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In science the credit goes to the man who convinces the world, not to the man to whom the idea first occurs.
Francis Darwin, botanist and son of Charles Darwin

10A The dark side of the moon

1 GRAMMAR quantifiers: *all, every,* etc.

a Right (✓) or wrong (✗)? Correct the mistakes in the highlighted phrases.

1 I've taken all luggage up to our room, OK? ✗ *all the luggage*
2 Everybody were bad-tempered because it was late. _____
3 All went wrong at my last job interview. _____
4 On Wednesday I spent all day studying for my biology exam. _____
5 All the men love buying new electronic gadgets. _____
6 We go bike riding on the rail trail every morning during the week. _____
7 The most people are against eating genetically modified food. _____
8 Every classroom in that school has an interactive whiteboard. _____

b Complete the dialogues with *no, any,* or *none.*

1 **A** Can I have a cookie?
B Sorry, we don't have *any*.
2 **A** How much homework have you done?
B _____. I don't feel like it right now.
3 **A** How are we going to get home?
B By taxi. There aren't _____ buses at this time of night.
4 **A** Did any of your friends pass the exam?
B No, _____ of them. It was too difficult.
5 **A** Let's have dinner in our hotel room.
B We can't. There's _____ room service after 9 p.m.
6 **A** When can you come?
B _____ day you like. I'm free all week.

LIVEWORKSHEETS

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c Complete the sentences with a word from the box.

both	either	neither	nor

1 *Both* my brother and my sister have children.
2 Dave has two computers, but _____ of them is working.
3 We'd like to go to _____ Cancun or Acapulco for our vacation this year.
4 Neither my boyfriend _____ I eat meat.
5 _____ of their children are at the same college.
6 I can't decide between these two shirts. I like _____ of them.
7 _____ of my parents have ever been overseas.

2 VOCABULARY science

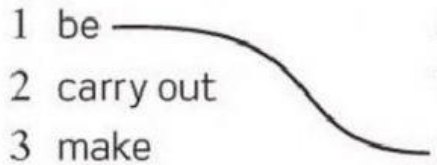
a Complete the sentences with a word from the same family as the words in **bold**.

1 I always knew, right from the start, that I wanted to be a *scientist*. **science**
2 Factories manufacturing plastics produce a lot of _____ waste. **chemistry**
3 My daughter's best subject at school is _____. **biologist**
4 One of the most controversial issues of our time is _____ engineering. **gene**
5 _____ is a mystery to me. I failed every exam I ever took. **physicist**

LIVEWORKSHEETS

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b Match each verb to a suitable noun.



1 be	a a discovery
2 carry out	b a theory
3 make	c a guinea pig
4 prove	d new drugs
5 test	e an experiment

c Complete the sentences with the correct form of a verb phrase from **b**.

1 We *carried out an experiment* in our chemistry class, but it went terribly wrong!
2 The student volunteered to _____ _____ because he needed the money.
3 Researchers _____ an important _____ completely by accident last month.
4 Companies need to _____ to make sure they are safe.
5 It took a long time for Newton to _____ his _____ of gravity.

LIVEWORKSHEETS

RMIT Classification: Trusted

3 READING

a Look at the pictures and read the article. Match each picture to a paragraph.









LIVEWORKSHEETS

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Reading: Unknown inventors

For most of us, the word "inventor" makes us think of names like Alexander Graham Bell or Guglielmo Marconi, the men behind the telephone and the radio. But what about the people whose inventions we use so often that we forget someone had to think them up in the first place? Read on to find out about five of the unknown inventors of our times.

A. An American woman named Margaret Knight was working in a paper bag factory when she noticed how difficult it was to put things into the bags. So, she decided to invent a machine that folded and glued paper to make a flat-bottomed bag. She made a lot of **sketches** of her machine, but before she could actually make it, another employee named Charles Annan stole her idea. Knight took Annan to court and eventually won the case. In 1858, Knight set up her own paper bag company and received large sums of **royalties** for her invention when other companies made her bags under license.

B. In 1910, a Russian-born candy manufacturer named Sam Bom emigrated to the US and set up a business there. One day, when he was wondering how to make the candy-making process more efficient, he **thought up** an idea for a new machine. It was called the Bom Sucker Machine and its job was to quickly and mechanically insert the sticks into lollipops. The new machine helped make the candy and Sam's company into a huge success, and in 1916, he was awarded "the key to San Francisco." In 1923, he founded the Just Born company, which is **still going strong** in the US today.

