



# Current. Ammeter.

- 1) revise theme current sources, construction and principle of work of the current source
- 2) know the meaning of current
- 3) make electric circuit experimentally and using symbols



# Translate into English:

| Electric current               | Электрический ток                 | Электр тоғы               |
|--------------------------------|-----------------------------------|---------------------------|
| Direction of electric current  | Направление электрического тока   | Электр тоғының бағыты     |
| Electric circuit               | Электрическая цепь                | Электр тізбегі            |
| Direct and alternating current | Постоянный и переменный ток       | Тұрақты және айнымалы тоқ |
| Effect of electric current     | Действие электрического тока      | Электр тоғының әсері      |
| Switch                         | Ключ                              | Кілт                      |
| Bulb                           | Лампочка                          | Қыздырушы шам             |
| Ammeter                        | Амперметр                         | Амперметр                 |
| Cell                           | Гальванический элемент.           | Гальвани элементі         |
| Conducting wire                | Провод                            | Сым                       |
| Battery                        | Батарея                           | Батарея                   |
| Electric charge                | Электрический заряд               | Электр заряды             |
| Coulomb (C)                    | Кулон (Кл-един. измерения заряда) | Кулон                     |
| Sources of current             | Источники тока                    | Ток көзі                  |

# Questions:

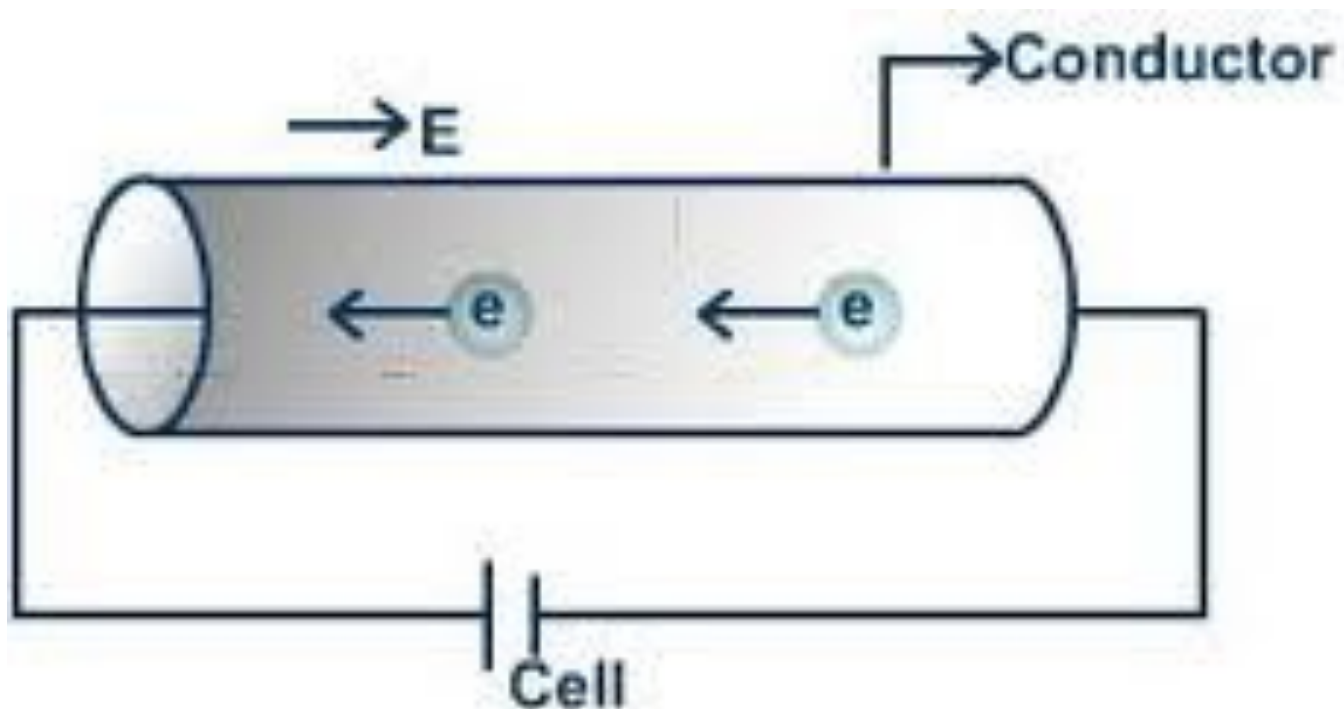
◆ Who said the term  
“electric current”  
for the first time?

