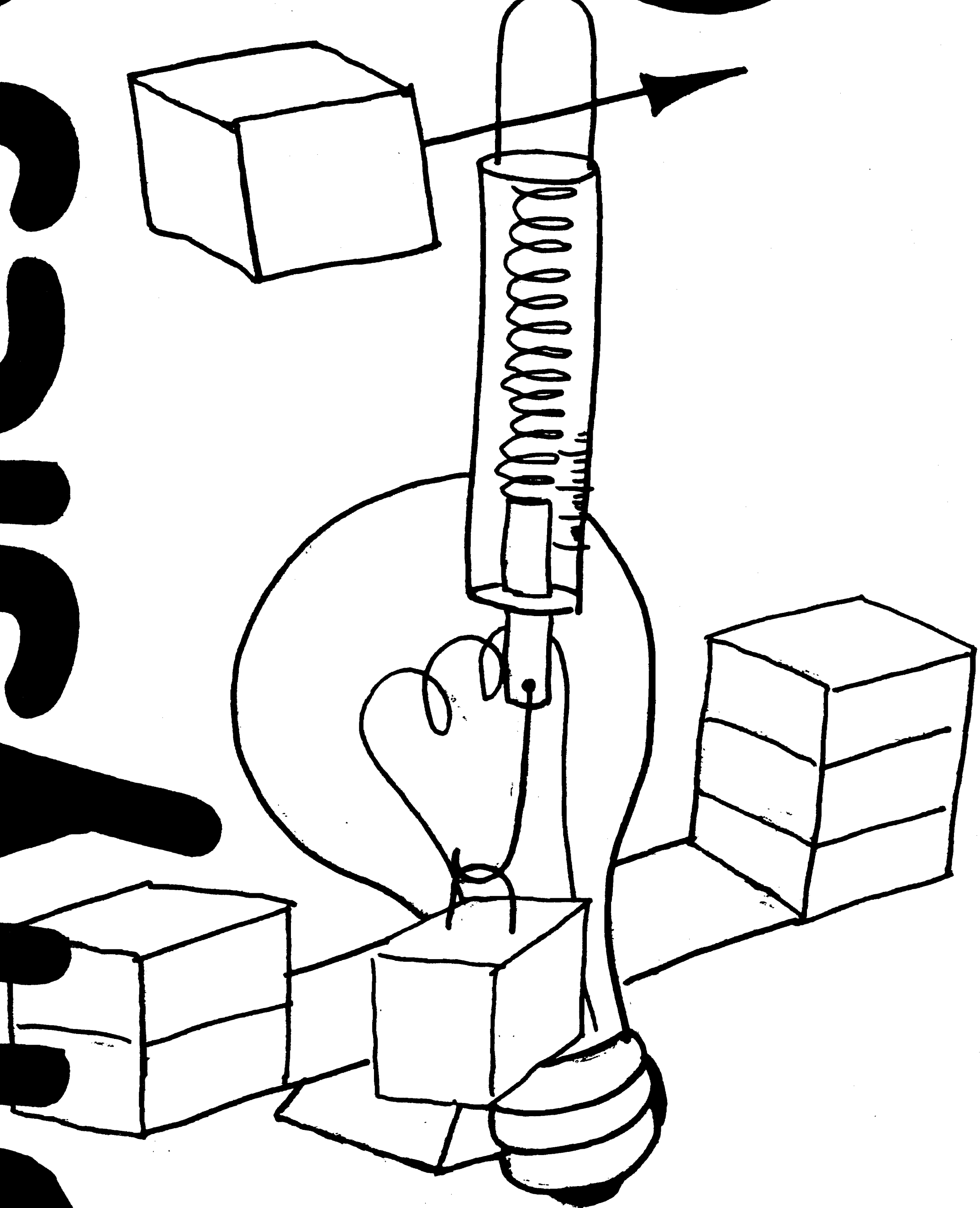
physics

grade 8



grambo

Mr Grambo

Physics-

Materials List

Your group is responsible for all materials in your box. Keep them neat and clean. report missing materials to your teacher.

- Spring Scale
- Spring
- Ruler
- Tape Measure
- Weights
- Fulcrum
- Beam (Balance)
- Pulleys
- Rope
- Box or Bag of assorted materials
- Wood Blocks
- Wood Block with wheels
- Sample wood blocks
- ramp
- Flashlight

Assorted Materials

- Paper Bag
- Sandpaper
- metal bar
- cloth
- wood chips
- string
- nails
- wax paper

Physics

Name_____

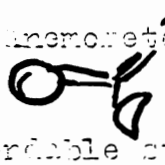
Class___ ___Box No_____

Energy - Experiment 1

Problem- What are different forms of energy?