C. In 1959, Ernie Fraze, the owner of a successful American engineering company, was at a picnic when he went to fetch the drinks. In those days, drinks were in sealed cans that were opened with a can opener. Unfortunately, Ernie had forgotten to bring the opener. This started him thinking, and one night, when he was having trouble sleeping, he solved the can dilemma. His idea was a new can that could be easily opened with a ring pull. Ernie's company began manufacturing a system of **mass producing** these cans and by 1980, he was making over $500 million dollars a year from his invention.

D. Once the banks had decided they wanted to install ATMs, the next problem was how to confirm a customer's identity to allow money to be **withdrawn**. It was a Scottish man by the name of Jam es Goodfellow who came up with the solution. In 1966, Goodfellow realized he could link a set of numbers, known only to the account owner, to an encoded card. If the two numbers matched, the person would receive their cash. This number became known as a Personal Identification Number or PIN. Goodfellow didn't get a penny for his idea, but he did receive an award from the Queen of England.

E. When take-out cups of coffee became popular, the Solo Cup Company, a leading producer of disposable cups, saw **a hole in the market** for a new container. Jack Clements was the man they asked to design it. In 1985, Clements designed a new lid for the cup in the shape of a dome. The lid rested comfortably between the mouth and nose when the user took a sip and it also helped prevent **spilling**. Since then, the Solo Traveler Lid has been adopted by many of America's coffeehouses and it has helped Clements' company earn $2 billion of annual income.

LIVEWORKSHEETS

RMIT Classification: Trusted

b Read the article again and answer the questions. Write the letter of the paragraph.

Which inventor…

1 thought of something that made an extra tool unnecessary? ___

2 made it safer to carry something? ___

3 found the answer to a security problem? ___

4 came from outside the country where he created his invention? ___

5 invented something that was an improvement on the existing design? ___

6 was British? ___

7 invented something that speeded up the manufacturing process? ___

8 had to take legal action against a colleague? ___

9 designed something that can be fitted onto something else? ___

10 had an idea outside work? ___

LIVEWORKSHEETS

RMIT Classification: Trusted

c Look at the highlighted words and phrases in the text and try to figure out their meaning. Then use them to complete the sentences.

1 After brainstorming solutions to the problem, researchers _____ a new idea.

2 When companies see _____, there is a lot of competition to fill it.

3 I couldn't get any more cash out of the ATM because I had already _____ $250.

4 The designers made a lot of _____ before they decided on the final version.

5 You shouldn't put a drink on your desk because you run the risk of _____ it on your computer.

6 They have started _____ the gadgets to meet the increased demand.

7 My grandfather is _____ although he is 94 years old.

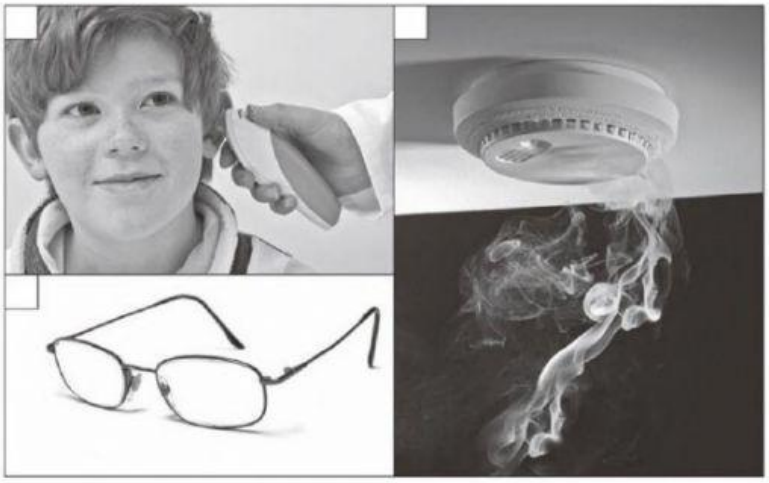
8 Musicians earn _____ every time their song is played on the radio.

LIVEWORKSHEETS

RMIT Classification: Trusted

5 LISTENING

a iChecker Listen to the radio program about NASA inventions and number the pictures in the order they are mentioned.



b Listen again and complete the sentences with between one and three words.

1 The first smoke detectors were invented in order to detect a fire or if there were _____ on the US space station *Skylab*.

2 NASA's smoke detector had a new feature that allowed astronauts to adjust the _____ to prevent false alarms.

3 The disadvantage of plastic glasses is that they _____ easily.

4 NASA developed a _____ to protect astronauts' helmets.

5 NASA uses infrared technology to _____ of stars.

6 Diatek wanted to _____ of time that it took for nurses to take patients' temperatures.

LIVEWORKSHEETS