

UNIT 9: USING IODIZED SALT TO PREVENT GOITRE

Grade Level: Grade 5 or 6

Introduction:

Goitre is a disease physically shown by the enlargement of the neck of humans. It may be due to a total or partial enlargement of the thyroid gland. One of its causes is hormonal dysfunction. Endemic or simple goitre is a result of prolonged iodine deficiency. This kind of goitre is quite common, especially among poor people.

Educational Objectives:

This script includes the following learning objectives:

1. Deciding how a community can eliminate goitre.
2. Involving the learners in transmitting messages of the consequences of iodine deficiency.
3. Cooperate as a member of a group.
4. Communicating orally.
5. Awareness of the consequences of iodine deficiency in human beings,
6. Understanding the role of iodine in the prevention of goitre.

Scientific Concepts:

- Goitre is physically manifested by enlargement of the neck in humans.
- Enlargement of neck may be due to enlargement of thyroid gland.
- Endemic or simple goitre is a result of iodine deficiency.
- Adding iodized salt to food could prevent goitre.

Previous knowledge assumed:

Parts of the body, functions of glands and hormones

Teaching-Learning Materials needed:

Pictures of people with goitre

Iodized salt

Community data on people with goitre problems

Poster paper, coloured pen

Student's Guide

Scenario

A person with goitre



The picture shows a person with goitre. Such endemic goitre is peculiar to some pockets of population in Bangladesh. In one district, Jamalpur, there is a high report of goitre among the people. What causes this problem and is there anything students can do to alleviate the problem ?

Your Task

The activities are summarized as follows:

1. In small groups, brainstorm ideas about goitre, the consequences of iodine deficiency and whether this is a problem in the community.
2. Report the results of the brainstorming to the class and follow by class discussion.

3. Make a survey of the number of goitre patients in the community - or obtain the data available from the health centre. The available data is analyzed, followed by finding out about the dietary habits of the members of the family.
4. Call a resource person to discuss about the possible causes of goitre.
5. Find out about the properties of iodized salt as compared to non-iodized salt. Discuss whether this is a good idea for combating goitre.
6. Recommend to family members the use of iodized salt to prevent goitre by designing a suitable poster.

Teacher's Guide

This activity relates to:

- a) an awareness of the causes of goitre and how this can be prevented
- b) understanding the use of iodized salt
- c) the need for public awareness that goitre can be prevented.

Teaching Strategy

1. The teacher can begin the lesson by a brainstorming session in which the students put forward their ideas on the problem of enlarged thyroid glands and whether this is a problem in their community through a brainstorming session. In this session, students put forward any idea they have and the teacher records these on the blackboard. All ideas are written down.
2. Following the brainstorming session, students discuss, in small groups, whether action is needed in their community to counteract the problem of enlarged thyroid glands. Where action is required, students put forward suggestions of how this can be undertaken.
3. In their small groups, students develop questions about the problem which they can pose to a visiting health worker to find out more about the disease and how it can be prevented.
4. Teacher invites a health professional to discuss with students about goitre. Each group is permitted to ask a question in turn. The teacher writes this question on the blackboard so that other groups do not ask the same question again. When all questions have been asked, the teacher and the health worker reinforce the answers given by the health worker by asking each student to take part in a quiz. In the quiz, students record answers to questions posed

verbally. At the end of the quiz, students swap papers and mark the paper given.

5. The teacher brings samples of iodized and non-iodized salt to the class. The student groups inspect these and discuss properties of the two samples. The students also discuss whether this is a good way of administering iodine to the community and if so, why it would be effective.
6. Students create posters to explain how the community can prevent goitre, the advantages of iodized salt and how community members can know that the salt is the iodized version.

Achieving the Objectives

Objective	This is achieved by
1. Deciding how a community can eliminate goitre.	discussing in a group and then designing a poster on the use of iodized salt.
2. Involving the learners in transmitting messages of the consequences of iodine deficiency.	designing a poster to publicize the problem of iodine deficiency.
3. Cooperate as a member of a group.	working with the group and arriving at common suggestions for action.
4. Communicating orally.	taking an active part in discussions within the group.
5. Awareness of the consequences of iodine deficiency in human beings.	Interacting with a visitor to explain problems of iodine deficiency
6. Understanding the role of iodine in the prevention of goitre.	creating a poster to explain actions needed by the community to prevent goitre

Assessment:

Able to give a Social Values grade (objective 1)

- A. Not able to suggest ways in which a society can eliminate goitre.
- B. Able to put forward ways of eliminating goitre and the manner in which this should be tackled.
- C. Able to appreciate the importance of eliminating goitre as well as indicating ways of doing this.

Able to give a Science Method grade (objective 2)

- A. Not able to develop a questionnaire. Relies on the work of others.
- B. Able to make a positive contribution to the development of a questionnaire on goitre.
- C. Able to guide others to create a questionnaire that show insight into the causes of goitre and the manner in which it can be eliminated.

Able to give a Personal Skills grade (objective 3 and 4)

- A. Not able to work with others to resolve and communicate ideas.
- B. Able to work with others to make a common decision.
- C. Able to actively participate and convince others to support the idea put forward in the discussion.

Able to give a Science Concept grade (objective 5 and 6)

- A. Not able to explain goitre, nor suggest how this can be prevented.
- B. Able to explain the causes of goitre and put forwards ways in which this can be prevented.
- C. Aware of the causes of goitre and how elimination is possible. Understands the make up and function of the thyroid gland.

Summative Assessment Strategies

Able to give a Personal Skills grade (objective 3 and 4)

- A. Not able to design a poster to educate the generate public.
- B. Able to design and create a poster that informs the public about goitre and its prevention
- C. Able to create an appealing poster that gives a positive image to the general public concerning the need to take preventive action against goitre.