



- JANUARY**  
*Makugiton*
- FEBRUARY**  
*Mahiguimaon*
- MARCH**  
*Matinabunon*
- APRIL**  
*Matinahuron*
- MAY**  
*Mahapday og Malimpyo*
- JUNE**  
*Maabik og Masunod sa  
Oksaltong Oras*
- JULY**  
*Maantigo og Maabilidad*
- AUGUST**  
*Maginhuhunon  
para sa Urban*
- SEPTEMBER**  
*Madagiroton*
- OCTOBER**  
*Matinud-anon*
- NOVEMBER**  
*Masaligan*
- DECEMBER**  
*Maalampon*

# 4



# SCIENCE

## Quarter 3 - Module 1 Effects of Force on the Shape and Size of an Object



**Name of Learner:** \_\_\_\_\_

**Grade & Section:** \_\_\_\_\_

**Name of School:** \_\_\_\_\_

**Science – Grade -4**  
**Support Material for Independent Learning Engagement (SMILE)**  
**Quarter 3 – Module 1: The Effects of Force when Applied to an Object**  
**First Edition, 2021**

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**Printed in the Philippines by**

**Department of Education – Region IX – Dipolog City Schools Division**

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# Lesson 1

## Effects of Force on the Shape and Size of an Object



### *What I Need to Know*

Have you ever noticed some objects or materials that are changed from its original shape and size? What causes their changes? This module is helpful to grade 4 pupils like you to fully discover and understand the effects of force when applied to an object.

At the end of this lesson, you are expected to:

Explain the effects of force on the shape and size of an object **(S4FEIIIa-1)**.



### *What's In*

*Hello pupils! Today you will be learning a new lesson, but before that, kindly answer the activity below based from your previous lesson about force in your grade three class.*

**Direction:** Encircle the letter of correct answer.

1. What is force?
  - a. Ability to do work.
  - b. A push and pull on an object.
  - c. Physical properties of the materials.
  - d. Molecules are widely spread.
2. What causes the object to move?
  - a. Force
  - b. Magnet
  - c. Heat
  - d. Sound
3. A door need a \_\_\_\_\_ to open.
  - a. energy
  - b. magnet
  - c. magnet
  - d. energy





## What is it

Now let's dig deeper what is the effect of force when applied to an object .

A force acting on an object **causes** the object to change its shape or size.

([www.toppr.com>guides>physics>forceanditseffects](http://www.toppr.com/guides/physics/forceanditseffects))

Some situations where force is applied and changed the size and shape are the following:

- Dropping a glass
- Cutting a cardboard
- Pounding an eggshell
- Squeezing sponge



## What I Can Do

Do the following activities, then answer the following questions.

### Direction

1. Drop an ice cubes on the floor.
2. Squeeze an empty can of soda or softdrinks.
3. Tear a piece of paper.

### Questions:

1. What happen to the shape and size of the ice cubes after it was dropped?  
\_\_\_\_\_

2. What happen to the shape and size of a piece of paper after it was torn?  
\_\_\_\_\_

3. What happen to the shape and size of empty can after it was squeezed?  
\_\_\_\_\_



## ***What's More***

**Direction:** Read and understand the situation. Write your answer on the table below.

<b>Situation</b>	<b>Explain the effect of force on the shape and size of an object?</b>
A. Father cut the wood.	
B. Pedro twisted the tie wire	
C. Mario hammered the iron bottle cup.	
D. Ana squeezed an oblong balloon.	



# What I Have Learned

**Direction:** Study the picture carefully. Tell what activity is being done, and what change/s took place when force was applied to the following objects.

1.



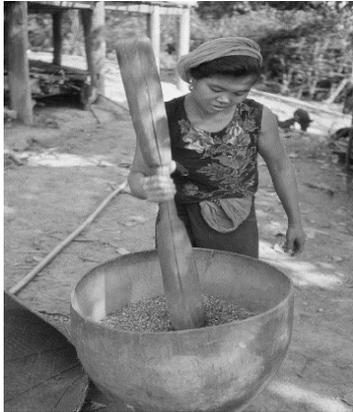
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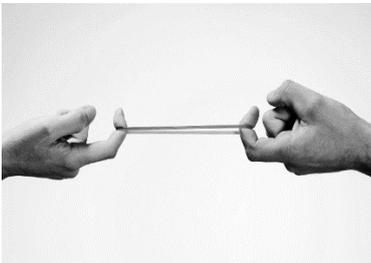
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## *What I Can Do*

### **What you need:**

Paper, pair of scissor, bar soap, cracker biscuits, hammer/stone, any empty box, empty plastic bottle.

