

PURPOSE

INVENT is an exciting simulation that will turn your students into a classroom of inventors. They will gain insight into the creative process of inventing as they research inventors and see how their inventions have changed our lives. Students will then practice the creative process by brainstorming, tinkering, and actually creating their own inventions. They will patent their inventions, advertise and market the product, and defend it when faced with a Consumer Advocacy group composed of their classmates. Finally, each invention will be featured at a special Thomas Edison Day open house.

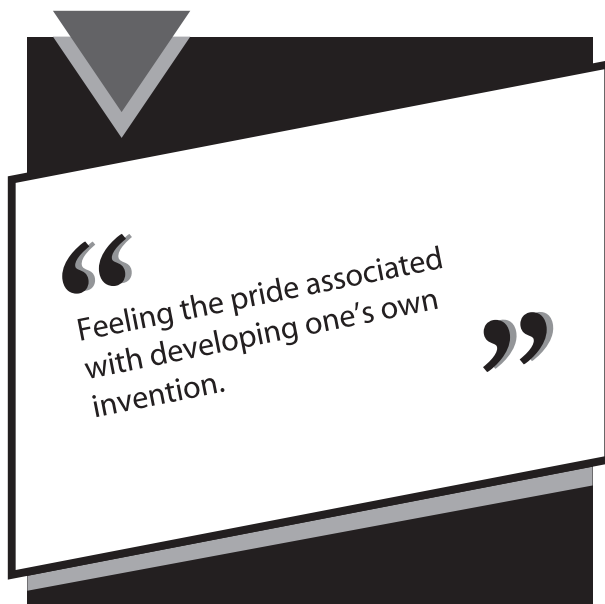
Specifically, students will participate in the following ways:

Knowledge

1. Why people invent (the need for inventions)
2. How important original thinking is to an inventor
3. How inventors have contributed to and changed history
4. What types of criticisms inventors face
5. How to get an invention patented
6. How to advertise and market an invention

Skills

1. Researching an inventor
2. Problem solving that is used to invent
3. Applying knowledge gained about inventors and inventions in a useful way for developing an original invention
4. Designing an invention that is practical and that fills a need



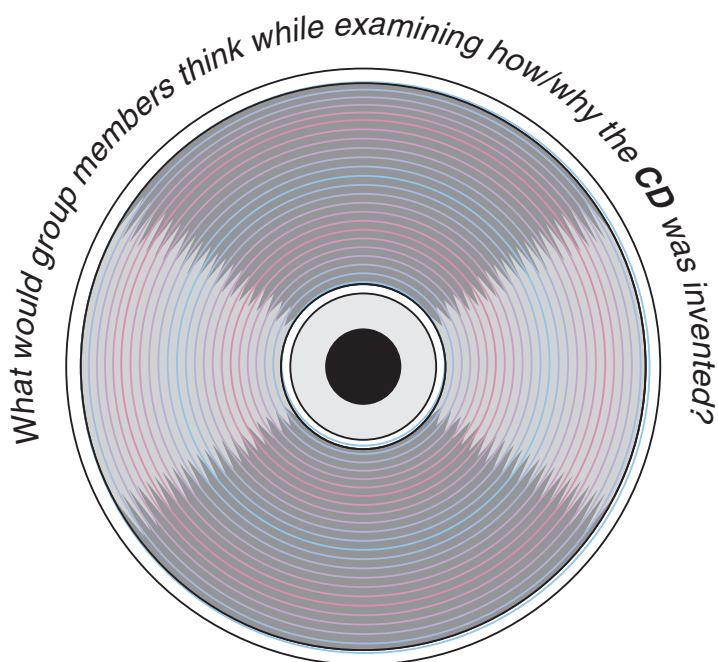
Feelings and attitudes

1. Understanding that inventions are needed for progress
2. Appreciating the criticism that inventors often face
3. A willingness to risk being different and seeing things in a novel way
4. Feeling the pride associated with developing one's own invention

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OVERVIEW

INVENT begins when a member of each cooperative team chooses one item from the “Invention Box.” Each of the six items in the box is representative of a broad category of inventions. (For example, a telephone would represent communication and an ice cream cone would represent food.) Each group’s members then study their item and brainstorm ideas of how this object might have been invented. When the group comes to an agreement about how they believe this item was invented, they will share this idea with the rest of the class. Then each group will learn how their item was actually invented.



