



# 11-12 YEARS | WEEK 26

## Science-Physics Concepts

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1. Lemon Car

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2. Purification of Water

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3. Machines

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4. What is the matter?

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5. Tool in a box

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6. Chemistry - Atoms

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7. Chemistry - Matter

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8. Chemistry - Change in state

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9. Chemistry - Density

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10. Chemistry - Mixture and solution

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11. Choose and write

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12. Electrical - Electricity

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13. Electrical - Circuits

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14. Electrical - Circuits in series

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15. Electrical - Circuits in parallel

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16. Electrical - Static Electricity

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17. Choose and write

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18. Choose and write

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19. Choose and write

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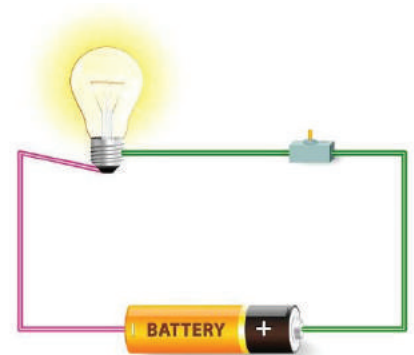
20. Crossword

# Lemon Car

How many lemons does it take to start a car?

We have known for a number of years that the acid found in lemons can be used to generate electricity. But the lemon battery is only 1.5 milliampere. To start a car you need around 100 ampere. Around 66 million lemons are needed to be able to start a car.

However, a few lemons can light a bulb. Can you spot all the 5 words that are hidden in the word gym that you can find in an electric circuit?



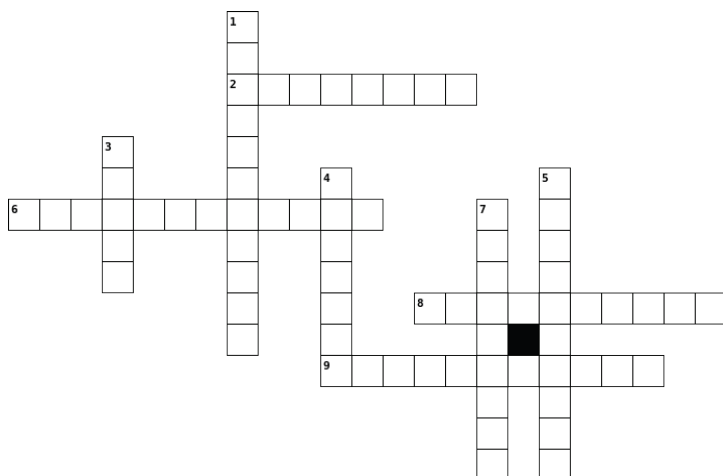
## Answers

1. Ammeter
2. Bulb
3. Cell
4. Relay
5. Switch

# Purification of Water

Did you know? The International Space Station(ISS) is the single most expensive object ever built. The cost of the ISS has been estimated at over \$120 billion. And The electrical systems on the ISS include 8 miles of wire!

When we are this topic, can you answer these questions and complete the crossword?



## Across

- 2 \_\_\_\_ is added to the water of the swimming pool as a mild disinfectant  
 6 During the process of \_\_\_\_\_ the impure liquid is first heated to form a vapor which is then condensed into a pure liquid by cooling  
 8 Substances that makes water unfit for drinking are called \_\_\_\_  
 9 The process of converting liquid into its vapor by heating

## Down

- 1 The process of transferring the clear liquid after sedimentation without disturbing the sediment  
 3 Universal solvent  
 4 Impurities can be removed by evaporation  
 5 Removing of impurities using filter paper  
 7 In water cycle, sun helps water to \_\_\_\_

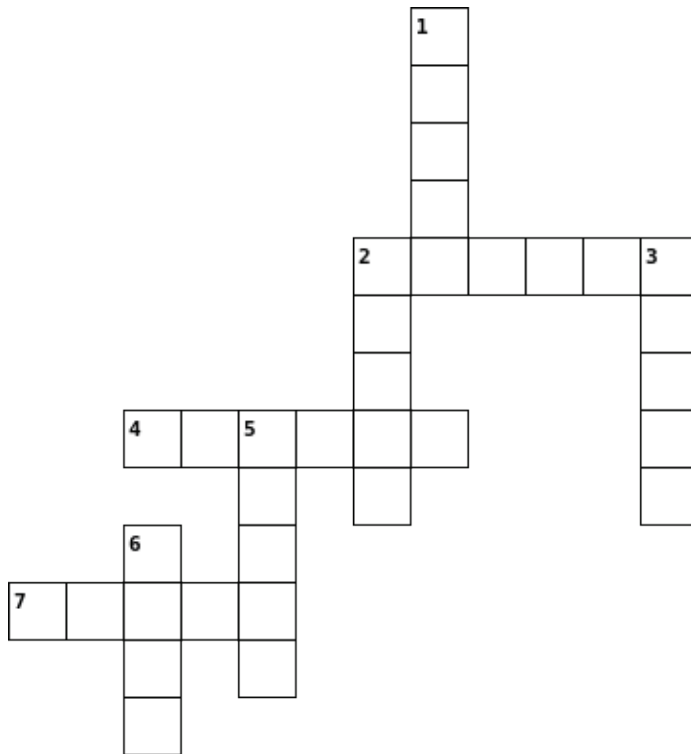
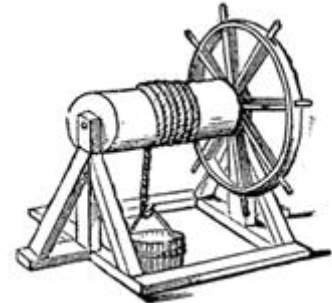
Answer

1 Decantation	3. Water	5. Filtration	7. Evaporate	9. Evaporation
2 Chlorine	4. Soluble	6. Distillation	8. Impurities	

# Machines

Machines are tools that make work easier. They allow the use to accomplish more work while expending less energy. One of the most important reasons Humans have become the most successful species on Earth is due to the mastery of tools and machines

Try and complete the below crossword related to machine using the hints provided below



## Across

- 2 Example of a lever
- 4 Made up of wheel and rope
- 7 Example of Pulley

## Down

- 1 Example of Wedge
- 2 Inclined plane wrapped around a rod
- 3 Pushes two things apart
- 5 A bar that pivots or turns on a fixed point
- 6 Example of an inclined plane

## Answers

1 Knife 2A Sawsaw 5 Lever 4 Pulley  
3 Wedge 2D Screw 6 Ramp 7 Crane

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