

# FHSST Formatting Reference Manual

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# Chapter 1

## Introduction

This document serves as a reference for the latex formatting, macros and environments that should be used for the FHSST books. The same environments should be used for all books.

Please post queries about this document in the FHSST forum.

# Chapter 2

## Formatting

Environments, macros and layout.

### 2.1 Page Layout

The following are used:

1. paper size
2. pagewidth and pageheight or margins - top margin = 2.5cm, bottom/outer = 2cm, inner (binding edge)=3cm
3. header = page numbers in header
4. footer = not needed
5. double or single sided = singled

It is suggested that the following be used (as in this document):

```
\oddsidemargin = 0.46cm
\topmargin = -1.54cm
\headheight = 1cm
\headsep = 0.5cm
\textwidth = 14cm
\textheight = 25.7cm
\footskip = 0.5cm
\setlength{\parindent}{0ex}
\setlength{\parskip}{2ex}
\pagestyle{headings}
\marginparsep = 0.5cm
\marginparwidth = 2cm
```

### 2.2 Environments

Some environments that are needed have been defined here. Each environment should be formatted differently, with some graphic to identify it (e.g. like the magnifying glass for the interesting fact). The environments should look the same in all books.

The names of the environments should be the same in all books, so that it is easy to use.

### 2.2.1 Definition

2 inputs. #1 - Title #2 - Details

Usage: `\Definition{#1}{#2}`

**Definition: Newton's Third Law (N3)**

When pairs of objects interact they exert forces on each other. These forces are the same size and point in opposite directions.

### 2.2.2 Tip

1 input

Usage: `\Tip{#1}`

**Tip: Check that only SI units are used.**

Usage: `\MarginTip{#1}`

This is a  
MarginTip.

### 2.2.3 Advanced

2 inputs. #1 - Title #2 - Details

Usage: `\Advanced{#1}{#2}`

**Advanced: Newton's Third Law (N3)**

When pairs of objects interact they exert forces on each other. These forces are the same size and point in opposite directions.

### 2.2.4 Activity

2 inputs. #1 - Title #2 - Details

Usage: `\Activity{#1}{#2}`

**Activity: Newton's Third Law (N3)**

When pairs of objects interact they exert forces on each other. These forces are the same size and point in opposite directions.

### 2.2.5 Exercise

2 inputs. #1 - Title #2 - Details

Usage: `\Exercise{#1}{#2}`

**Exercise: Newton's Third Law (N3)**

When pairs of objects interact they exert forces on each other. These forces are the same size and point in opposite directions.

**2.2.6 Experiment**

2 inputs. #1 - Title #2 - Details

Usage: \Experiment{#1}{#2}

**Experiment: Newton's Third Law (N3)**

When pairs of objects interact they exert forces on each other. These forces are the same size and point in opposite directions.

**2.2.7 Method**

2 inputs. #1 - Title #2 - Details

Usage: \Method{#1}{#2}

**Method: Drawing a force diagram**

1. identify all objects that are interacting
2. ...

**2.2.8 Interesting Fact**

1 input

Usage: \IFact{#1}



This is an interesting fact

**2.2.9 Important**

1 input

Usage: \Important{#1}

**Important:** This is an interesting fact

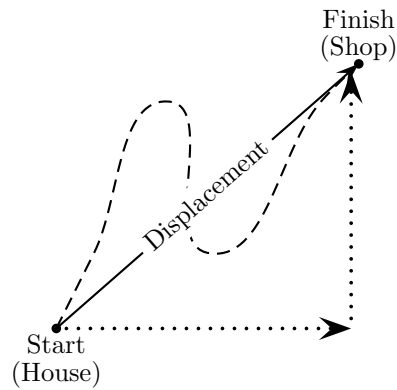


Figure 2.1: Illustration of Displacement

### 2.2.10 Worked Example

3 inputs. #1 - Title #2 - Question #3 - Details of solution

Usage: `\begin{wex}{#1}{#2}{#3}\end{wex}`

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#### Worked Example 1: Motion in 1D

**Question:** A car approaches a robot at...

**Answer**

*Step 0 : Identify what information has been given*

We see that

*Step 1 : Identify what information has been given*

*Step 2 : Identify what information has been given*

*Step 3 : Identify what information has been given*

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## 2.3 Figures

Figures should be centred on the page with the caption at the **bottom** of the figure as shown in Figure 2.1.

Figures should also be in grayscale. The books are not going to be reproduced in colour.

## 2.4 Tables

Tables should be centred on the page with the caption at the **top** of the figure as shown in Table 2.1. The headings of each column should be **bold**. There should be a double horizontal line above and below the headings and a double horizontal line to end the table.

## 2.5 Exercises

Exercises should be placed after each section, **not** at the end of the chapter.

Table 2.1: Units used in the **Motion in One Dimension** chapter

| Units        |            |      |                              |
|--------------|------------|------|------------------------------|
| Quantity     | Symbol     | Unit | Base S.I. Units              |
| Displacement | $\Delta x$ | -    | $m$ + direction              |
| Velocity     | $u, v$     | -    | $m \cdot s^{-1}$ + direction |
| Distance     | $d$        | -    | $m$                          |
| Speed        | $s$        | -    | $m \cdot s^{-1}$             |
| Acceleration | $a$        | -    | $m \cdot s^{-2}$ + direction |

## 2.6 PStricks

Use `\uput` instead of `\rput` for labels.

## 2.7 Language

Try to avoid contractions (it's, didn't, aren't, etc) instead use the complete words (it is, did not, are not, etc).