### **What to do:**

1. Observe each of the solid materials given in Column A.
2. Change the shape or size of the materials found in Column A by applying force on it.
3. Fill out Column B with what you did to change the shape and size of the materials.
4. Fill out Column C with the changes that took place after you have applied force on the materials.

<b>(A) Object</b>	<b>(B) What I did to change the shape and size of the materials?</b>	<b>(C) What changes took place after I have applied force on the material?</b>
Paper		
Bar soap		
Cracker biscuits		
Empty box		
Empty bottle		



# Assessment

**Direction:** Encircle the letter of the correct answer.

1. The shape or size of an object \_\_\_\_\_ when force is applied on it.
  - a. break
  - b. bend
  - c. change
  - d. move
  
2. When a force is applied on a rubber band, the rubber band \_\_\_\_\_.
  - a. breaks.
  - b. is cut into tiny pieces.
  - c. changes its shape.
  - d. stays the same.
  
3. Which of the following situations show the change in size when force is applied?
  - a. A book placed inside the bag.
  - b. Paperclips thrown on the floor.
  - c. A pencil rolling on the table.
  - d. A garter being pulled.
  
4. When a molding clay is being squeezed, it will \_\_\_\_\_.
  - a. changes its shape.
  - b. cut into tiny pieces.
  - c. breaks.
  - d. stays the same.
  
5. When force is applied, which situation shows change in size and shape of an object?
  - a. A tire being rolled
  - b. Pounding of corn or rice
  - c. A vase placed on the table
  - d. A car parked on the street



## ***Additional Activities***

**Direction:** Observe the materials/objects found at home. What materials/objects are changed from its original size or shape? Explain how the changes happened? Give at least two (2) materials. Write your answer below.

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# Answer Key:

## What's In

1. B    2. A    3. B    4. D    5. C

## What's New

1. A person chopped the wood
2. Chopped
3. Yes
4. The wood change its shape and size

## What I Can Do

- 1-3. Change its shape and size

## What's More

- A-D Change its shape and size

## What I have Learned

1-5 (Answer may vary)

## What I Can Do

(answer may vary)

## Assessment

1. c
2. c
3. d
4. a
5. b

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## Region IX: Zamboanga Peninsula Hymn – Our Eden Land

Here the trees and flowers bloom  
Here the breezes gently Blow,  
Here the birds sing Merrily,  
The liberty forever Stays,

Gallant men And Ladies fair  
Linger with love and care  
Golden beams of sunrise and sunset  
Are visions you'll never forget  
Oh! That's Region IX

Cebuanos, Ilocanos, Subanons, Boholanos, Ilongos,  
All of them are proud and true  
Region IX our Eden Land

Here the Badjaos roam the seas  
Here the Samals live in peace  
Here the Tausogs thrive so free  
With the Yakans in unity

Hardworking people Abound,  
Every valleys and Dale  
Zamboanguenos, Tagalogs, Bicolanos,

Region IX  
Our..  
Eden...  
Land...

### My Final Farewell

Farewell, dear Fatherland, clime of the sun caress'd  
Pearl of the Orient seas, our Eden lost!,  
Gladly now I go to give thee this faded life's best,  
And were it brighter, fresher, or more blest  
Still would I give it thee, nor count the cost.

On the field of battle, 'mid the frenzy of fight,  
Others have given their lives, without doubt or heed;  
The place matters not-cypress or laurel or lily white,  
Scaffold or open plain, combat or martyrdom's plight,  
T is ever the same, to serve our home and country's need.

I die just when I see the dawn break,  
Through the gloom of night, to herald the day;  
And if color is lacking my blood thou shalt take,  
Pour'd out at need for thy dear sake  
To dye with its crimson the waking ray.

My dreams, when life first opened to me,  
My dreams, when the hopes of youth beat high,  
Were to see thy lov'd face, O gem of the Orient sea  
From gloom and grief, from care and sorrow free;  
No blush on thy brow, no tear in thine eye.

Dream of my life, my living and burning desire,  
All hail ! cries the soul that is now to take flight;  
All hail ! And sweet it is for thee to expire ;  
To die for thy sake, that thou mayst aspire;  
And sleep in thy bosom eternity's long night.