Hypothesis- Why do you burn in the sun? Why do you get a shock when you walk on a rug then touch a metal object?

Materials- Bendable stick, Anemometer, Bulb, Radiometer, flashlight,


Procedure- 1) Look at the bendable stick.

Q-Why is this stick able to bend?

Q- Why can you bend your arm at the elbow?

Q-Why don't the two sticks fall apart?

Q-Why don't the two sections of your arm fall apart?

Q-Why are the parts of your body made so they can bend?

Q-You just played a baseball game and now you are tired. Why?

Q-Where does your body get the strength to play baseball?

2) Look at the anemometer

3) Blow on it

Q-Why does it turn ?

Q-How will this instrument be affected if I put it outside on a windy day?

Q-How might this instrument help a weather person?

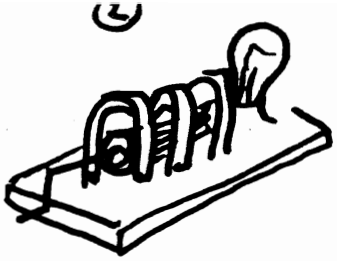
4) Look at the hand generator. Turn handle.

Q-How is the generator like the anemometer?

5) Look at the bulb

Q-How can we get the bulb to light?

Physics - Energy - Experiment 1



6) Turn handle of generator.

Q - Why did this happen to the bulb?

Q - Where did the electricity come from?

7) Look at the radiometer.

Q - Describe how it looks.

8) Blow on it.

Q - Describe what happens to the radiometer.

9) Shine the flashlight on it.

Q - How did the flashlight affect it.

Note - There are many forms of energy. These are only a few.

(chemical energy, light energy, electrical energy, mechanical energy)

I Pick words from above.

Moving your arm or turning the handle of the generator shows us _____ energy.

The amemoter shows us _____ energy.

The radiometer shows us _____energy.

We get _____ energy from a generator.

Food in your stomagh is turned into _____ energy.

II What are some other forms of energy that you know of?

Physics

Name _____

Class _____ Box No _____

Grade 8

Energy- Expenment 2

Problem- How does energy change?

Hypothesis- Where does your energy come from?
Where does electricity come from?

Materials- Paper bag, Generator, flashlight

Procedure- 1) Blow air into a paper bag.
2) Pop Bag

Q-Describe what happened?

Q-Why did this happen?

Q-Where did the energy come from to make this noise?

Q-Did the bag always have the energy to make the noise?

Q-How do you know this?

3) We have a bulb and a hand generator.

Q-How can we make the bulb light?

Q-Where does the energy come from to light the bulb?

Q-What did I have to do in order to make it light?

Q-Why wouldn't you want to touch a bulb after it has been on for a while?

Q-How did the heat get there?

4) As you turn the handle of the generator listen carefully.

Q-Why is it making noise?

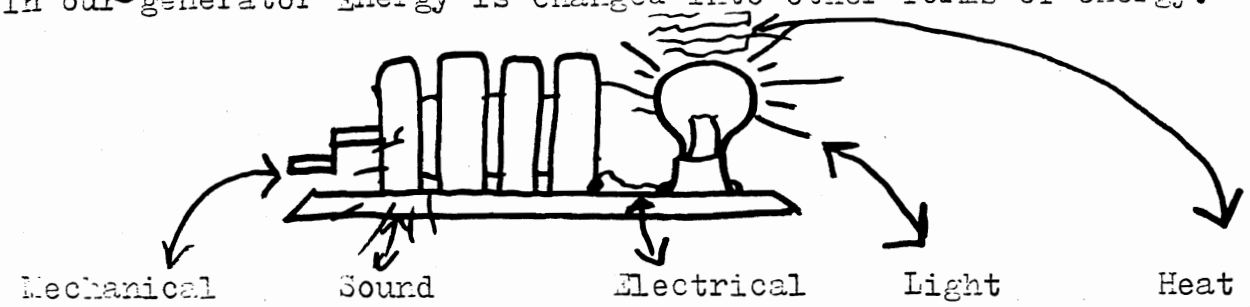
Q-In order to make noise it needs energy. How did it get the energy to make noise?

Q-When you look at a bulb, how do you know it is on?

Q-Where did it get the energy to do this?

Physics - Energy Experiment 2

In our generator Energy is changed into other forms of energy.



Q- Have we created energy anywhere? What happens to it?

Note: When energy changes from one form to another we have ENERGY CONVERSION.

Lets see if this happens all the time.....

5) Look at the flashlight

Q- How does it work?

