

UNIT-5

Invention

ACTIVITY - 1

This unit is about inventions and inventing.

Look carefully at the picture. There are many things in it!

Name as many as you can in English!



In your list, underline all the things that were invented.

ACTIVITY - 2

Do you know who invented the light bulb?

You may know the name Thomas Edison as its inventor, but often, one person is remembered for inventing something that many people

helped with. Edison didn't really invent the light bulb by himself. He used earlier inventions by other people, and he had a large team of people working with him. Edison did not really invent the light bulb, but he did make it better. Edison saw a big problem with the earlier inventions for light bulbs. They did not last long enough and they were not easy to make in large numbers. Edison worked with a team to solve the problem. They made the first light bulb that lasted long enough and could be sold for use in homes.

Do you know any other famous inventors? Perhaps you know who invented the printing press or the telephone. These famous inventors saw a problem, just as Edison did. Edison saw that people needed light after dark but that the light bulbs of other inventors did not last long enough or could not be made cheaply so that many people could have them. Edison solved the problems. Inventors solve problems.

ACTIVITY - 3

Here are some more famous inventions. Work with a partner or group to add three more inventions to the list. What are some problems that each of these inventions solved?

Sewing Machine	
Oven	
Antibiotics	

Individually, list three real problems that you know about that might be solved with a new invention.

In a pair or group, share the list of problems you each made. Use ideas from everyone's list to make a new list. The new list will list the five most serious problems from all the lists you shared.



Our group looked at everyone's list and agreed these five problems are all very serious....
1)
2)
3)
4)
5)

ACTIVITY - 4

You don't need to be famous to invent things. You don't even need to be grown up. You just need to see a problem and think of a new way to solve it. **Read this story about a young boy who invented a new way to solve a problem.**

Smart Boy Invents Smart Bell – Part 1



Newspaper Report June 2011
England, UK –

A British schoolboy will earn up to 20.5 lakh for his invention of a doorbell that fools burglars into thinking somebody is at home in an empty house. Laurence Rook, 13, from southern England, is the inventor of Smart Bell. Smart Bell looks and works like a regular doorbell. Usually, visitors ring the doorbell to let the owner of the house know someone is at the door. The owner “answers” the doorbell by opening the door to admit the visitor.

But what if no one is home? Then, no one will answer the doorbell and the visitor will go away.

Sometimes in the UK, burglars ring the doorbell. If no one answers, they may go into the empty house and steal things! However, if no one answers the Smart Bell, the Smart Bell does something special....

What is the problem in “Smart Boy Creates Smart Bell”?

Do you think this problem is more or less serious than the problems in the list your group made in the earlier activity?

New Words

Burglars

This invention FOOLS burglars. What does "FOOLS" mean?

ACTIVITY - 5

Add Laurence's problem from the newspaper report to your list from the earlier activity. Now, work in a new group to rank the problems in order of seriousness. Number the problems where 1 is the most serious of all and 6 is the least serious.

Our group list + Laurence's problem	Seriousness RANK

Where did Laurence's problem rank on your list? In other words, what number did Laurence's problem have on your list? For example, if your list ranks Laurence as number 3, then your group believes that Laurence's problem is the third most serious problem on the list.



We ranked Laurence's problem number _____. We think that Laurence's problem is the _____ most serious problem on the list.

ACTIVITY - 6

Compare your ranking for Laurence's problem to other lists in the class.

Our rank for Laurence's problem	Number of lists in our class that rank Laurence's problem higher than ours	Number of lists in our class that rank Laurence's problem lower than ours

Our group ranked Laurence's problem as the _____ most serious problem.

_____ lists ranked Laurence's problem as more serious than we did.

_____ ranked Laurence's problem as less serious than we did.

ACTIVITY - 7

Smart Boy Invents Smart Bell – Part 2

Newspaper Report June 2011

When the Smart Bell is pressed, it waits ten seconds to see if the home owner answers.

If no one answers, the Smart Bell dials the owner's mobile phone! The owner can answer the phone and talk to the visitor standing at the front door.

Laurence's invention uses existing mobile phone technology and has a built in SIM card. He also made the Smart Bell create a small amount of white noise.

The white noise makes the Smart Bell sound like the owner is inside the house talking on an intercom.

The white noise doesn't sound like a mobile phone so the visitor cannot tell the owner is not at home.

