



# 01. TECHNOLOGICAL SYSTEMS

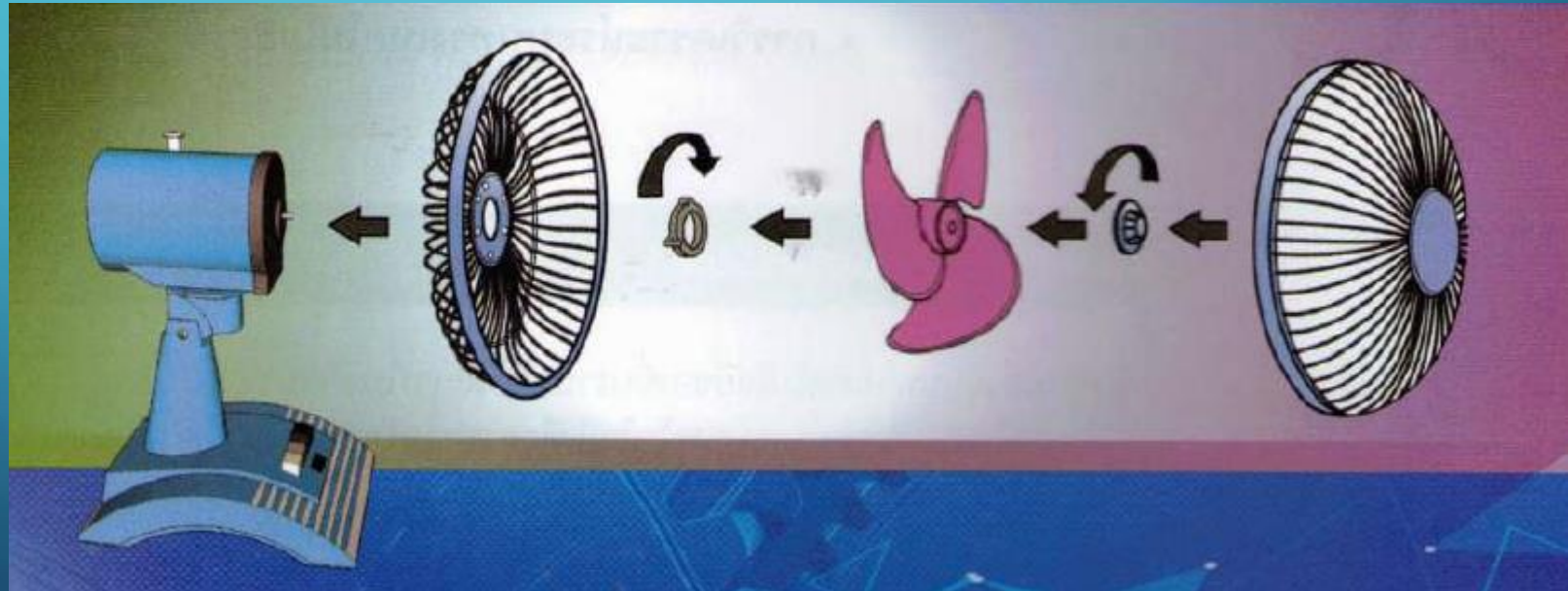
M1U3P1 DESIGN AND TECHNOLOGY

WHAT IS THIS?