Q- Why does the bulb light when you do this?

Q- Where does the energy come from?

Q- How does a battery get the energy?

6) Look at the cut open dry cell on the teachers desk.

Q- Describe what you see.

Q- Where does the electricity come from?

Q- Why will the battery go dead if you leave the flashlight on?

Q- What happens to the electricity after it reaches the bulb?

Q- Explain how energy is changed in a flashlight.

Note: There is a rule. We cannot create nor destroy energy. We can store it, use it or change it from one form of energy to another only.

Homework - Read chapter five - Pathways in science
Page 35-40

Answer parts II and III On page 40

1) What do we call stored energy? Energy we use?

Name _____

Class _____ Box No _____

Physics

Energy- Experiment 3

Problem- What happens to energy after it is used?

Hypothesis- Why does an automobile engine get hot?
Why shouldn't you touch a drill bit after it is used?

Materials- Wood block, sandpaper, metal bar

Procedure-

Q-What might happen if you don't put water in an automobile radiator?

Q-Why will this happen?

Q-Why does an auto engine get hot?

Q-Why do some cars get 50 miles per gallon while others only get 20 mpg?

1) There is a roller skate on the teachers desk. Look at it.

2) Spin the wheel.

Q-Why does it stop turning?

Q-Why doesn't it turn forever?

3) Rub your hands together.

Q-How is the mechanical energy of moving your arms being changed?

Q-How do your hands feel?

Q-How can we use this idea to start a fire?

4) Bend the metal back and forth.

Q-How does it feel? Why does it feel this way?

Q-What happens to the mechanical energy of bending?

5) Sand the wood.

Q-Why is the wood getting hot?

Q-Where does the heat come from?

Physics- Energy - Experiment 3 ②

Q- How is the heat helping the sanding, the car engine, your hands, or the bent bar?

Q- Is the heat produced always helpful? How do you know this?

Energy changes from form to form. Some energy changes to light, some to heat. It may not be useful to you, but the energy is never destroyed. Cars are made so that they are not efficient. This means that not all the gasoline is being changed into useful energy. Some gasoline is being changed into non useful energy.

Q- How do you think we can make a car more efficient?

Q- How do you think we can make a roller skate more efficient?

While a car is running, energy is being used. We call this kinetic energy. When it is not on energy is being stored somewhere, so that when you want to use the car the energy is there. Stored energy is potential energy.

Q- Where is energy being stored in the car.

Homework

Q- Finish the chart below. Check weather the instrument uses the heat produced or wastes the heat produced.

	Uses Heat produced	Wastes produced	Uses some wastes some
Toaster			
Electric shaver			
Bicycle Pump			
Fan			
Car			
Sandpaper			

Q- What happens to some energy after it has been used?

Physics
Force and Work- Experiment 4

Name _____

Class ___ Box No _____

Problem- What is force?

Hypothesis- Why do you move if you are pushed?

Materials- Wood block, Piece of cloth

Procedure- 1) Push wood block

Q- Why does the block move?

2) Stop pushing the block

Q- Why isn't it moving any more?

Q- What do I have to do in order to move the block?

3) Look at your box

Q- How can I get it to move without pushing it?

Q- How might a rope help us?

Q- Why would it move easier if it where on wheels?

Q- What are two different things you can do to cause an object to move across the table?

4) Write your name on a piece of paper.

5) Make your name darker.

Q- What did you have to do in order to make it darker?

Q- Why did you have to do this?

Note: When we _____ something or _____ something we are applying a FORCE to it. A FORCE causes something to move.

6) Pick up the piece of cloth.

Q- How can we tear it?

7) Tear it

Q- Why did you have to do this in order to tear it?

Physics - Force and Work - Experiment 4

Q- How do you think we can measure how much force is required to tear a cloth or move an object.

Homework-

1) What is force?

2) What are two different kinds of force?

3) What can forces do?

4) How are forces measured?

5) What is Tension?

6) What is acceleration?

7) What is gravity?

Physics
Force and work - Experiment 5

Name _____
Class _____ Box No _____

Problem- How can we measure a force? How can we show a force?

Hypothesis - Why do you have weight?
Why would you weigh less on the moon?

Materials- Spring scale, wood blocks, spring

Procedure-

1) Look at the box below. I want to move it to the right.

Q- How can we show what direction it will move in?

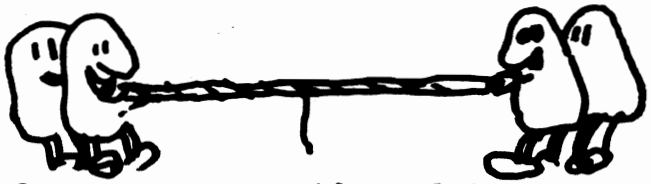
Q- Why doesn't the box float away?