If over my grave some day thou seest grow,  
In the grassy sod, a humble flower,  
Draw it to thy lips and kiss my soul so,  
While I may feel on my brow in the cold tomb below  
The touch of thy tenderness, thy breath's warm power.

Let the moon beam over me soft and serene,  
Let the dawn shed over me its radiant flashes,  
Let the wind with sad lament over me keen ;  
And if on my cross a bird should be seen,  
Let it trill there its hymn of peace to my ashes.

Let the sun draw the vapors up to the sky,  
And heavenward in purity bear my tardy protest  
Let some kind soul o'er my untimely fate sigh,  
And in the still evening a prayer be lifted on high  
From thee, O my country, that in God I may rest.

Pray for all those that hapless have died,  
For all who have suffered the unmeasur'd pain;  
For our mothers that bitterly their woes have cried,  
For widows and orphans, for captives by torture tried  
And then for thyself that redemption thou mayst gain

And when the dark night wraps the graveyard around  
With only the dead in their vigil to see  
Break not my repose or the mystery profound  
And perchance thou mayst hear a sad hymn resound  
'T is I, O my country, raising a song unto thee.

And even my grave is remembered no more  
Unmark'd by never a cross nor a stone  
Let the plow sweep through it, the spade turn it o'er  
That my ashes may carpet earthly floor,  
Before into nothingness at last they are blown.

Then will oblivion bring to me no care  
As over thy vales and plains I sweep;  
Throbbing and cleansed in thy space and air  
With color and light, with song and lament I fare,  
Ever repeating the faith that I keep.

My Fatherland ador'd, that sadness to my sorrow lends  
Beloved Filipinas, hear now my last good-by!  
I give thee all: parents and kindred and friends  
For I go where no slave before the oppressor bends,  
Where faith can never kill, and God reigns e'er on high!

Farewell to you all, from my soul torn away,  
Friends of my childhood in the home dispossessed!  
Give thanks that I rest from the wearisome day!  
Farewell to thee, too, sweet friend that lightened my way;  
Beloved creatures all, farewell! In death there is rest!

### I Am a Filipino, by Carlos P. Romulo

I am a Filipino—inheritor of a glorious past, hostage to the uncertain future. As such I must prove equal to a two-fold task—the task of meeting my responsibility to the past, and the task of performing my obligation to the future.

I sprung from a hardy race, child many generations removed of ancient Malayan pioneers. Across the centuries the memory comes rushing back to me: of brown-skinned men putting out to sea in ships that were as frail as their hearts were stout. Over the sea I see them come, borne upon the billowing wave and the whistling wind, carried upon the mighty swell of hope—hope in the free abundance of new land that was to be their home and their children's forever.

I am a Filipino. In my blood runs the immortal seed of heroes—seed that flowered down the centuries in deeds of courage and defiance. In my veins yet pulses the same hot blood that sent Lapulapu to battle against the first invader of this land, that nerved Lakandula in the combat against the alien foe, that drove Diego Silang and Dagohoy into rebellion against the foreign oppressor.

The seed I bear within me is an immortal seed. It is the mark of my manhood, the symbol of dignity as a human being. Like the seeds that were once buried in the tomb of Tutankhamen many thousand years ago, it shall grow and flower and bear fruit again. It is the insignia of my race, and my generation is but a stage in the unending search of my people for freedom and happiness.

I am a Filipino, child of the marriage of the East and the West. The East, with its languor and mysticism, its passivity and endurance, was my mother, and my sire was the West that came thundering across the seas with the Cross and Sword and the Machine. I am of the East, an eager participant in its spirit, and in its struggles for liberation from the imperialist yoke. But I also know that the East must awake from its centuried sleep, shake off the lethargy that has bound his limbs, and start moving where destiny awaits.

I am a Filipino, and this is my inheritance. What pledge shall I give that I may prove worthy of my inheritance? I shall give the pledge that has come ringing down the corridors of the centuries, and it shall be compounded of the joyous cries of my Malayan forebears when first they saw the contours of this land loom before their eyes, of the battle cries that have resounded in every field of combat from Mactan to Tirad Pass, of the voices of my people when they sing:

"I am a Filipino born to freedom, and I shall not rest until freedom shall have been added unto my inheritance—for myself and my children and my children's children—forever."