André-Marie  
Ampère  
(20 January 1775 –  
10 June 1836)



## Current - Сила тока (I, A)

**Current is the amount of charge passing through a point in the circuit in one second.**



# Current

$$I = \frac{q}{t}$$

**I – Current (A)**

**q – Charge  
(C)**

**t – time (s)**

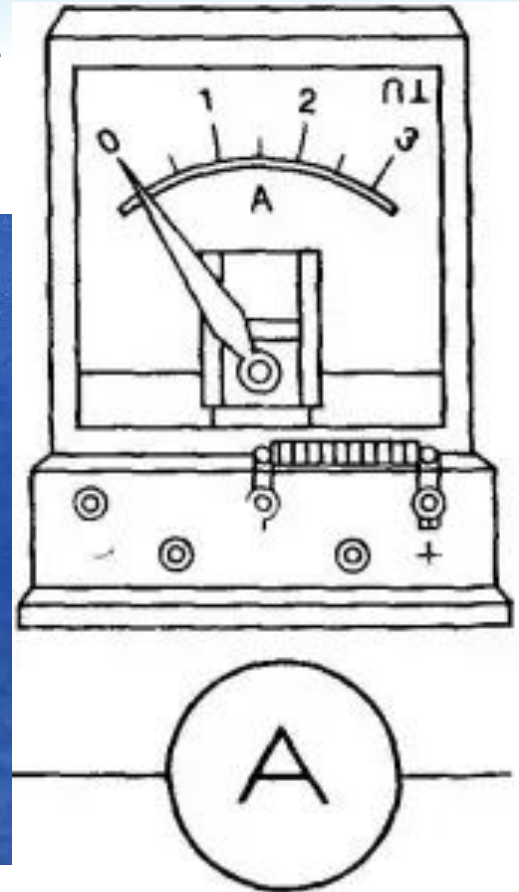
# Units of current

$$1 \text{ Ampere} = \frac{1 \text{ Coulomb}}{1 \text{ second}}$$

**Caution!**  
**1A is dangerous for life!**

# Ammeter (Амперметр)

Ammeter is the device for measuring current



# Problem solving

A charge of  $3.6 \times 10^4 \text{C}$  passes through a bulb in 1 hour. What is the current passing through the bulb?

a

**10A**

b

**3.6A**

c

**7.2A**



# Practice:

1

Find current in electric bulb , if electric charge of 300C travels through it during 10min.

2

What charge will travel during 3min through ammeter if current is 0.2A?

3


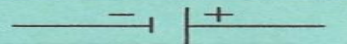
Current is 200A. What is the time the charge of 60000C travels through it?

4


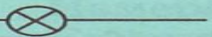
Current in the iron is 0.2A. What charge will travel through it during 5 min?

