

Reading speed practice passages

Time yourself reading each passage at your normal pace. Speed = words ÷ minutes. Then answer the question without looking back.

1. How honeybees share directions (95 words)

When a scout honeybee finds a good patch of flowers, she flies back to the hive and performs a waggle dance on the honeycomb. She runs forward in a straight line while shaking her body, then loops back and repeats. The angle of the straight run, compared with straight up, shows the direction of the flowers compared with the direction of the Sun. The length of the waggle tells the other bees how far away the food is. Bees that follow the dance can fly straight to flowers they have never visited, even kilometres away.

Question: What does the length of the waggle run tell other bees?

2. Why we have tides (91 words)

Twice a day, in most places, the sea rises and falls. The main cause is the Moon. Its gravity pulls hardest on the side of the Earth facing it, drawing the water into a bulge, and a second bulge forms on the far side. As the Earth turns, a coast passes through both bulges, giving two high tides roughly every twenty-four hours and fifty minutes. The Sun has a smaller effect. When Sun and Moon line up, at new and full moon, their pulls combine to make especially large spring tides.

Question: When do spring tides happen?

3. Recycling glass (88 words)

Glass is one of the few materials that can be recycled again and again without losing quality. Collected bottles and jars are sorted by colour, crushed into small pieces called cullet, cleaned and melted with sand and other raw materials. Using cullet saves energy, because it melts at a lower temperature than the raw ingredients. The main problem is contamination: ceramics, heat-resistant cookware and window glass have different melting points and can spoil a batch, which is why many schemes ask people to recycle only bottles and jars.

Question: Why should cookware not go in the glass recycling?

4. The printing press (82 words)

Around 1440 in Mainz, Johannes Gutenberg developed a printing system using movable metal type: individual letters cast in metal that could be arranged into pages, inked, printed and reused. Combined with an oil-based ink and a press adapted from those used for wine and paper, it let printers produce hundreds of identical copies far faster than scribes could copy by hand. His Bible, printed around 1455, is the best-known early example. Within fifty years, presses had spread to hundreds of European towns.

Question: What was new about Gutenberg's type?

5. How rainbows form (87 words)

A rainbow appears when sunlight shines into falling raindrops while the Sun is behind you. Light bends as it enters each drop, reflects off the back and bends again as it leaves. Different colours bend by slightly different amounts, so white light is spread into a band from red to violet. Because the light leaves the drops at about forty-two degrees, the rainbow always forms a circle around the point directly opposite the Sun. From the ground we usually see only the top part of that circle.

Question: Where must the Sun be to see a rainbow?

6. Compound interest (87 words)

When you save money, the bank pays interest. With simple interest, you earn interest only on the money you put in. With compound interest, each period's interest is added to the balance, so the next period's interest is calculated on a larger amount. Over short periods the difference is small, but over decades it becomes large: 1,000 saved at 5 percent a year grows to about 1,629 after ten years with annual compounding, compared with 1,500 with simple interest. The same effect works against you on debts.

Question: What is compound interest calculated on?

Answer key

1. How far away the food is
2. At new and full moon, when Sun and Moon line up
3. It has a different melting point and can spoil a batch
4. It was movable metal type that could be rearranged and reused
5. Behind you
6. The original amount plus earlier interest

Notes