Q- What force keeps it on the table? Show that force also.

Note: We show forces by means of a vector diagram. If both forces move in the same direction we add the forces. If forces acting on an object move in different directions, we subtract one force from the other. What is left over is called the resultant force

Q -In a game of tug of war, why is it hard to win?

Q- In the picture below show the forces in a game of tug of war.



Q -If four people are on one side and three are on the other, why will the side with four people win?

Q- Three people are on each side. Why are the players having difficulty winning?

Q -What is happening to all their forces?

2) lets find out how to measure a force.

3) attach a spring to the wood block. Pull block with the spring.

Q- Why does the spring stretch?

Physics- Force and Work- Experiment 5

Q- Why does the spring stop stretching after a while?

Q- How can we use this stretching spring to measure the force required to move or lift an object?

4) Look at the spring scale

Q- How do you think it works?

Q- How can it be used to measure force?

Q- How can we find the force required to move some of the objects in your box?

Q- How can we find the force required to lift an object off the table?

Object	Force to move it	Force to lift it
	grams	grams

Q- How does the force required to move and lift an object compare?

Q- Why do you think this happens?

Q- Draw an object being moved and then lifted. Show all forces acting on the object.

Homework

1) What is weight?

2) How can we measure a force?

3) How can we show a force?

Stop! It's Time for a QUIZ

Physics - Quiz 1
Quiz on Forces

Name _____

Class _____ Box No _____

Grade 8

MAKE SURE YOU HAVE READ CHAPTER 9 BEFORE TAKING THIS QUIZ

1) What is a force?

2) How can we show a force?

3) How can we measure a force?

4) What is a resultant force?

Show the forces

Box being pulled to the right 

Box being pushed to the right 

Box being pulled in opposite directions 

Box being pulled in same direction 

Show resultant force

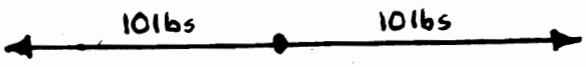
Box being pulled in one direction with 10 lbs of force, and being pulled in the other direction with 5 lbs of force. 

Box being pushed and pulled in the same direction with the same force of 20 lbs. 

5) When forces move in the same direction we _____ them.

6) When forces move in opposite directions we _____ them.

7) Will an object move if two forces move in opposite directions with the same force? How do you know this?



Name _____

Class _____ Box No _____

Physics

Force and Work- Experiment 6

Problem- What is work?

Hypothesis - Why does an object move if you push it?

Materials- Spring scale, Blocks, Ruler

Procedure- 1) Push on a wall

Q- Why doesn't it move?

2) Push your box

Q- Why does it move?

* In both cases you are exerting a _____ on the object. In only one case the object moves.

* When you exert a _____ on an object and it moves you have done WORK. Work means that you have moved an object a certain distance.

Q- What must be done to an object in order for it to move?

Q- How can we measure the force required to move an object?

* In order to find out how much work is done to move an object we use the formula Work = Force X Distance.

$$W = f \times d$$

Q- How can we find out the distance an object moved?

Q- Force is measured in pounds or grams. Distance in inches or centimeters. What kind of units will you get if you multiply force by distance?

Q- Fill in the chart

Force	Distance	Work done
10 g	10 cm	
5 g	20 cm	
15 lbs	3 ft.	

Don't Forget the Units

Q- Have we done any work in pushing a parked car? Why?

Q- What has to happen to an object in order for work to be done?

Physics - Force and Work - Experiment 6 (2)

3) Move an object 12 cm.

Q - How much work was required to move it? SHOW ALL WORK

Homework

1) What is the formula for work?

2) How much work is required to move a 20 g object 6 meters?

Show all work

3) How much work is required to move a 15 g object 7 cm?

4) How far was an object moved if the work done in 200 gcm and the force on the object is 40 g?

Physics
Force and Work- Experiment 7

Name _____

Class _____ Box No _____

Problem- How can work be done with less force?

Hypothesis- Why do you slide on ice or a waxed floor?

Materials- Block, Block with wheels, spring scale, Waxed paper, sand paper

Procedure-1) Measure the force required to move the block across the table top.

_____ g

2) Pull block over sandpaper and then measure the force.

_____ g

Q-How do the two forces compare?

Q-Why aren't they the same?

Q-Why would a farmer use wheel-barrel, or a shopper use a shopping cart?

Q-Why would it be difficult for a car to move if it didn't have wheels?