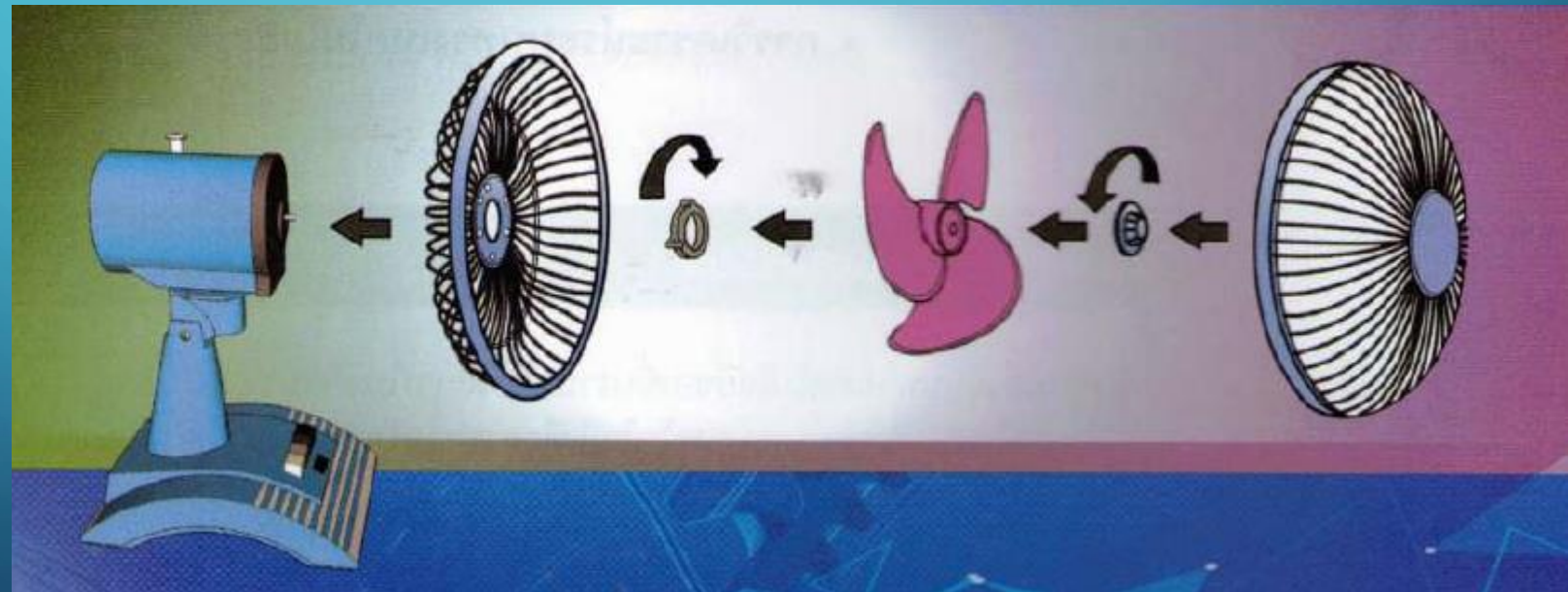
# FAN SYSTEM

- If we carefully analyze the fan we will see that the fan consists out of many parts or components
  - Metal casing
  - Fan
  - Motor
  - Wires
  - Stand



# FAN SYSTEM

- If we carefully analyze the fan we will see that the fan consists out of many parts or components
  - What parts do we have?



# FAN SYSTEM

- Sometimes there will be a problem with the fan, and the reason for that can be:

WHAT?



engdict.com  
by Pawano Book

# FAN SYSTEM

- Sometimes there will be a problem with the fan, and the cause can be
  - We didn't plug it in
  - Motor doesn't work
  - Some electronic is broken...
- All of the components have to work correctly so that the device or machine can do it's job effectively

# WHAT DOES THIS MEAN?

- All of the components have to work correctly so that the device or machine can do it's job effectively



# WHAT DOES THIS MEAN?

- All of the components have to work correctly so that the device or machine can do it's job effectively



# FAN SYSTEM

- If we can understand the technological system and how it works it will help us to analyze and find the cause of the problem
- If we take care of our device/machine we can improve it's lifespan and it's efficiency will not decrease after some time

I really like using my device, so I need to make sure that I take good care of it.



