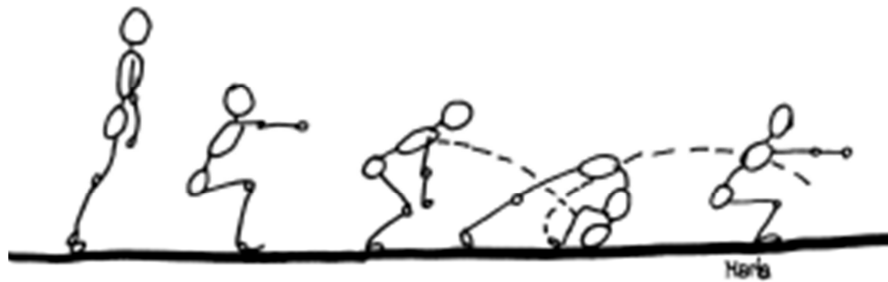


Worksheets unit 1  
**READY, STEADY, GO!**



**MACHINES MOVE THE WORLD**


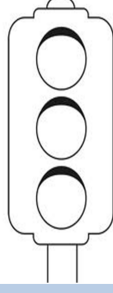


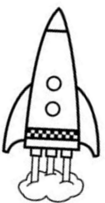

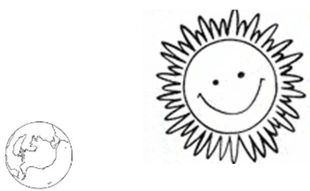

Marta Vidal Vidal

February – April 2011

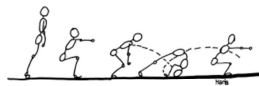


READY, STEADY, GO!

A. Draw the **MOTION** of these objects using **ARROWS**.  
Look at the e.g. number 1. Be aware of the **DIRECTION**.

|   |  |
|---|--|
| <p>1</p>  <p>The motion of the Skier</p>     | <p>2</p>  <p>Motion of a traffic light.</p> |
| <p>3</p>  <p>Motion of the clockwise.</p>    | <p>4</p>  <p>Motion of a cannon ball.</p>  |
| <p>5</p>  <p>Motion of the space ship.</p> | <p>6</p>  <p>Motion of a softball.</p>    |
| <p>7</p>  <p>Motion of the earth.</p>      | <p>8</p>  <p>Motion of a spin.</p>        |

The line or arrow to describe an objects **MOTION** is called the **TRAJECTORY**.



READY, STEADY, GO!

**B. Write the names and the sentences in the correct box.**

**B.1. What kind of MOTION is in number ...?**





**B.2. Why is it a/an...? (Write it)**

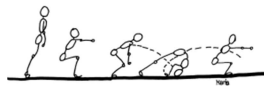
|    |  |
|----|--|
| 1. |  |
| 2. |  |
| 3. |  |
| 4. |  |
| 5. |  |
| 6. |  |
| 7. |  |
| 8. |  |

**MOTION is a change in position of an object with respect to time.**

**B.2.**

- B.1.**
- Rectilinear motion
  - Parabolic motion
  - Coconut motion
  - Oscillating motion
  - Circular motion
  - Elliptical motion
  - Static

|                      |   |
|----------------------|---|
| Because it describes | a straight line.<br>_____   |
|                      | a parabola.<br>    |
|                      | an oscillation.<br> |
|                      | a circle.<br>      |
|                      | an ellipse<br>     |
|                      | No, there is no motion.   |



READY, STEADY, GO!

Complete the table of different motion and its characteristic using the labels above.

RECTILINIAR MOTION

a circle

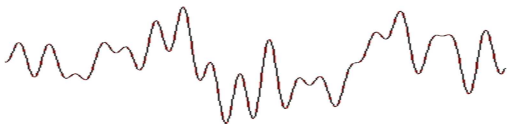
CIRCULAR MOTION

STATIC

ELLIPTICAL MOTION

an oscillation

OSCILLATING MOTION



NO MOTION

a parabola

PARABOLIC MOTION

a straight line

(It) is a change in position of an object with respect to time.



(It) is the line or arrow to describe an object's motion.



an ellipse



# MOTION

| Motion | Line | Picture |
|--------|------|---------|
|        |      |         |
|        |      |         |
|        |      |         |
|        |      |         |
|        |      |         |
|        |      |         |

## TRAJECTORY



READY, STEADY, GO!

# HANDS ON! Velocity

Name:

Date:

## PROBLEM:

How do you identify and **calculate** the **velocity** of objects/bodies?

## MATERIALS:

- A pencil
- A calculator.

## STEPS:

1. **Predict** the velocity of this bodies looking at data. Write a number from 1 to 5 (from the faster to the slower).
2. Calculate the velocity.
3. Write a number from 1 to 5 (from the faster to the slower).
4. Share and check the results with all the class.

$$\text{VELOCITY} = \frac{\text{DISTANCE in meters}}{\text{TIME in seconds}}$$



**CALCULATE**

| Bodies in motion | PREDICTION | METERS | SECONDS | VELOCITY | The winner of a race |
|------------------|------------|--------|---------|----------|----------------------|
| Skier            |            | 810 m  | 54s     | m/s      |                      |
| Skateboard       |            | 25 m   | 50 s    | m/s      |                      |
| Canyon ball      |            | 1500 m | 15s     | m/s      |                      |
| Bicycle          |            | 270 m  | 45s     | m/s      |                      |
| Car              |            | 1280 m | 32s     | m/s      |                      |

|                   |                                    |         |  |
|-------------------|------------------------------------|---------|--|
| I think that      | skier<br>skateboard<br>canyon ball | will be | the first/second/third/....<br>the last. |
| The               | bicycle<br>car                     | is      | the fastest.<br>the slowest.             |
| I don't think so. |                                    |         |  |
| I agree with..... |                                    |         |  |