Q-How do wheels help the car move easier?

3) Pull the block with the wheels across the table and record the force.

_____ g

Q-How does this force compare to the ones above?

Q-Why where wheels invented?

Q-How does friction affect the force required to move an object?

Q-Why will a hockey puck move faster on ice than on cement?

Q-Why does a car slide on a grease slick?

Q-Why will you slide on a waxed floor?

Physics- Force and Work- Experiment 7

Homework

1) Why is less force required to pull an object over a smooth surface than over a rough surface?

2) You are driving a car on an icy road. How can friction help you in this situation?

3) Is friction always bad? Why or why not?

4) How can we use less force to move an object?

5) How can we do work with less force (see answer above)?

Physics
Force and Work- Experiment 8

Name_____

Class_____Box No_____

Problem- What is power?

Hypothesis- What is ment by horsepower in an automobile engine?

Materials- Block, Spring scale, watch, ruler

Procedure-

Two boys of equal weight and height run in a race. One boy wins the race. Both used the same force to run.

Q-Have they both run the same distance?

Q-Have they both used the same amount of force?

Q-Why have they both done the same amount of work?

Q-If they both did the same work why did one win?

Q-THere must be some other factor involved here. That factor is TIME.

Q-What can you tell me about the boys rate of work?

Q-When we talk about the amount og work that can be done in a cartain amount of time we are talking about POWER.

Power = Work X Time $P = wt$

and Work = Force X Distance $w = fd$

Then Power = Force X Distance X Time $P = fdt$

Q-What do you think the units of power will be if force= grams, time= seconds, and distance in in centimeters?

Q-How did you get this answer?

Q-How much power is used to move a 10 g block 5 cm in 15 seconds.

Q-Why is it easier for 10 horses to move a cart than for one horse?

Q How fast can two horses move 1000 lbs if one horse does it in one minute?

Physics- Force and Work - Experiment 8

Q- How can we do the same work in less time?

Q- Why can more horses do the same work in less time?

Q From this we got the term horsepower.
What is the definition for HORSEPOWER-

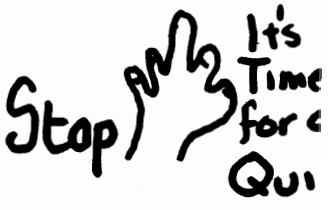
Homework-

1) What is power?

2) What are the formula for power?

3) How can we figure out power?

4) What are the units of electrical power?



Physics - Quiz 2

Quiz on Work and Power

Name _____

Class _____ Box No _____

2000 lbs = 1 ton

5280 ft = 1 mile

2.5cm = 1 inch

1) A man pushes a two ton car 20 feet, and his son pushes a three ton car 9 feet. Who dose more work? (Prove your answer)

Ans_____.

2) A 115lb Women pushes a car with a force of 80 lbs. How much work is done if the car moves 30 feet?

Ans_____.

3) A boy has to move 1500 lbs of coal 70 feet across the room. Half way across the room he drops half his coal. How much work is used to move the remaining coal across the rest of the room?

Ans_____.

4) The pistons in a car move 20 cm every second. There is a 50 g force pushing the pistons. How much work is done to move the piston? What is the power in 2 seconds? (show all work)

Ans: Work _____

Power _____

5) Two teams have a tug of war. Team A pulls with a force of 1680 lbs. Team B pulls with a force of 1602. Will they move toward A or B? How much force is being used to move the team? How much work is done to move them 24 feet?

Ans - Direction _____

Force _____

Work _____

Physics
Machines- Experiment 9

Name _____

Class _____ Box No _____

Problem- Why do some objects tip over?

Hypothesis- Why is it difficult to stand on one foot?

Materials- Meter stick, batton

Procedure- 1) Pick up meter stick.

2) Try to balance it on its end

Q- Why is it difficult to do this?

Q- Where is the best place to hold this meter stick in order to balance it?

Q- Why is this the best place?

Note: The point on an object where all the weight appears to be concentrated is called the CENTER OF GRAVITY. An object will balance if held at its center of gravity.

3) Look at the batton.

Q- How can I twirl this?

Q- Where is the best place to hold it? Why?

4) Stand three paces from the wall. Place a chair between you and the wall. Bend over and let your head touch the wall. Lift the chair to your chest and stand up.

Q- Why is it difficult to stand?

* Draw a picture standing and bent over. Show the center of gravity. This may help you answer the above question.

Q- How do we know when an object is balanced?

Q- When an object is balanced it is in EQUILIBRIUM. What does this mean?

Q- A ball is a neutral object. Why doesn't it tip over? What do you think neutral means?

