

ENGLISH AUDIOPIEDIA  
SUPPLEMENTARY MATERIALS

I AM AVAILABLE FOR YOU IN YOUR DIFFICULT TIMES

A. IDENTIFICATION

Code	:	14/EAP/X SMA
Theme	:	Technology
Subtheme	:	Medical Technology
Social Function	:	To describe the characteristics of ventilators
Grade	:	Grade X Senior High School

B. KEY VOCABULARY

breathe (verb1)	:	bernafas
insufficiency (noun)	:	ketidakcukupan
lung (noun)	:	paru-paru
treatment (noun)	:	perawatan
perform (verb1)	:	melakukan
insert (verb1)	:	memasukkan

C. MONOLOGUE SCRIPT

Are you a patient who is physically unable to breathe? Or does a family member suffer from breathing problems? Don't be too worried because I am available for you and your family during your difficult times.

I am a machine called a ventilator. I can provide mechanical ventilation by moving breathable air into and out of your lungs to deliver breaths.

I am a modern mechanical ventilator so I am a computerized microprocessor-controlled machine. I am available for treatments to help you or your family breathe when you find it difficult or are unable to breathe on your own. I can push airflow into your lungs to help you breathe. Normal breathing consists of an average tidal volume or VT of 5 millilitres per kilogram but my mechanical ventilations can occur at a VT of 10 millilitres per kilogram.

I can perform invasive ventilation while my friend, the noninvasive ventilator, can perform noninvasive ventilation. My mechanical ventilation is performed with a tube inserted into the airways. I am mostly used in the intensive care units at hospitals. Unlike me, my friend, the noninvasive ventilator, can be used at home by people with respiratory difficulties. My friend is often used in home care.

Do you want to know about my parts? As a ventilator machine, I have a compressible air reservoir, air and oxygen supplies, a set of valves and tubes, and a disposable or reusable "patient circuit". I am equipped with monitoring and alarm systems for your related parameters, including pressure, volume, and flow, and ventilator functions, including air leakage, power failure, and mechanical failure. I also have backup batteries, oxygen tanks, and a remote control.

I am electronically controlled by a small embedded system to allow exact adaptation of pressure and flow characteristics for your needs. Fine-tuned ventilator settings also serve to make ventilation more tolerable and comfortable for you or your family member.

I really hope that you never have to use me. However, if you do have difficulty in breathing and your doctor advises you to use me, I'm ready to help you.

Adapted from: <https://en.wikipedia.org/wiki/Ventilator> and [https://www.medicinenet.com/different\\_types\\_of\\_mechanical\\_ventilation/article.htm](https://www.medicinenet.com/different_types_of_mechanical_ventilation/article.htm)

#### D. EXERCISES

Task 1: Explore

Answer these questions based on the talk.

1. What is the purpose of the speaker?
  - A. to explain the history of ventilators
  - B. to retell the experience of using a ventilator
  - C. to persuade listeners to use a ventilator
  - D. to describe the characteristics of a ventilator
  - E. to inform listeners about how to choose the right type of ventilator
2. The speaker said, "I can provide mechanical ventilation by moving breathable air into and out of your lungs to deliver breaths."  
What does the word "deliver" mean?

- A. send
  - B. save
  - C. keep
  - D. produce
  - E. transfer
3. What is the first part of the talk about?
- A. the different types of ventilators
  - B. the definition of a ventilator
  - C. how a ventilator works
  - D. the development of ventilators
  - E. the need for ventilators

Key Answer

- 1. D. to describe the characteristics of a ventilator.
- 2. D. produce
- 3. B. the definition of a ventilator

Task 2: Explore

Answer the following questions.

1. How is the speaker likely to affect listeners who have a family member with breathing difficulties?
- A. They will ask doctors about the benefits of a ventilator.
  - B. They will agree with the doctor's suggestion to use a ventilator.
  - C. They will search for information about ventilators online.
  - D. They will post the information about ventilators in their social media.
  - E. They will tell other people about the need for a ventilator for a family member.
2. The speaker said, "I am a modern mechanical ventilator so I am a computerized microprocessor-controlled machine."
- What can we conclude from this sentence?
- A. A modern ventilator is not a machine that uses a computer.
  - B. A computer can be used to control a modern ventilator.
  - C. A modern ventilator can control a microprocessor that uses a computer.
  - D. A modern ventilator is operated by a microprocessor that uses a computer.

