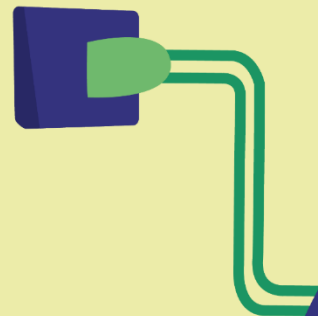


**Sustainable**  
**Development**  
**Goals**

# Lesson 17

## Goal 9 – Industry, Innovation and Infrastructure (1)

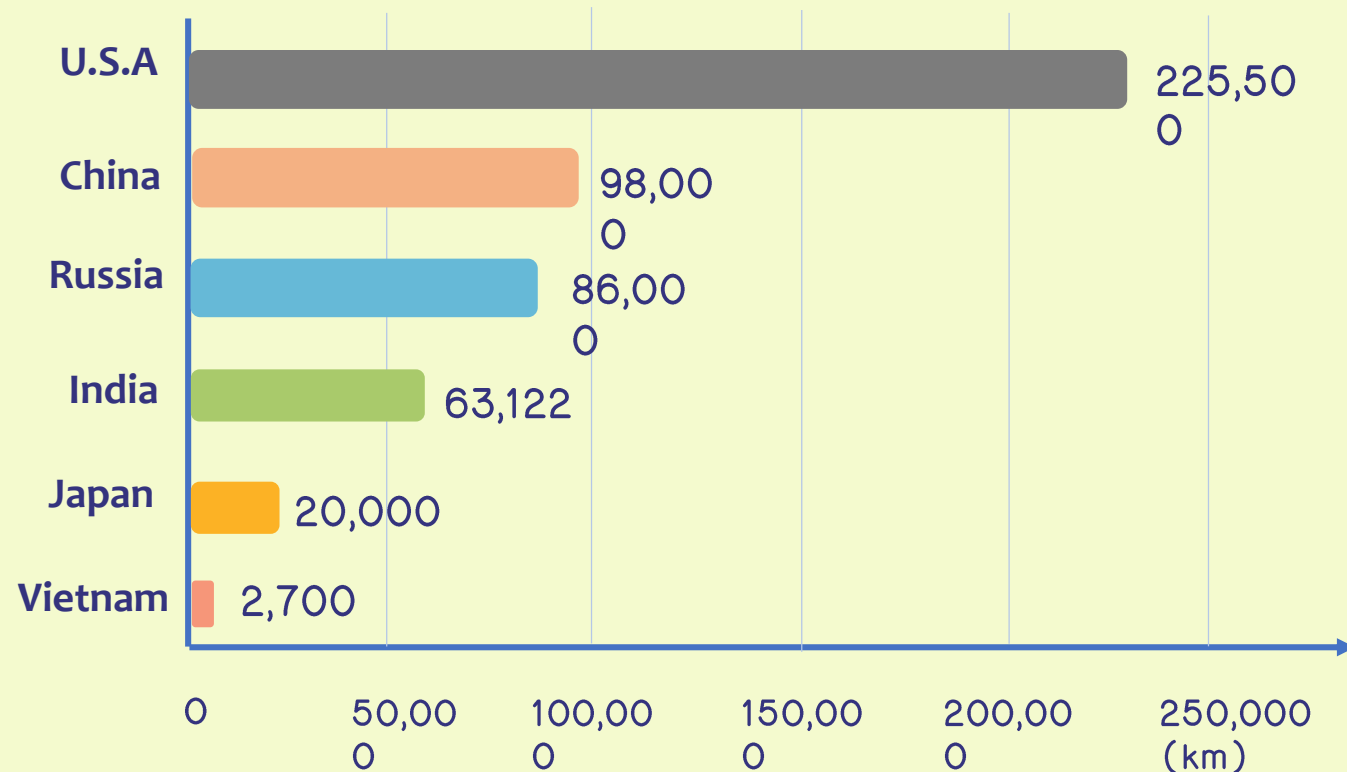




## Think and Answer

1. Look at the chart, which country has the longest total railway length and which country has the shortest railway length?

2. Why there is such a gap and what conclusion can you draw?



The Total Railway Length in Different Countries



# Words to Know

Read the sentences and answer the following questions.



Many developing countries have poor **infrastructures**.

\*How is the infrastructure in your country?



Workers **maintained** old equipment in the railway station to improve safety.

\*Do you think it's necessary to maintain the old equipment, why?

The country made an **investment** in heavy industry.

\*Which industry does your country invest more?



**Intelligent** control system is widely used in railway system.

\*What are the benefits of using intelligent control system?





## Infrastructure

**Infrastructure** provides the basic needs to society. It can include public services like railway system. Nowadays, the development of railway system is unequal in different countries, especially in the developing countries.

In Vietnam, the railway system now has the total length of about only 2700km. Due to financial reasons, Vietnam's **investment** in railway is very limited, so the railway development is very slow.



The Philippines has less advanced and **intelligent** railway system. Therefore, the Government is still working to improve the railway system and develop effective policies for the infrastructure and operation of railway lines.

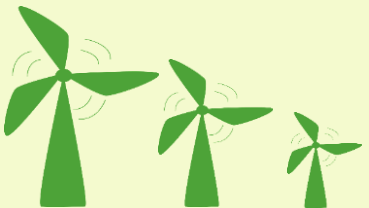


# Reading



China has built a high-speed rail network and is continuing to expand it rapidly. China's high-speed railways use newer and more advanced technologies, which makes travel and transport much faster, safer and more convenient.

In Japan, underground traffic has covered many major cities such as Tokyo and Osaka. Japan's railway network is about 20 000 km long. Japan's rail problem is how to **maintain** or replace the old railway systems which exist so many years. Therefore, the Japanese government is working to provide more intelligent railway systems and better travel experience for people.





# Respond to Reading

Read the railway status and match them with the corresponding countries.

1. The Philippines

2. Vietnam

3. Japan

4. China

a. The country doesn't invest too much in railway system, so the railway development is very slow.

b. The country is still working to develop more advanced and intelligent railway system.

c. The speed of the railway in this country is very fast. The advanced technologies are used in the country's railway system.

d. The government is working to maintain the old railway systems and provide better travel experience for people.



## Read the Sustainable Development Goals from United Nations.

### Sustainable Development Goals

#### Goal 9 – Industry, Innovation and Infrastructure



1. By 2030, develop quality and sustainable infrastructure to support economic development and human well-being.
2. By 2030, enhance scientific research in industrial sectors in all countries.
3. By 2030, increase access to information and communications technology.

### Deeper thinking after class:



What should countries do to improve the railway system?

Is it necessary to have an international cooperation to enhance technology exchange?



**Task :** Do research and collect the railway data of your own country in your preview paper.