# Symbols of electric device or Electric elements



**Источник тока**

**Лампа**

**Ключ**

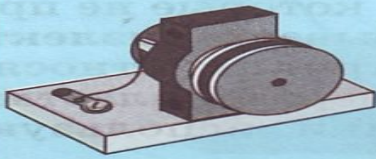
**Соединительные провода**




**Зажимы электрической цепи**




**Электродвигатель**




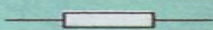

**Катушка с сердечником**



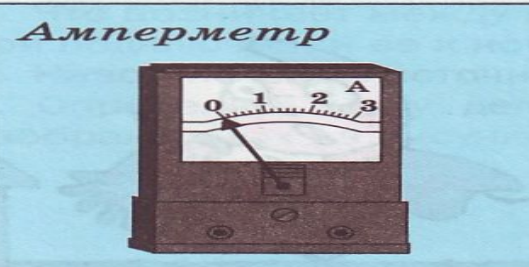


**Электрозвонок**



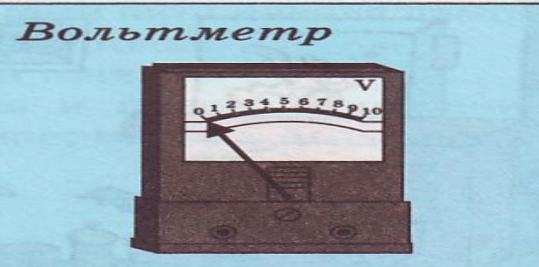


**Резистор**

**Амперметр**

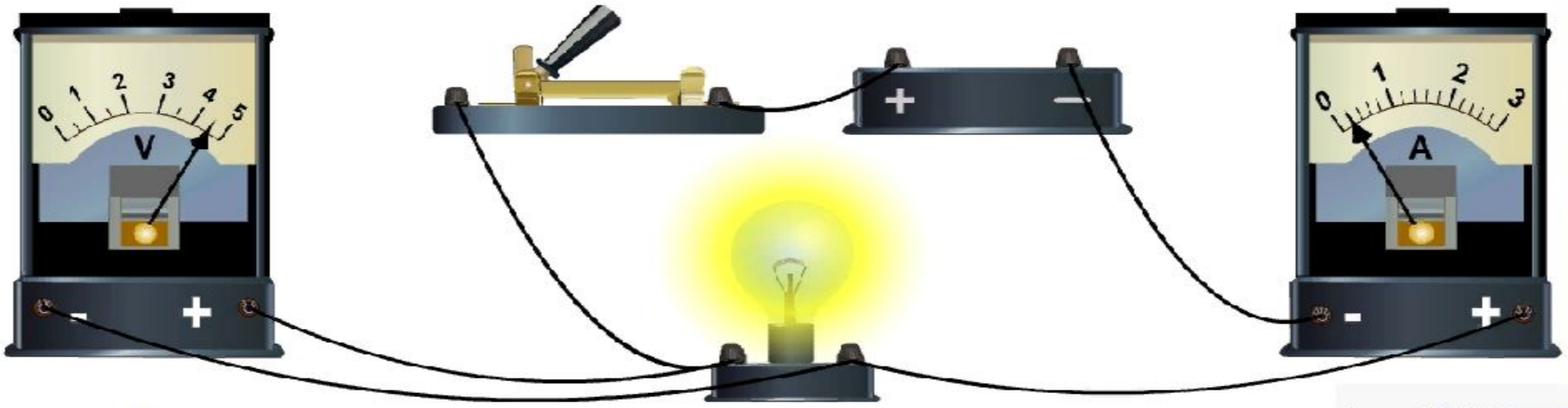
**Вольтметр**

Draw an electric circuit diagram of this pictures:



# Подключение вольтметра

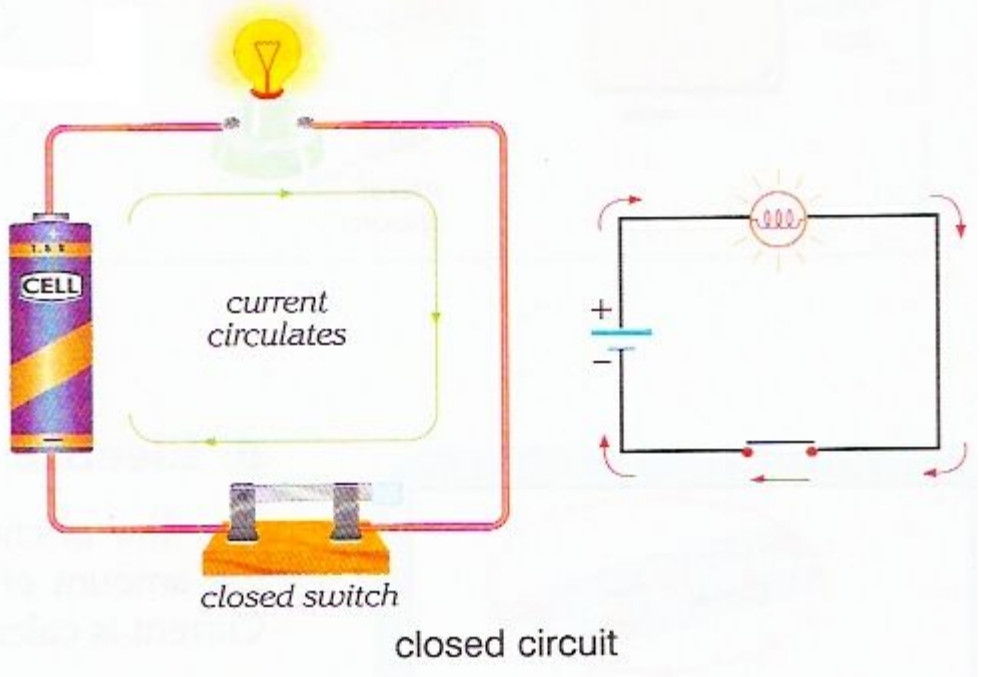
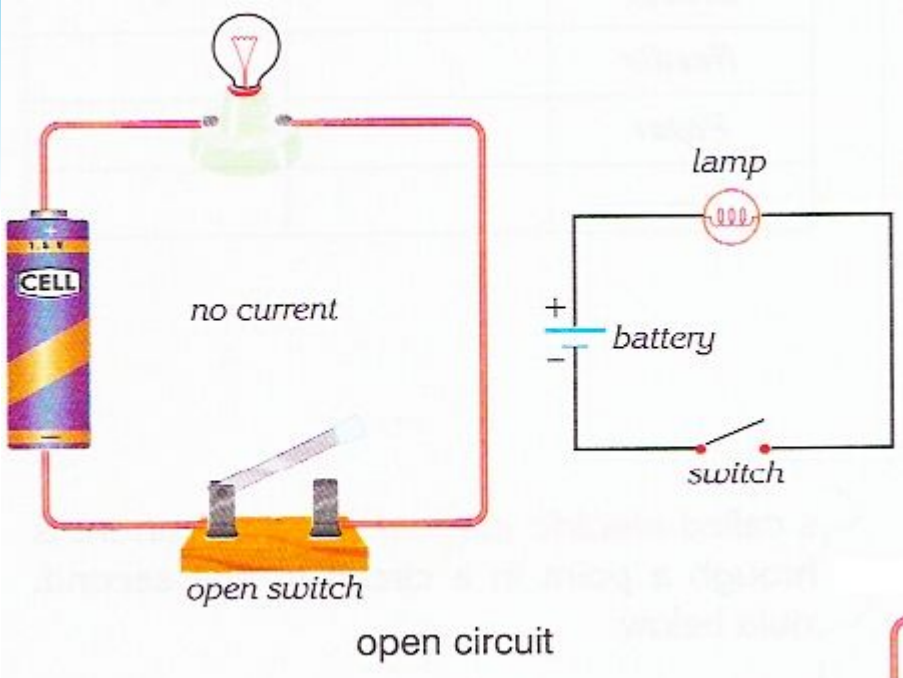


