 50 minutes

GRADE LEVEL: Grades 9-10

PURPOSE: The purpose of this lesson is to inform students that there are additives in the foods we consume and to consider the positive and negatives of adding these to food. In particular we will examine those additives added to meat and dairy.

BACKGROUND:

This lesson is best conducted in a block to keep the momentum - if possible. Prearrange the Skype session with another class for a nominated time. There is homework to be completed prior to conducting this lesson. The Students page has a sub-page called "Skype Recording Instructions" for assistance in recording the debate to create a podcast.

OBJECTIVES: (include other learning areas)

Students will be able to:

- 1) Identify foods that do contain additives and those that do not.
- 2) Recognise the positives and negatives of using additives in food.
- 3) Display debating skills and form a convincing argument supported by facts.

PRE-ASSESSMENT:

Students are familiar with the debate format. Students are familiar with the interactive whiteboard (IWB) technology from previous use in lessons. Students are familiar with Skype-video conferencing. Some students have had experience in creating podcasts - these students will assist two other students in learning to use this technology (peer teaching).

SET INDUCTION:

This lesson builds on the knowledge students learnt during lessons conducted under the topic Sustainable vs. Non-sustainable Foods -Overview of Key Issues". Explain to the students that this lesson is regarding two sides of an issue. Inform students that they will be debating the issues with respect and passion.

PROCEDURE:

Have students read the information sheets on "Additives", "Pesticides", "Antibiotics", "Rbgh"(recombinant Bovine Growth Hormone) as homework tasks prior to the lesson. Ensure they make a brief summary of key points to bring to this lesson.

Conduct a brief brainstorming session of key things learnt in the previous lesson using IWB to reflect on information learnt about sustainable and non-sustainable food so far. Save this brainstorming exercise to be used as revision in a subsequent lesson.

Display the issues statements from the Sustainable Table website on the IWB (<http://www.sustainabletable.org/issues/additives/>).

Using the IWB, engage the class and collaboratively create a list of factors and determine at least one positive and one negative for each. Students should draw upon knowledge formed by reading the handouts and summaries made during the homework exercise.

Divide the class into two sections for debate. One group is to support the argument for additives and their use in meat and dairy farming. The other group is anti additive use in farming.

Ask the students to nominate three speakers who will speak for four minutes whilst representing their team. Inform the class that the debate will be created into a podcast and submitted to their class blog for this topic (under the section "Additive Debate Podcast"). Seek two students to be responsible for preparing the required equipment, recording and posting the podcast to the class blog. (Ensure those chosen have not obtained these skills so as to keep educating different students).

Ask the students to research information on their topic using handouts and the following website as the main source: (<http://www.sustainabletable.org/issues/additives/>), www.daa.asn.au/index.asp?PageID=2145834393 and <http://www.westonaprice.org/farm-a-ranch/451-why-farmers-use-hormones.html>. Alternatively, choose some other sites for the students to investigate/research to limit time wasting. The debate should be supported by five or more additive facts obtained from reputable sources. These sources should be revealed in the debate. (Allow 30 minutes for research and to form arguments).

Teacher should circulate the room and guide students with research. Also, keep the students on task whilst constructing their argument and gather anecdotal evidence for assessment.

Conduct a class debate - Each speaker has four minutes, therefore allow approximately 35-40 minutes for the entire debate team and Skype session.

Arrange to Skype (video conference) the debate live to another classroom. It may be useful to choose a class that can then use the debate to build upon for their own learning purposes. The debate can be Skyped to a class they have had contact with before in another country/location.

After the debate has concluded, ask the other class of students to judge and determine the winning team - peer assessment.

EXTENSION ACTIVITIES: Individually, the student will write a brief blog entry (200-250 words) that answers the question "How can I limit additives in my diet and what are the benefits of doing so?" This should be posted to the sustainable food blog under the "Additives" category, thus allowing for sharing of thoughts. Refer students to the first entry created on the blog as an example.

CLOSURE: Ask the students to indicate how strongly they are in favour of, or otherwise, of additive free food. Represent the responses graphically on the IWB. Have clickers for students available to ensure opinions are anonymous and authentic.

Have students reflect on learning by creating an entry in their e-portfolio and evaluate their own performance.

MATERIALS NEEDED:

- Podcast recording equipment
- IWB and clickers
- A list of websites for research, and computers
- Skype facilities
- Web addresses for information sheets on "Additives", "Pesticides", "Antibiotics", "Rbgh" and Computers with Internet access (supplied under students page for lesson two)
- **e-portfolio**

EVALUATION:

- 1). As a group, the student's debate will be evaluated for meeting the requirements of five or more additives facts.
- 2). Anecdotal evidence collected of student's discussions and contribution to group work.
- 3). Individually, student's blog entry will be evaluated for the statement and supporting details. Entries will be assessed for correct grammar and spelling.