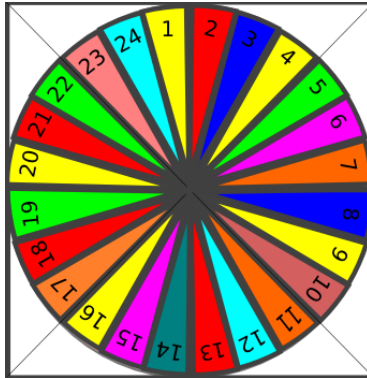


The wheel of Technology



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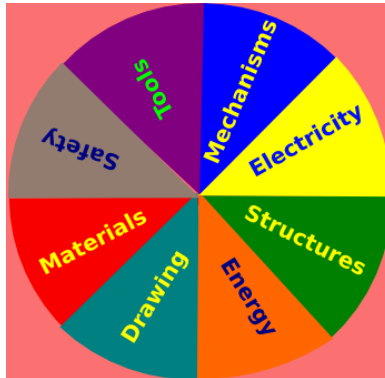
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General Knowledge



Tools

- 1 What tool would you use to remove a nail from a piece of wood?
- 2 Identify the tool of the picture
- 3 What is a drilling tool?
- 4 List at least two different types of screwdrivers
- 5 How can you injure yourself when using a hammer?
- 6 What are the difference between a file and a rasp?
- 7 Draw three different tools you know

Mechanisms

- 1 What simple machine would you use to raise a barrel (pushing it)?
- 2 How many lever classes do you know?
- 3 List two different class 1 levers
- 4 List two different class 2 levers
- 5 List two different class 3 levers
- 6 Draw a compound pulley used to lift a heavy weight
- 7 What mechanism could be used to lift a bucket out of a well?
- 8 What mechanism uses the car steering?

Structures

- 1 Identify the monument shown in the picture
- 2 Indicate an example of a mass structures
- 3 What sort of structure can we see in a pylon?
- 4 Draw an example of suspension structure
- 5 List five different types of structures
- 6 What type of structure has the building we are now inside?
- 7 Why trussed structures are so rigid?
- 8 What materials can be use to make pillars?
- 9 Draw a frame structure with pillars, beams and joists

Drawing

- ❶ What are the angles we find in the set squares?
- ❷ Use the set squares to draw an 105° angle
- ❸ Use the set squares to draw two perpendicular lines
- ❹ Use the Lego blocks to reconstruct the figure according to the views
- ❺ Use the isometric template to draw a shoe box
- ❻ What scale would you use to draw your classroom on a A4 paper?
- ❼ Name the main views (orthographic projections) of an object
- ❽ Draw the main views of the object shown

Energy

- ❶ What unit we use to measure energy?
- ❷ How do we call the industrial facilities where electricity is produced?
- ❸ Name three different types of power station plants
- ❹ How do we call the element that rotates in a power station using the energy of water, wind, etc?
- ❺ What types of electric current do you know?
- ❻ How do we call the machine that produces the rotation of a shaft using electricity?
- ❼ Name two types of renewable energies
- ❽ Name two types of non renewable energies

Materials

- ① What material would you use to make a garden house for dogs?
- ② What material would you use to make a spoon?
- ③ Name three different pure metals
- ④ What is brass?
- ⑤ How can bronze be made?
- ⑥ What material would you use to make a scarf?
- ⑦ Name three examples of natural hardwood
- ⑧ Why is golden so valuable?
- ⑨ What material would you use to make a tuna tin?
- ⑩ Which material is heavier, lead or titanium?

Safety

- ① Identify the hazards you see in the picture
- ② List two safety rule for the technology workshop
- ③ What you are supposed to do when the Technology class is over?
- ④ What are the risks of playing with the tools?
- ⑤ What do you have to do before using a power tool?
- ⑥ What could happen if you ran through the workshop when your classmates are still working?
- ⑦ Draw a sign meaning *Be careful: you can slide*
- ⑧ Draw a sign meaning *No running*
- ⑨ Draw a sign meaning *You must use gloves*

Electricity

- ① What physical magnitude and unit we use to measure the quantity of electricity that flows through a wire?
- ② Write the Ohm's Law
- ③ What is the voltage if the resistance $R = 10 \Omega$ and the current intensity $I = 20 A$?
- ④ List three electricity conductors and three insulators
- ⑤ What is the voltage of a car battery?
- ⑥ Draw a circuit with a battery and a motor in series with a lamp
- ⑦ Draw a parallel circuit with two resistors
- ⑧ How do you call the electric mechanism used to turn on/off the light?

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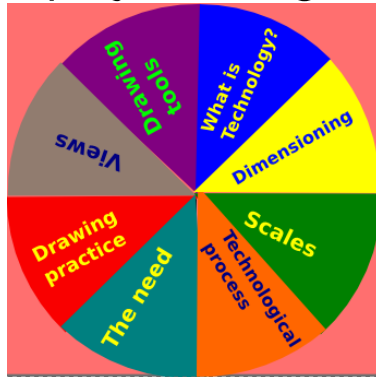
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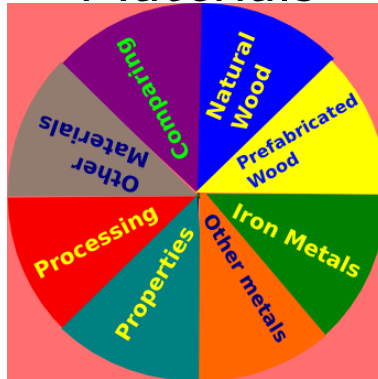
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