

## Lesson 9 The light beam that got away: Part 1

### 1 Talk about it



When you look at the sky at night, what do you see?

How far do you think these things are from Earth? **Google it**



### 57 2 Read and listen

What are Gedanken and Uncle Albert talking about?

- a how many planets there are .....
- b how people travel to the moon .....
- c how fast light travels .....

Gedanken is a schoolgirl who has to decide what to write about for a school science project. She goes to see her Uncle Albert, a famous scientist, and tells him about the project. They go outside and sit in a park, looking up at the stars in the night sky ...

## The Light Beam That Got Away from The Time and Space of Uncle Albert by Russell Stannard

'How far away are they, Uncle?'

'A long way.'

'But how far?'

'Ooh ...' he paused, lost for words. 'So far that it ... well ... it takes years for their light to get here.'

'What?' Gedanken was not sure she had heard him correctly.

'Yes. Years. That light we're now looking at was given out years ago. **It's taken that long** to get here.'

'But why? It doesn't take **time** for light to go from one place to another. When I put on a light at

home, the light goes everywhere at the same time.'

'Not quite,' explained Uncle Albert. 'It only **seems** to get everywhere at once. That's because rooms are small. You don't notice the tiny, tiny **time it takes** for the light to go from the lamp bulb to the walls. But out there in space it's different. The stars are a long, long way off and their light **takes ages** to make the journey to us – and that's despite how fast it goes.'

'How fast?'

'Three hundred thousand kilometres a second.'

He saw her looking blank, so added, 'A hundred and eighty-six thousand miles a second.'

She still didn't seem **to take it in**.

'Five times round the Earth in the time it takes to say "rice pudding".'

'Five times ...?'

'That's right. That's how fast it goes. And it still **takes years** to get here from those stars even at that speed.'

They continued to sit there gazing up at the sky, lost in thought.



### 3 Read

Are the sentences below **true** (T) or **false** (F)? Correct the false sentences.

- Gedanken is thinking about possible topics for her schoolwork. ☐ .....
- Uncle Albert is a science teacher. ☐ .....
- Gedanken and Uncle Albert are looking at the stars. ☐ .....
- It takes a very long time for light to travel to Earth. ☐ .....
- Gedanken already knew the information that Uncle Albert told her. ☐ .....

Abbreviation Finder

ITT

112 It Takes Time

The meanings of "It takes..."