- E. Only a modern ventilator machine can perform mechanical ventilation.
3. How is an invasive ventilator different from a noninvasive ventilator?
- A. An invasive ventilator can be used at home while a noninvasive ventilator can only be used at the hospital.
  - B. An invasive ventilator can help a patient breath while a noninvasive ventilator cannot help the patient breath.
  - C. An invasive ventilator is controlled by a computer while a noninvasive ventilator is controlled by a microprocessor.
  - D. An invasive ventilator uses a tube inserted into the patient's airway while a noninvasive ventilator does not use a tube.
  - E. An invasive ventilator cannot perform mechanical ventilation while a noninvasive ventilator can perform mechanical ventilation.

#### Key Answer

- 1. B. They will agree with the doctor's suggestion to use a ventilator.
- 2. D. A modern ventilator is operated by a microprocessor that uses a computer.
- 3. D. An invasive ventilator uses a tube inserted into the patient's airway while a noninvasive ventilator does not use a tube.

#### Task 3: Apply

Answer these questions.

- 1. Which group of words is similar in meaning?
  - A. expect, hope, want, think
  - B. insert, put, install, take out
  - C. remote, close, far away, nearby
  - D. average, normal, extraordinary, special
  - E. difficulties, troubles, obstacles, problems
  
- 2. Which topic is most suitable for continuing this talk?
  - A. origin of ventilators
  - B. invention of ventilators
  - C. development of the modern ventilator
  - D. places where ventilators are mostly used

E. popularity of ventilators among the medical world

Key Answer

1. E. difficulties, troubles, obstacles, problems
2. C. development of the modern ventilator

Task 4: Present

Listen to the audio and do the following activities. You may choose the ones that you like most or the activities that your teacher assigns to you.

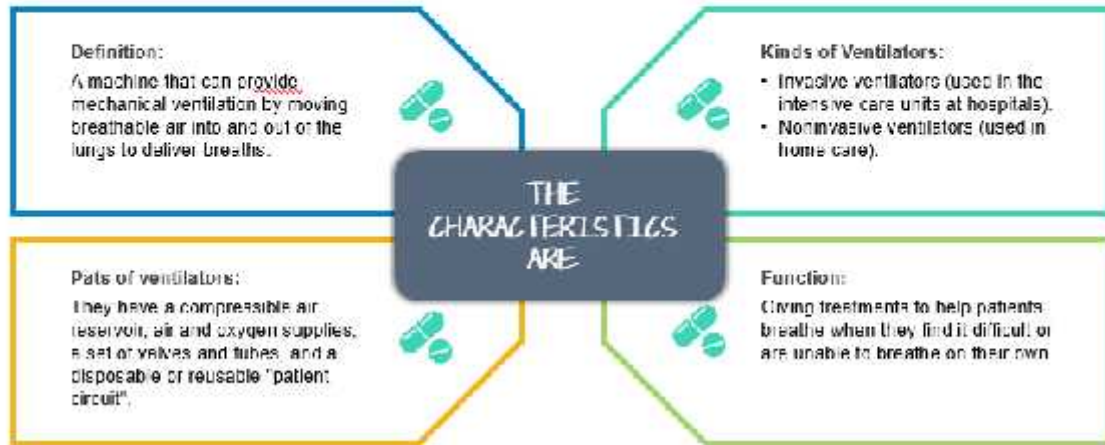
1. After listening to the talk, please explain what you understand about ventilators. You may use simple sentences in your own words.
2. If one of your family members has breathing difficulties, what would you possibly do?
3. Make an infographic consisting of the characteristics of a ventilator.

Key Answer

Following is an example of the answer:

1. A ventilator is a medical device to help patients who suffer from breathing difficulties. There are invasive and noninvasive ventilators. An invasive ventilator uses a tube which is inserted into a patient's airways. It is mostly used in hospitals. A noninvasive ventilator does not use a tube. It can be used at home for home care.
2. Consult a doctor whether it is possible to use a ventilator to help a patient's breathing difficulties.
3. Following is an example of a mind map that is based on the information in the text.

# VENTILATORS



## E. REFERENCES

<https://en.wikipedia.org/wiki/Ventilator> (2020). Ventilator. Diakses tanggal 16 April 2020.

[https://www.medicinenet.com/different\\_types\\_of\\_mechanical\\_ventilation/article.htm](https://www.medicinenet.com/different_types_of_mechanical_ventilation/article.htm). (2020). What Are the Different Types of Mechanical Ventilation?. Diakses tanggal 18 April 2020.

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