Physics - Machines - Experiment 9

5) Stand a book on its edge.

Q Why isn't this the best way to put a book on the table?

Q What is a better way?

Q Why is this a better way?

Q One way is stable the other is unstable. Which is which?

Homework

1) How can we find the center of gravity of an object?

2) What does center of gravity mean?

3) When will a leaning object fall?

4) How can we balance an object?

5) Why is a tall thin object easier to fall over than a short fat object?

Physics
Machines - Experiment 10

Name _____

Class _____ Box No _____

Problem- How can we use a small force to move a heavy object?

Hypothesis-How does a See Saw make it easier to lift a friend?

Materials- Fulcrum , Lever , Weights,

Procedure- 1) Put a nail in a wood block or get a wood block with a nail in it.

2) Try to remove the nail.

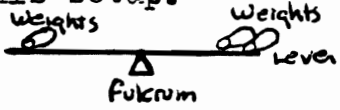
Q-Why is it difficult to remove?

3) Use a hammer to remove it.

Q-Why did the hammer make it easier to remove the nail?

LETS FIND OUT.

4) Put together this setup.

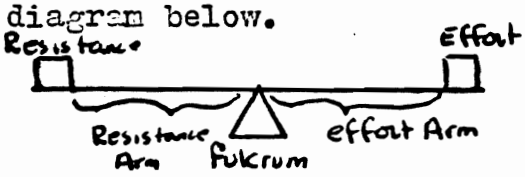


Q-How can we balance the two weights with one weight?

Q-Why will it balance if we move the fulcrum towards the two weight side?

Q-We call this beam a lever. When moving heavy objects like a refrigerator why do we use a lever?

5) Look a the diagram below.



Fulcrum- Point where lever rotates.
Resistance- Object to be lifted.
Resistance Arm- Distance from fulcrum to resistance.
Effort- Force needed to lift and balance resistance.
Effort Arm- Distance from fulcrum to effort.

Q-How does a lever help lift heavy objects?

Q-How does it affect the force you apply?

Physics - Machines - Experiment 10

There is a formula used to figure out how many times it multiplies the force you use.

Mechanical Advantage- The advantage the machine gives you.

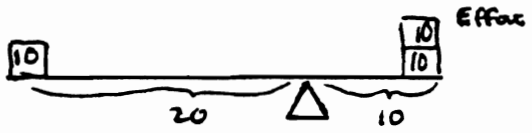
$$\text{Mechanical advantage} = \frac{\text{Effort Arm}}{\text{Resistance Arm}}$$

$$\text{Mechanical Advantage} = \frac{\text{Resistance}}{\text{Effort}}$$

Q What is the mechanical advantage, or how many times does it multiply your force? (Mechanical advantage has no units)

Show work here

MA _____



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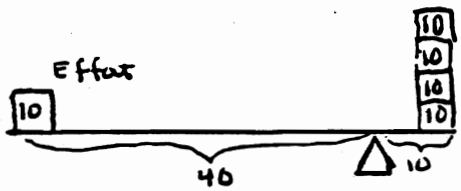
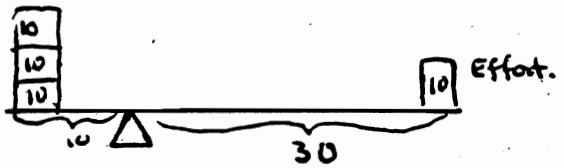


MA _____



Homework

1) How is a hammer like a lever?

2) Why are levers helpful to us? How do they work?

Physics
Machines - Experiment 11

(1)

Name _____

class _____ Box No _____

Problem- Why are ramps used to load trucks?

Hypothesis- Is it easier to lift an object or push it uphill?

Materials- Blocks, Ramp (on teachers desk) , Spring scale

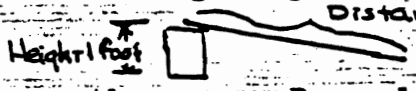
Procedure-

Q- How can we use a board to help put a heavy object into a truck?

1) Lift block with spring scale. Record force used to lift it. 1 foot.

_____ Force

2) Set up the following ramp or inclined plane,



3) Pull block up the ramp. Record force

_____ force

Q- How has the ramp affected the force used to lift an object up 1 foot.

Q- How would a ramp help us put an object like a stove in a truck?

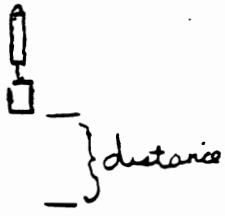
Lets find out how much easier a ramp makes it for us. Again we use mechanical advantage- the advantage the machine gives us.

$$\text{Mechanical advantage} = \frac{\text{Resistance}}{\text{Effort}} = \frac{\text{Distance}}{\text{Height}} = \frac{d}{h}$$

Mechanical Advantage- $\frac{\text{Distance(Length it travels on ramp)}}{\text{Height object is lifted}}$

MA

Q- How much work was done in lifting the object?