Laurence first got his idea because his mom didn't like to miss deliveries while she was away from home. Laurence helped by creating a way for his mom to talk to delivery workers even when she was not home.

But Laurence soon saw that his idea could solve a much more important problem. He saw that it could stop burglars. "...Burglars ring the doorbell first to see if anyone is at home.... If you are out and a burglar comes up to your door and rings the doorbell, after ten seconds, Smart Bell will ring through to your mobile phone and you will be able to answer." The burglar will not know the house is empty.

Laurence came up with the idea for the Smart Bell when his school asked students to enter a contest for student inventions. Laurence thought of problems he knew about that could be solved with inventions. He drew designs to show his idea.

A family friend helped him to send his design to China, to a company that makes working models from designs. They showed the model of his idea to companies. Less than 12 months after the model was built, several other big companies are ready to sell Smart Bell. Laurence and the companies hope that Smart Bell will be very popular.



ACTIVITY - 8

Laurence had to draw the design for his invention before the company in China could make it. Inventors often draw their designs to show how their idea will work.

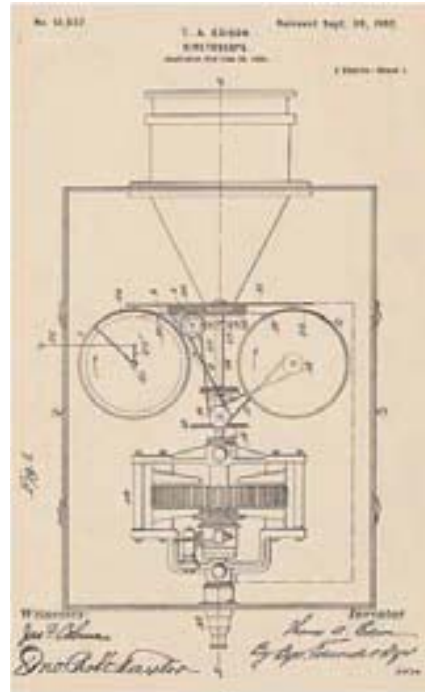
Read the article very carefully to find out all the things that Smart Bell does. How many things does Smart Bell do?

Think about all the parts that Smart Bell must have to work. How many parts do you think it needs?

How would the parts be connected?

Work in a pair or group to draw a possible design for Smart Bell showing all the parts needed to make it.

Label your drawing and write a few sentences to explain how it works.



Share your design with the class. Did others think of other designs for the Smart Bell?

ACTIVITY - 9

Not all inventions are machines or medical miracles. Did you know that Shakespeare, the author of many famous plays, such as Romeo and Juliet also invented many words that we still use today?

Look carefully at these words that Shakespeare invented. What do the words have in common? How do you think Shakespeare thought of them?



bedroom downstairs farmhouse moonbeam schoolboy
birthplace eyeball leapfrog roadway watchdog

All the words are made of two simpler words put together. For example, watch + dog = watchdog.

ACTIVITY - 10

You can invent a word right now! **Invent a new word by putting two simpler words together into one. Be creative in inventing the meaning for your new word!**

My word is _____. My word is made of the words _____ and _____.

Write these sentences that show what your invented word means. Make sure that your classmates will be able to understand the meaning of your word from your sentences.



Helpline

Going Beyond the Textbook

Use the internet or library resources to collect more information on inventions and other topics you've read about in your textbook. You may wish to search for more inventions by children or for more famous inventors. You may visit the textbook website, www.onlinetextbook.info, for more activities related to inventions. Be sure to post things you've learned there, too. The world is full of interesting things!

Remember throughout the activity that the goal is for students to notice and produce language. There are no “right” answers to the questions asked. The activity of drawing Laurence's invention is designed to encourage students to read the text carefully, to make inferences, and to apply what they learn from it. If students do not notice all the functions or parts, continually refer them to the text with questions that encourage them to think more carefully about the reading. You might say, for instance, "What's this part in paragraph 2? It says that it 'works like a regular doorbell.' What does that mean?" Students will need to infer what parts a bell needs and what parts a phone needs. Students may not think about how, exactly, the Smart Bell "waits ten seconds". Encourage close reading and critical thinking by asking leading questions, but give the students time to work this out for themselves. Allow the students to get creative, deciding that the Smart Bell should come in different colours, etc. Due to space limitations, this printed text has only a portion of the available texts and activities. Find more activities on the textbook website, www.onlinetextbook.info.