**Correct**



**Incorrect**





# WHAT IS A SYSTEM?

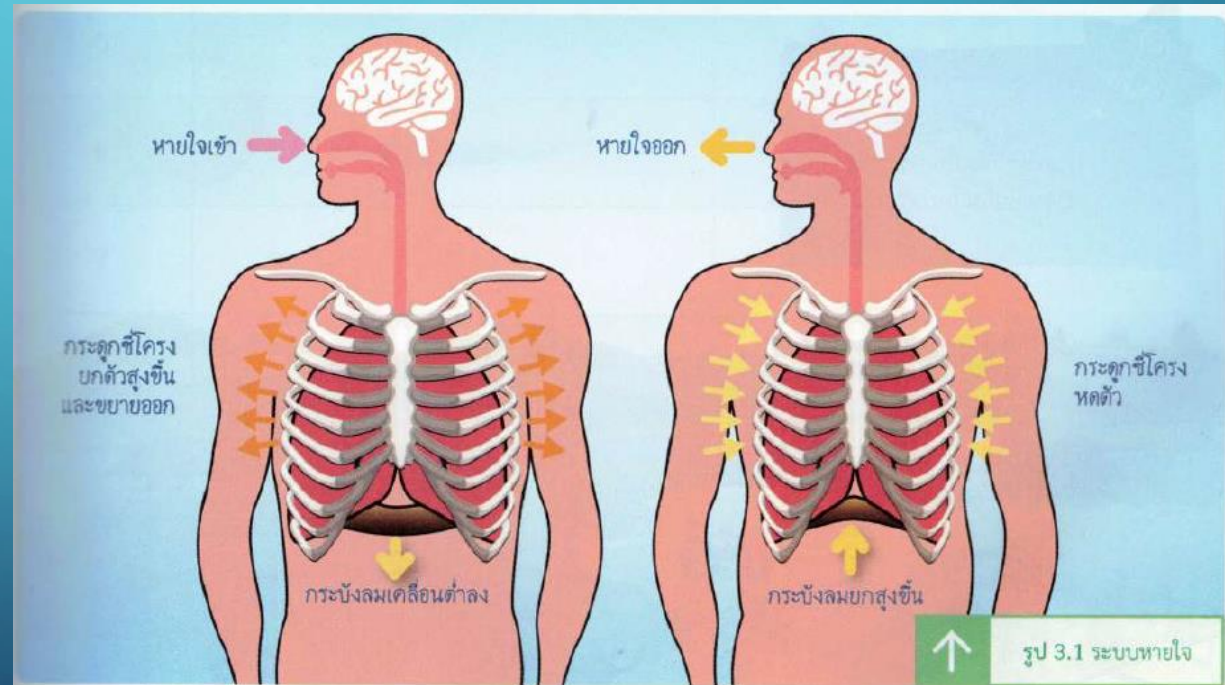
# WHAT IS A SYSTEM?

- A system is a unity of two or more components that work together to achieve the same objective
- We have two types of systems
  - Human system
  - Natural system



