Life aboard the International Space Station

Level 1 • Elementary

1. **Warmer**

1. Write five things (key words only) onto the word wheel that you think of when you read the words ‘space station’.

   - space
   - station

2. Share your ideas in class.

2. **Key words**

Fill the gaps in the sentences using these key words from the text. The paragraph numbers are given to help you.

<table>
<thead>
<tr>
<th>docking</th>
<th>mission</th>
<th>astronaut</th>
<th>altitude</th>
<th>crew</th>
<th>hatches</th>
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</thead>
<tbody>
<tr>
<td>lap</td>
<td>storage</td>
<td>views</td>
<td>orbiting</td>
<td>laboratory</td>
<td>contrails</td>
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</tbody>
</table>

1. someone who travels and works in space __________________ (para 2)
2. an important piece of work that a person has to do for a government or large organization, especially one that involves travel __________________ (para 2)
3. the height of a place or thing above sea level __________________ (para 3)
4. if a spacecraft is doing this, it is joining to another spacecraft while still in space __________________ (para 4)
5. doors cut into the floor or ceiling of a ship, aircraft or building that people or things can move through. __________________ (para 4)
6. the people who work on a ship, aircraft, etc __________________ (para 4)

7. a space or room where things can be kept or stored __________________ (para 5)
8. places where people do scientific and medical experiments or research __________________ (para 5)
9. one complete go around something like a race course (here around Earth) __________________ (para 9)
10. areas or places, especially attractive ones, that can be seen __________________ (para 10)
11. artificial clouds created by an aircraft __________________ (para 10)
12. moving around a large object in space such as a planet __________________ (para 13)
Life aboard the International Space Station

It's ten years since the first crew entered the International Space Station (ISS) 220 miles above Earth. But what is it like aboard the ISS?

Ian Sample
24 October, 2010

1 At 6.41pm this Thursday, a small bright light will appear in the night sky. It looks like a star but it is the International Space Station.

2 With more than ten years of building work now coming to an end, astronauts can finally start working properly on the space station. And they will have an extraordinary time. “I still can’t believe what I’ve seen sometimes,” says Piers Sellers, a NASA astronaut, who took part in the most recent shuttle mission to the station in May.

3 NASA is celebrating ten years of life on the space station (the first astronauts arrived on 2 November 2000), but fewer than 200 people know what life on board is really like. It takes two days to get to the space station. The station flies at an altitude of 220 miles (that’s more than 30 times the cruising height of a jumbo jet), but is travelling at a speed of 17,500 mph.

4 The shuttle approaches the space station from below. The docking procedure is slow and careful. This is not surprising as the spacecraft are very expensive: $1.7bn (£1.1bn) for a shuttle and around $100bn (£64bn) for the space station. Once they are locked together it takes half an hour or so to equalize the pressure and finally open the hatches that separate the two crews. “You see these faces on the other side and they’re always excited to see you. Sometimes it’s been three months since they’ve seen anyone else,” says Sellers.

5 The living space on the station is about the size of one-and-a-half Boeing 747’s. Storage places, laboratories and siderooms give astronauts room to do their work, do experiments and operate the space station’s two robotic arms. The space station has a permanent crew of six astronauts who have to learn to move around without crushing into anything.

6 In a short time, the crew members are able to fly down the length of the station, straight as an arrow, without touching anything, except with their fingertips.

7 Living in on the space station does strange things to the body. On their first day or two in space, some astronauts feel sick. Many astronauts lose much of their sense of smell and taste. “Nothing tastes like it does on Earth. It all tastes like cardboard,” says Sellers. “We get through gallons of Tabasco sauce.”

8 The astronauts have problems with their bones and muscles too. For every month in space, they lose around 2% of their bone mass. On long stays aboard the space station, crews spend at least two hours a day exercising.

9 It takes the space station one and a half hours to fly around Earth, or 16 laps a day. After 45 minutes of daylight, a dark line appears on the planet, dividing Earth into night and day. For a couple of seconds, there is a line of orange light and then complete darkness. Another 45 minutes later the sun rises to fill the space station with bright light again.

10 On board, the best views are from the cupola whose six windows look down on a wonderful view of Earth. But for the really exceptional views, you need to step outside. Space walkers see whole continents, mountain ranges, cities, aircraft contrails and ships crossing the oceans.

11 Most shuttle missions take astronauts to the space station for two weeks or so, where every working day is hard. As soon as the wake-up music begins, printers start printing out instructions for the day ahead. Almost every hour is planned.

12 Short visits to the space station are easier than longer ones. Frank de Winne, a Belgian astronaut, spent nine days on the space station in 2002 and returned for a six-month trip last year, when he became the first European commander of the space station. “If you are there for a week or two, everything is different and new the whole time. It’s not the same when you’re there for six months. Things that are
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difficult, such as not having a shower or any fresh fruit, become part of normal life. The things you really miss are your wife, your kids and your family and friends," he says. The crews use email and the station’s phone to get in touch with family and friends when there is time.

13 The space station will be orbiting Earth for at least another five years; probably much longer – possibly until 2028. For those who worked on building the space station, seeing its bright light shooting across the sky at night makes them feel very proud. "You can go out on a quiet night and see it flying over and you think, my goodness, I was there, I helped put that together," says Sellers.

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3 Comprehension check

Are these statements true (T) or false (F)?

1. It has taken ten years to build the International Space Station (ISS).
2. The ISS cost around sixty-four billion US dollars.
3. When the shuttle docks on the ISS, the astronauts can immediately go through the hatch into the space station.
4. Many astronauts have problems with their sense of smell and taste on board the ISS.
5. The ISS flies around Earth 45 times a week.
6. Most astronauts stay on the ISS for two weeks.
7. The astronauts cannot contact their families while they are on the ISS.
8. It is possible to see the ISS in the night sky.

4 Collocations

Make word pairs from the article by matching a word from the left with one from the right. The first one is done for you.

1. bright a. sky
2. night b. crew
3. space c. procedure
d. light
5. permanent e. station
6. Tabasco g. mass
7. bone h. Earth
8. exceptional i. walkers
9. space j. sauce
10. orbiting k. views

5 Retelling

Retell the article using all the collocations (word pairs) from Exercise 4 to help you.
Discussion: Different but the same

How is working on the space station different (or similar) to working away from home on Earth, e.g., working for two weeks in a foreign country? Complete these sentences in your own words and then talk about them.

1. Two weeks working on the ISS is different to a two-week business trip on Earth because ...

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

2. But, at the same time, it is also be similar because ...

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

Webquest

Go to NASA’s official ISS website to find out more information about the ISS

Here you can read about current missions, crew members and expeditions, watch videos, see images, and find out where to see the ISS in the night sky.
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KEY

2 Key words
1. astronaut
2. mission
3. altitude
4. docking
5. hatches
6. crew
7. storage
8. laboratory
9. lap
10. views
11. contrails
12. orbiting

4 Collocations
1. d
2. a
3. e
4. c
5. b
6. i
7. f
8. j
9. h
10. g

Teacher’s note: All the questions and answers in each task are in the order that they appear in the article.

3 Comprehension check
1. T
2. F
3. F
4. T
5. F
6. T
7. F
8. T