Next, each member of the group will research—on his/her own—an invention that falls into their broad category. Each student will develop a page of a Classroom Invention Book as a result of this research. Once this activity is complete, cooperative groups will work together to develop a brand new invention for a fairy tale character that falls into its broad category.

Once this group invention has been developed, each member of the group will be asked to begin working on his/her own personal invention. This invention will be of the student’s own choosing and can fit into any category. As students begin the process of making their own inventions, they will develop an invention log where they will record in writing and diagrams all the work they do on their invention. Students will patent, market, and create an advertisement for their invention. Finally, faced with a Consumer Advocacy group of classmates, students will share a model of their invention, explain how it is used, and answer questions about its benefits and hazards.



TEACHING TIP

Note: *If you sense you are going to have an outstanding Thomas Edison Day, you may wish to invite the local media to give your students the publicity they deserve.*

INVENT culminates with a Thomas Edison Day in which all inventions, advertisements, patents, drawings, and research are displayed for parents, other teachers, and students from their school to enjoy.

Unit Time Chart

Note: This Unit Time Chart is intended as an example. Alter it as desired.

Monday	Tuesday	Wednesday	Thursday	Friday
Organize teams GROUP THINKER ACTIVITY Introduce the simulation Give HOME-WORK assignment in the Student Guide 1	Greatest Invention Graph Research inventors		Begin Group Fairy Tale Invention Discuss Individual Invention Project	Share Group Fairy Tale Invention
1	2	3	4	5
Tinkerer Activity	Log Mini-lecture Make logs Inventive Ideas Activity #1	Patent Mini-lecture Inventive Ideas Activity #2	Advertising Mini-lecture Develop Advertisements	
6	7	8	9	10
Share Invention Models and Ads Evaluate Peer Inventions		Set up Thomas Edison Day		Thomas Edison Day
11	12	13	14	15

Day 1

Materials

1. A band-aid
2. An ice cream cone
3. Some velcro
4. A telephone (play or real)
5. A single roller skate
6. A disposable diaper
7. An "Invention Box" large enough to hold items #1-6 listed above
8. An enlarged copy of the Invention Wheel
9. A HISTORY OF A FEW INVENTIONS handout
10. Student Guides

Procedure

1. Divide students into six cooperative learning groups.
2. Tell your students that they are about to begin a simulation about inventions. The following activity will introduce and excite your students about the world of inventions:
 - a. Tell the students that they will send one member from their group up to the front of the room to pick an item from the "Invention Box." These students may not look inside the box before choosing the item.
 - b. Once the group member has chosen an item, this person will return to the rest of the group.
 - c. The entire group will develop their own idea about how this item was invented without using any resource materials. If the class is not familiar with brainstorming techniques, the teacher may want to model the appropriate way to brainstorm before students begin this activity. Remind the class that during a brainstorming activity everyone in the group must give ideas and there should be no criticism of the ideas when they are first given. Once the group has many ideas to choose from, they should narrow down their choices by getting group consensus.
 - d. The group will devise a way to present their idea to the rest of the class of how this item was invented. The teacher may want to offer suggestions for presentation ideas to help groups. For example, the groups may present a:
 1. skit
 2. newscast
 3. commercial
 4. documentary featuring the inventor
 5. poem or rap
 6. diagram (or illustration)
 7. song
 - e. After giving the groups 10-15 minutes to prepare, have each group come forward to show the rest of the class its presentation.



TEACHING TIP

If groups have difficulty selecting a person, help by telling them to send to the front of the room the person whose birthday falls earliest (or latest) in the year.

HOMework ASSIGNMENT: “The Most Important Invention in History”

Your homework assignment is to choose what you consider “the most important invention in history.” Follow these steps:

Before class tomorrow

1. Talk to other people to get ideas, but *you* must make the final decision as to what you believe has been the world’s most important invention.
2. Read the A HISTORY OF A FEW INVENTIONS handout which your teacher has given you.
3. Look in some other books or encyclopedias if you have time to do so. You will find it interesting to find information about inventors and their inventions. Such information will help you tomorrow with #4 below.

In class tomorrow

4. Neatly print your conclusions on a notecard under the bulleted items. (See the model below.)

The Most Important Invention in History	
Darcy Davenport	
• invention	_____
• name of the inventor	_____
• date the invention was patented or developed	_____
• sources of your information (where/how you did your research)	_____

Name it and explain what it does.

Give his/her name and birth date if you found it.

Give dates if you found them.

List persons you talked to and what you read (titles, authors, dates of publication)