

Burning Calories

Summary

Activities help students understand how physical activity burns calories.

Materials

- [Crystal Ball \(poster size\)](#) (pdf)
M&M candies
Post-it® Notes
- [Predictions](#) (pdf)
Pedometers
Slice of a raw baby carrot
Froot Loops
Journals

Additional Resources

Books

- *The Lunch Line*
, by Karen Berman Nagel; ISBN 0590602462
- *WHY?*
by Lila Prap; ISBN 1929132808

Articles

- *Kids Discover*
, Kids Discover; ISSN 1054-2868

Background for Teachers

In addition to making healthy food choices, the new food guide pyramid reminds us to be physically active every day. Students will need background knowledge regarding how to make a prediction in order to complete this activity. They should also know what a calorie is. Make sure that students understand that when we talk about burning calories we are not talking about fire, we are talking about our bodies using the calories as a form of energy.

Students will need to walk during this activity. Students with physical limitations or food allergies may need accommodations to complete this activity. The lesson requires students to walk three different distances. They will need a hallway or outside area with space to walk. The distance walked does not need to be a straight line.

Intended Learning Outcomes

4. Develop physical skills and personal hygiene.
6. Communicate clearly in oral, artistic, written, and nonverbal form.

Instructional Procedures

Invitation to Learn

Ask the children how many steps they think a second grader would have to walk to burn the calories contained in one regular-sized package of M&M candies. Hold up the package of M&M candies. Tell students to write their answers on their Post-it® notes and attach it to the *Crystal Ball poster*.

Instructional Procedures

Hand out *Predictions*.

Give each student one carrot slice and instruct them to eat the carrot slice.

Now have the students predict how many steps they will have to walk to burn the calories they

just ate. Have the children write their prediction in *Crystal Ball #1*.

Tell the students that in order to burn the calories in the carrot slice we will have to walk.

Take the children to a hallway or an open area and walk. Have the children help you count the steps using a pedometer. Stop when you get to 57 steps. Tell the students that we have just burned the half of a calorie that was in the carrot slice.

When you get back to class have the children write in the correct answer.

Give each student one Froot Loop and instruct them to eat the Froot Loop.

Now have the students predict how many steps they will have to walk to burn the calories they just ate. Have the children write their prediction in *Crystal Ball #2*.

Tell the students that in order to burn the calories in the Froot Loop we will have to walk.

Take the children to a hallway or an open area and walk. Have the children help you count the steps using a pedometer. Stop when you get to 114 steps. Tell the students that we have just burned the single calorie that was in the Froot Loop.

When you get back to class have the children write in the correct answer.

Give each student one M&M candy and instruct them to eat the M&M candy.

Now have the students predict how many steps they will have to walk to burn the calories they just ate. Have the children write their prediction in *Crystal Ball #3*.

Tell the students that in order to burn calories in the M&M candy we will have to walk.

Take the children to a hallway or an open area and walk. Have the children help you count the steps using a pedometer. Stop when you get to 342 steps. Tell the students that we have just burned the three calories that were in the M&M candy.

When you get back to class have the children write in the correct answer.

Ask probing questions regarding the conclusions children can make from this activity.

Help the children conclude that: Foods have different levels of calories. We need to be careful about the foods we consume. The more high-calorie foods we eat, the more calories we need to burn to stay healthy.

Have the children write at least one conclusion in a journal that they made in the process of this activity.

Finally, to burn the calories in a whole package of M&M candies a second grader would have to walk 26,904 steps.

Extensions

Explain to students that within each food group the number of calories per serving fluctuates.

Eating one cup of apples has far fewer calories than eating one cup of strawberries.

Advanced learners may compare calories of the fast food items they eat at the Kid's Nutrition web site.

Students may look at a variety of menus from restaurants and make comparisons. They could also practice selecting healthy foods from restaurant menus.

Place different foods on a piece of construction paper. Make sure to include some high fat foods such as potato chips. Observe the transfer of fat to the paper.

Family Connections

With the help of an adult, students can find out what their favorite foods are composed of using the USDA website.

Students could organize physical activities for their family members to do together.

Assessment Plan

Show students two portion cards (one should be a high-calorie food and one should be a low-calorie food). Ask students to identify the food with the greatest or least amount of calories.

Bibliography

Research Basis

Bell, R., (1990). Whole-Class Inquiry: Science. *Learning and Leading with Technology*, 32(8), 45-47. This article discusses three comparable lessons: (1) a traditional textbook-based lesson; (2) an example of the same lesson taught in a computer laboratory setting using a hands-on approach; and (3) scaffolding provided to facilitate inquiry in a whole-class setting.

Jarrett, D., (1997). *Inquiry Strategies for Science and Mathematics Learning: It's Just Good Teaching*. Northwest Regional Education Laboratory. Retrieved November 30, 2006, from <http://www.eric.ed.gov>.

Inquiry-based learning satisfies the natural curiosity children possess. Students who are learning through inquiry are actively involved in the learning process. Teachers may begin to create an environment that supports inquiry by using appropriate questioning, having children collect data, and engaging children in activities that lead to discovery.

Authors

[Utah LessonPlans](#)