Student Assignment Guide - Instructions

The starting point for most school projects is to say "I have to hand in an assignment by a certain date." Unfortunately, this is usually the ending point as well. A professional Project Manager would approach it differently. Let's work through a few questions.

What is the topic?

While it may seem straight forward, a two-page set of instructions can cloud the topic. It will help if you can summarize in two or three sentences what the topic is about. It will help focus on what is required.

Example

For our example, we have been given an assignment to write a 5,000 word essay on the discovery of Australia. As part of that essay, we must include charts and pictures.

"The assignment is to produce an essay, including pictures and illustrations, on the discovery of Australia by Captain James Cook in 1770. It should cover

- Why he made the voyage
- Some information about the people on board
- The areas he visited
- The boat
- The crew
- The return journey."

What are we supposed to get out of this Assignment?

The assignment is being carried out to establish the existence of some skills. For example, you may be establishing that you have skills to research and present information about any topic. You might be proving that you have the skills to use library research facilities. You might be showing you have the ability to put forward a point of view in a convincing manner.

Understanding the purpose of the assignment will help you craft whatever you have to hand in, in a manner that will support those objectives.

Example:

The assignment is to establish research skills using a variety of resources, and to document a topic in an interesting, informative manner. It also requires the use of pictures and illustrations, which must be used in a way that supports the text. The text should also refer to, and explain these images.

What are the things you have to produce?

For an assignment they may be a 5,000-word essay, a presentation to the class, a picture, a chart, etc.

Example
- 5,000 word essay containing pictures and charts
- 30 minute presentation to the class including PowerPoint presentation

Note: For the rest of the examples, we will ignore the PowerPoint presentation and focus on the essay.

What are the steps involved in producing each of these things?

Think through what steps you will need to take to create each of the deliverables.

Example

One deliverable is a 5,000-word essay on the discovery of Australia. Major steps may be:
- Research on the Internet
- Research in a library
- Planning the layout
- Preparing first draft
- Searching for pictures and illustrations
- Prepare final draft
- Checking and final revision

How long will each deliverable take?

Once the steps are identified, estimate how long each will take. It is likely that some estimates will be reasonably accurate, and some will be a guess. Estimate how much you may be out in your estimate, or your confidence level. Stop at a maximum error of 100%. After you have established your estimate, and the worst case, write down the mid point.

Things invariably take longer then we estimate. A good rule of thumb is to take the mid point of the estimate and the worst case. In this case it is the mid point of 46 hrs and 64.4 hrs, which is around 55 hrs.

Example:

Deliverable	Step	Time Estimate	Confidence Level	Worst Case	Mid Point
Essay	Research on the Internet	4 hrs	50%	6 hrs	5 hrs
	Research in a library	10 hrs	20%	12 hrs	11 hrs
	Planning the layout	2 hrs	20%	2.4 hrs	2.2 hrs
	Preparing first draft	20 hrs	40%	28 hrs	24 hrs
	Searching for pictures and illustrations	2 hrs	0%	2 hrs	2 hrs
	Prepare final draft	4 hrs	100%	8 hrs	6 hrs
	Checking and final revision	4 hrs	50%	6 hrs	5 hrs
Total		46 hrs		64.4 hrs	55.2 hrs

We will use 55 hrs as the starting point to do our planning. Using this approach assumes some things will go as planned, and some will turn into a worst case. If we assume a 50:50 split, the likely outcome is 55 hrs.

Plan the completion Date

Work on the assumption that you will not finish at the last minute, but some time before the due date. If you plan to finish at the last minute, it will invariably lead to stress and panic. Something will go wrong, and there will be no time to fix it and the problems will snowball. Trying to fix one problem will cause another problem and so it will get worse. If we have 11 weeks to complete the assignment, plan to finish in 10 weeks. This leaves a week for unforeseen events.

Work out the time available

Now look at your time. Realistically plan what time you have available. Also document anything you are not sure about. You may have to assume certain things in order to create an estimate. If you make an assumption, and it is later proven wrong, your whole schedule can come unstuck.

Example:

For the example, we need to complete the assignment in 10 weeks – 1 week before the due date.

Say you can spend 2 hours a day after school except on Mondays and Fridays when you have other commitments. Over ten weeks, you have a maximum of 60 hours.

By looking at your next 10 weekends, you find that 4 are already booked up. You estimate you can spend around 4 hours on the other 6 weekends, which gives you another 24 hours available. You are now up to 84 hours in total.

The chart below shows each week in the first row, the hours available in the second row, and the cumulative time available in the bottom row.