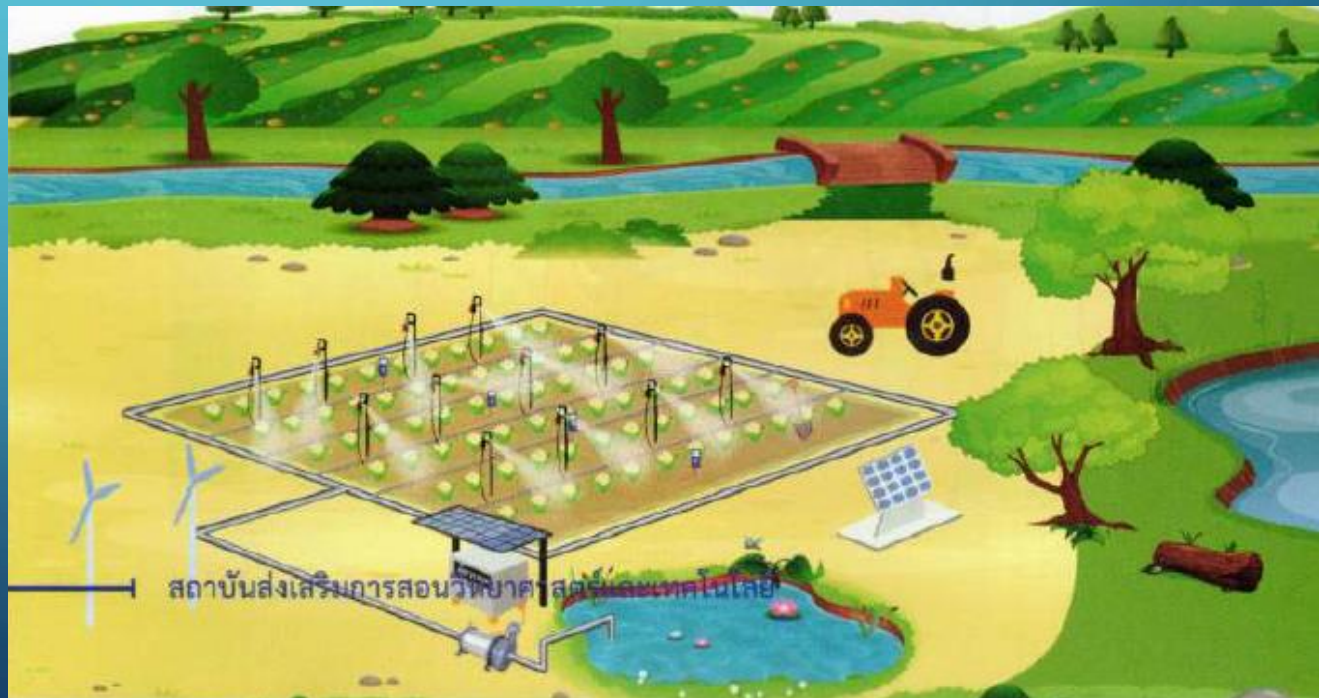
# NATURAL SYSTEM

- Natural systems are those systems that we can find in nature
- Example:
  - Trees producing oxygen
  - Human breathing system
  - Our immune system



# HUMAN MADE SYSTEMS

- Human made systems are systems that we humans made
- They were mostly made to fix a problem or some of our needs
- Example:
  - Electric trains
  - Cars
  - Plant watering system



# TECHNOLOGICAL SYSTEM

- Technology is invented to fix our problems or help our needs
- Technology helps us do some activity or work more easier, better and more efficient
- For technology to work we need different components that are working together for the same objective, which means we it needs to work as a system, **a technological system**

# TECHNOLOGICAL SYSTEM

- Technological system is a group of two or more parts that are working together to achieve the common objective
- Technological system has elements such as **input, process, output** and **feedback**
- They all work together in a unity



# TECHNOLOGICAL SYSTEM

- **Input** – is something that is put in, taken in or operated on by any process or system
- **Process** – some kind of work, activity or operation that the system performs to achieve the objective
- **Output** – result from the systems process, it can also be a waste that is made from the process
- **Feedback** – data that is used to control and regulate the system in order to achieve the objective

ตัวป้อน (input)  
(แรงถีบบันได)

กระบวนการ (process)  
(การหมุนของจาน โซ่  
ล้อของจักรยาน)

ผลผลิต (output)  
(จักรยานเคลื่อนที่)



จานหลัง โซ่ บันได จานหน้า

ข้อมูลย้อนกลับ (feedback)  
(ความเร็ว)

ตัวป้อน (input)  
(แก๊สหุงต้ม ประกายไฟจุดน้ำ)

กระบวนการ (process)  
(การทำงานของเตาแก๊ส)

ผลผลิต (output)  
(เปลวไฟ ความร้อนบนหัวเตาแก๊ส)



↑ รูป 3.5 ระบบทางเทคโนโลยีของเตาแก๊ส

# กระบวนการ (process)



รูป 3.6 การบำบัดน้ำเสีย



ANY QUESTIONS?



# WORKSHEET



THE END