

Many robotic hands make light work

Answers

LINKS TO:

Stage 2, Module 13

Learning Object 4: Help your community

Exercise 1

Answers:

1.1 List the jobs that robots already do to help people around the house.

At present there are robots that can vacuum floors and carpets, and other ones that can mow the lawn.

1.2 What do scientists believe robots will be able to do in the next five to ten years?

In the next five to ten years scientists believe that robots will be able to set the dinner table, mop the floor, do the laundry, make the bed and do the ironing.

1.3 Scientists believe that they can program robots to do household chores. What effect do you think this will have on everyday life?

If scientists are able to program robots to do some basic household chores this would allow humans more time to undertake more work, or leisure activities.

1.4 What are the advantages and disadvantages of having robots do household chores?

The advantages of robots doing household chores are that they would probably be able to do them more efficiently than humans and possibly use up fewer resources such as electricity and water. The downside is that humans will need to actively use their additional free time in a productive way to maintain a fit, healthy and full lifestyle. If having a robot to do all the housework results in humans spending more time in front of the television, then this is an undesirable outcome.

Exercise 2

Answers:

2.1 Zak is expected to do many household chores. List the chores he needs to do.

When Zak returns home to the space station he needs to help his mother by undertaking a large number of household chores. These include:

Daily:

- cooking
- cleaning
- washing the dishes

- taking out the rubbish
- looking after the new robots

Weekly:

- clean the bathroom
- clean his room
- vacuum
- mop the floor
- polish the silverware
- undertake external repairs to the space station

Monthly:

- clean the walls
- clean the windows
- clean the space station filters
- clean his face, arms and body

2.2 What inference can you draw about Zak's personality from his response?

From the large number of chores undertaken by Zak we can infer that he is industrious and uncomplaining. He has a strong work ethic and takes on responsibility. He is unselfish, because he thinks about his extended robot family unit and not just about himself.

Exercise 3

Sample answers:

3.1 Peter and Anna are expected to do household chores. Which jobs are similar to the ones you are expected to do in your family?

The chores that I must undertake at home, which are similar to Peter and Anna's, are washing the dishes, taking out the rubbish and keeping my room clean and tidy.

3.2 Are there differences in the kinds of jobs that Peter and Anna are each expected to do around the house? Use specific examples to support your answer.

Peter and Anna share some common household chores such as taking turns cooking, washing the dishes and keeping their respective bedrooms clean. However, they also have their individual duties. Peter must water the plants, do the laundry and take out the rubbish. Anna, on the other hand, must sweep the floor, clean the bathroom, collect and fold the laundry, and do the ironing.

3.3 Based on the information in Exercise 2, how do Peter and Anna's household chores compare to those that Zak is expected to do on the space station?

Peter and Anna's chores are similar to those undertaken by Zak on the space station except that Zak doesn't have to do the laundry or ironing, because the robots on the space station don't wear any clothes. In addition Zak also has to clean the walls, windows and filters as well as undertake external repairs to the space station. Zak does the combined chores of Peter and Anna in addition to many other duties.

Exercise 4

Sample answers:

4.1 Tick the box that corresponds with the answer that is most appropriate for you.

Survey responses are ticked in your work sheet.

4.2 What household chores have you done this week? Complete the table in Indonesian with this information.

Minggu

Membenahi tempat tidur

Mencuci mobil

Membersihkan halaman

Menyiram kebun

Membersihkan sepatu sekolah

Membuang sampah

Senin

Membenahi tempat tidur

Mencuci piring

Membuang sampah

Selasa

Membenahi tempat tidur

Mencuci piring

Membuang sampah

Rabu

Membenahi tempat tidur

Mencuci seragam sekolah

Membuang sampah

Kamis

Membenahi tempat tidur

Mencuci piring

Membuang sampah

Jumat

Membenahi tempat tidur

Mencuci seragam sekolah

Membuang sampah

Sabtu

Membersihkan kamar tidur

Mengganti seprei

Membenahi tempat tidur

Membersihkan bak mandi

Membuang sampah

4.3

4.3.1 Identify the household chores you're expected to do:

Daily:

- make my bed (every day)
- cleaning the dishes (three times a week)
- taking out the rubbish (every day)
- washing school uniform (twice a week)

Weekly:

- wash the car
- clean the yard
- water the garden
- clean the bathtub
- clean my bedroom
- change the sheets

4.3.2 Looking at the table you filled out in Exercise 4.2, can you estimate how much time you spend doing the various household chores that are expected of you?

I spend about 6.5 hours on my various chores each week.

4.3.3 How does that compare with your estimation of the time you spend on leisure activities?

I spend about 40 hours a week on leisure activities, such as watching television, surfing the Internet, playing computer games, playing sport, going out with my friends, and spending time with my family.

4.3.4 How do you feel about doing these jobs?

As both of my parents work full-time, I feel that it is fair that I also contribute to the housework by doing my chores.

4.3.5 Do you think doing chores is beneficial for children? Give reasons to support your answer.

Yes, I think doing chores is beneficial for children, because doing chores teaches children a range of life skills, such as fulfilling responsibilities and earning their keep, as well as how to do things like wash dishes, cook meals or mow lawns.

4.3.6 Should doing jobs be linked to earning pocket money? Give reasons to support your answer.

My parents give me \$5 pocket money each day for doing my chores, which is a good incentive for me to make sure I do them, but I know that there are other parents who do not give any pocket money and teach their children that doing chores is a shared family responsibility and a way for the children to pay for their own upkeep. I think it is the personal preference of the parents as to whether they give pocket money for doing jobs or not.

4.4 Using the scale of 1–15 (where 1 is where you would like a robot to do the chore most, to 15 where you would like a robot to do the chore least) rank these household chores in the order that you would like to give them to a robot helper

Chores are ranked 1–15 on the work sheet.

4.5 Look at your answers for Exercise 4.4 once more. What were the three jobs you were most likely to give to a robot helper? Write your reasons for choosing these in Indonesian.

Pilihan pertama:

Saya ingin sebuah robot membantu saya menyedot debu dengan mesin penyedot, karena pekerjaan ini berat bagi saya dan membutuhkan waktu dua jam untuk membersihkan seluruh ruangan di rumah.

Pilihan kedua:

Saya ingin sebuah robot membantu saya membersihkan jamban, karena pekerjaan ini sangat menjijikkan terutama karena ada bau dari kamar kecil yang kadang-kadang membuat saya mual.

Pilihan ketiga:

Saya ingin sebuah robot membantu saya memasak makan malam, karena saya tidak pandai masak. Masak membutuhkan waktu yang cukup lama dan setelah masak saya harus mencuci peralatan masak.