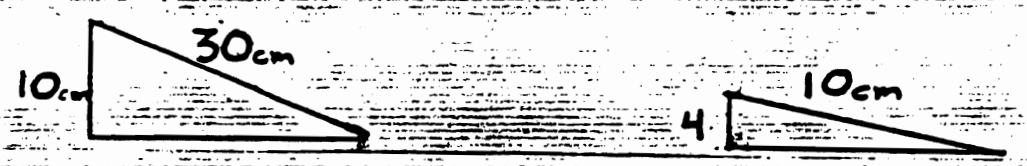


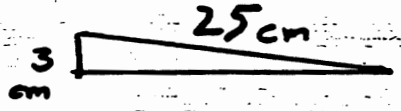
Q- How much work was done in pulling the block up the ramp?

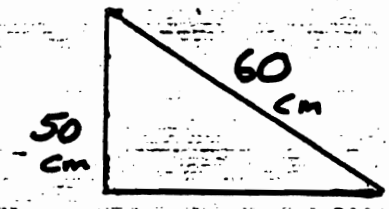
Physics- Machines - Experiment 11

Q- What can you tell me about the amount of work in each case?

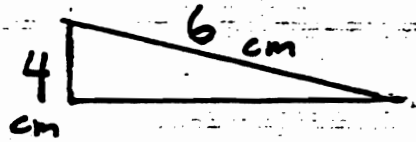
Q- What is the mechanical advantage for each problem ?

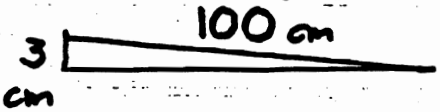






Gramco
Ann Arbor, Michigan





Name_____

Class_____ Box No_____

hysics
lachines - Experiment 12

roblem- How do pulleys help us lift heavy objects with less force?

ypothesis- Why are pulleys on clothes lines?

aterials- Ringstand-clamp-bar(From teacher), two pulleys, rope, weights

rocedure- 1) Lift two weights and record force used to lift them.

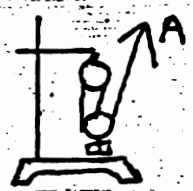
_____ force

2) Set up this pulley system.

)-How much force is required to lift this object?

)-How much work is done in lifting the object 10 cm?

3) Set up this pulley system.



)-How is this system different from the other one?

)-Attach a spring scale at A . How much force is required to lift the object?

4) Set up this pulley system and record force required to lift the objects.

I will help you

)-How has the pulley affected the force required to lift the object?

ysics ~ Machines- Experiment 12

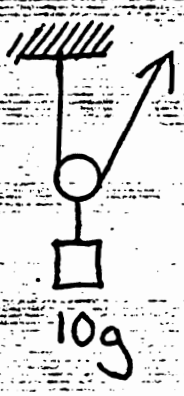
How can you use a pulley to lift a piano?

How has the use of two pulleys affected the force required to lift the object?

Lets see how much easier it has made it to lift the object.

Mechanical advantage is equal to the number of strings that lift the object up.

What would be the force required to lift these objects? Remember to count the strings.



hysics - Mass and Density - Experiment 13

Newton came up with an idea. He said that the larger the object the greater the gravity. The smaller the object the smaller the gravity.

2) Step on a scale.

3) How much do you weigh? _____ lbs.

Q- Why would you weigh less on the moon?

Q- Would you weight more or less if you went to jupiter?

Q- Why?

Q- The gravity of the moon is 1/6 that of the earth. If a person weighs 60 lbs on the earth how much do you think he would weigh on the moon?

Q- How is the mass of an object, Size, affected as you bring it near the moon?

Q- How is the weight of an object affected as we bring it near the moon?

Q- How is weight different from mass?

Homework-

Fill in the chart

Force of gravity on earth	Body	Object Weighs
	Mercury	8.25 lbs
1.1	Venus	
1.0	Earth	150 lbs
0.1	Mars	
	Moon	25 lbs
2.5	Jupiter	

1) Why do objects fall?

nysics - Mass and Density - Experiment 13

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1) Why do objects fall?

Physics

Name_____

Class_____ Dem No_____

Mass and Density - Experiment 14

Problem- How can we compare the weight of different materials?

Hypothesis - Which is heavier a brick or a bag of cotton? Why

Materials- Ruler, Scale(from teacher), weight, wood block, mercury(on teachers desk.