# Make a circuit:

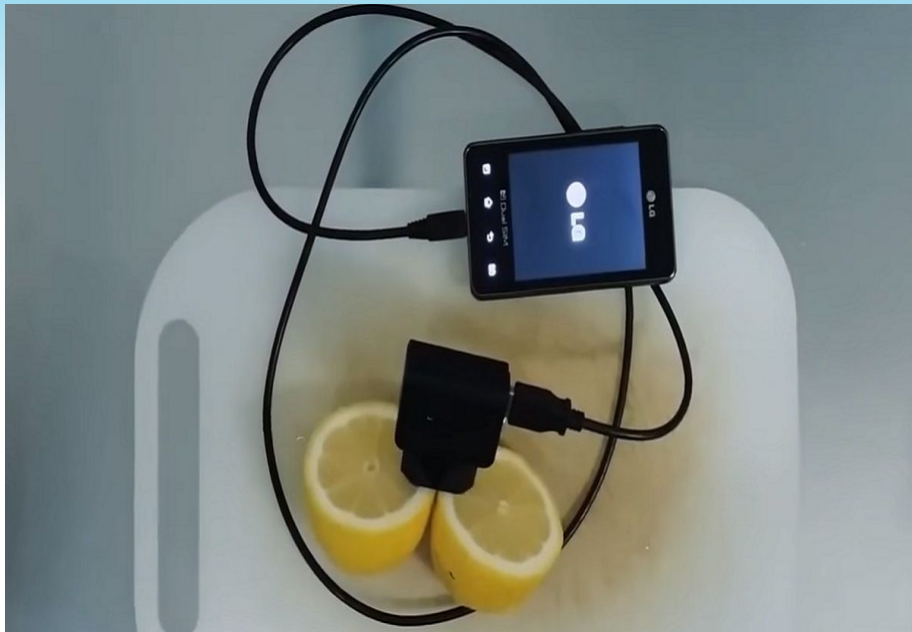
## Make a circuit:

Draw a circuit into the exercise-book,  
Write down

**I = ...**



# Alternative energy sources



**ФОНАРИК ИЗ КАРТОФЕЛЯ**  
**В ПОИСКАХ АЛЬТЕРНАТИВНЫХ**  
**ИСТОЧНИКОВ СВЕТА**

**VILED®**

# Feedback:



I didn't like  
the lesson



I didn't understand  
anything and was  
waiting  
the end of the  
lesson



I understood  
everything.  
I liked the  
lesson.



**Thank You !**