Procedure-

1) look at the weight and the wood block.

Q-Which weighs more?

Q-Why do you think this one weighs more?

Q-How can we find out exactly how much heavier one is from the other?

2) Look at the bottle of mercury (chemical symbol Hg)

Q-Why is it heavier than the wood block?

Q-If something is big, does it mean it is heavier than something that is small?

Q-Why do you say this?

3) Look at the wood block set.

Q-What can you tell me about their size?

4) Weigh each block, and record their weights here.

Q-What can you tell me about their weights?

Q-Why is one heavier?

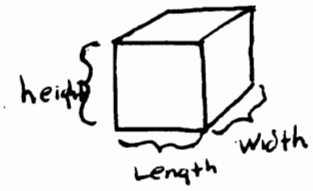
Note: although their size was the same, their weight was not. Size is another name for mass and volume.

Q-How is mass different from weight?

Physics- Mass and Density- Experiment 14

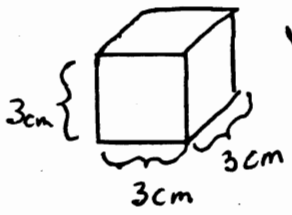
Something happens here. Because of the way things are made they weigh differently. The more atoms of something we can put in a space the more it will weigh. We call this weight for a particular mass of an object density.

We use the formula $\text{Density} = \frac{\text{Weight}}{\text{Volume}}$

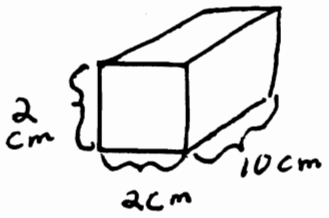


Volume(of a block) = Length of block X Width of block X Height of block

Q- Find the density of this object.



Weighs 18grams



Weighs 50grams

Homework-

1) How can we compare the weights of different objects?

2) What is density?

3) How can we find the density of an object?

4) What does the density of an object depend on?

Physics

①

Name_____

Class_____ Perio_____

Mass and Density- Experiment 15

Problem - Why do some objects sink while others float?

Hypothesis- A tree falls in a river. What will happen to it? Why?

Materials- Bucket, nail, wood block, cotton ,corn oil, baby oil, test tubes wood chips

Procedure- 1) Put water in the bucket

2) put the wood block in the bucket

Q-Describe what happens.

Q-Why do you think this happened?

Q-Which is more dense, the water or the wood?

Q-Why do you say this?

3) Put nail in water

Q-Why did this happen?

Q-Which is more dense, water or a nail?

Q-Why?

Q-Which is more dense, wood or a nail?

Lets Try This With Liquids.

4)Place 10 drops of corn oil into a test tube ½ full of water.

Q-Describe what happens?

Q-Which liquid is more dense?

5) pour this out. ¼ fill a test tube with baby oil.

6) Place wood chips in test tube.

Q-Describe what happens.

Q-Which is more dense? Why?

Physics - Mass and Density - Experiment 15

Remember- When objects are the same size, or you have the same amount of different objects, the heavier one is more dense.

Homework

1) How can we compare the weights of different objects?

2) Why are some objects heavier than others?

3) Which do you think is more dense, Mercury or a Nail. How would you find out?

Stop It's Time a Qui

Name _____

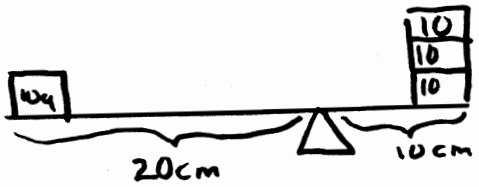
Class____ Box No ___

Physics - Quiz 3

Quiz on Simple Machines and Density.

1) - What is the Mechanical Advantage?

Show all work



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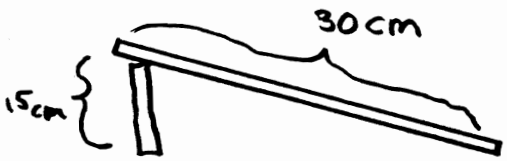

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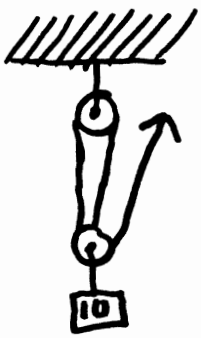

_____MA

2) Why do objects fall?

3) There are 2 objects the same size. Why is one heavier?

4)- What does density mean?

5) Wood floats in water. Why?

6) How does a ramp help lift heavy objects?

7) How does a lever help us lift up a heavy object?