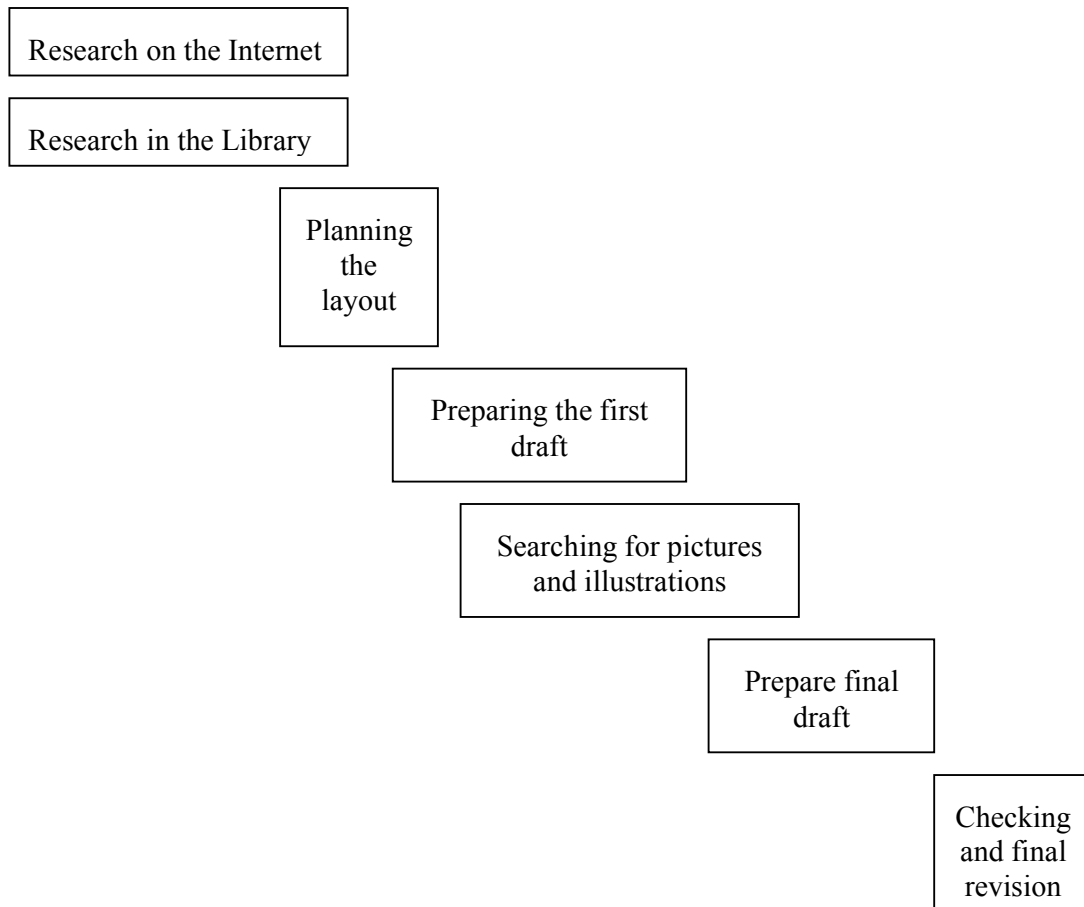| Week	1	2	3	4	5	6	7	8	9	10
Time (Hrs)	6	10	10	6	6	10	10	10	10	6
Cumulative	6	16	26	32	38	48	58	68	78	84

Assumptions:

- Can work every Tue/Wed/Thur for 2 hours.
- Can work 4 hrs per weekend except for weekends 4, 5 and 10 when I am going away.

Decide the sequence in which the work needs to be performed

Most times, the sequence is fairly self-evident. There are however activities that can be performed in parallel. For example research at a library and on the net can be performed at the same time.

For the examples that follow, we will forget about the presentation deliverable, and focus on the essay.

Example:

| Research on the Internet |

| Research in the Library |

| Planning the layout |

| Preparing the first draft |

| Searching for pictures and illustrations |

| Prepare final draft |

| Checking and final revision |

Select Milestones

Probably the biggest problem we have in achieving time based goals is to focus on how long each task should take, rather than milestones along the way.

To take an example, we might get out of bed at 6:30 each morning, take 9 seconds to walk to the shower, take 3 minutes to clean our teeth, another 11 minutes in the shower etc. We don't measure progress down to the second for each task. We know that if we are showered and dressed by 7:00 we are on track to leave the house at the usual time. It is more natural to set some markers along the way to measure our progress.

If there is a problem with the hot water, we know we will not be able to be dressed by 7:00 and we can decide to skip a shower this morning. Alternatively, we might decide to grab breakfast when we get where we are going.

What we do subconsciously is juggle a small number of activities to reach a milestone. If we take 4 minutes to clean our teeth instead of 3, we hurry up the shower to make up time. It is only when the number of activities we are juggling becomes too great that we get into trouble.

A milestone should be black or white. You cannot have a milestone that says 40% of the draft is complete. It cannot be measured. Perhaps it means 40% of the words in the final essay, but that might not be 40% of the work. Milestones are things that you can look at and it is clear the work is done.

Example:

For the example, we can set the following milestones.
- Research complete
- Planning complete
- First Draft complete
- Pictures found
- Final Draft complete
- Assignment complete

Create your Personal Schedule
Now comes the real work. This entails creating a schedule for the duration of the project. The inputs for this schedule are:
- The activities or steps
- The mid point estimated times
- The sequence
- The time available

Also focus on the spare time each week. The further forward from today that you look, the less you can see. In other words, the further ahead you forecast, the more chance you will have unforeseen problems arise. Construct the schedule to allow progressively more spare time as the project progresses. It will provide a buffer for the unforeseen.

As well as creating the schedule, identify where the milestones occur.

Example

Wk	Time Avail	Activity	Time Allocated	Spare Time	Actual Time
1	10 hrs	Library Research (12 hrs) Internet Research (6 hrs)	7 hrs 3 hrs	0	
2	10 hrs	Library Research Internet Research Planning (2.4 hrs) **Milestone: Internet and Library research complete**	5 hrs 3 hrs 2 hrs	0	
3	6 hrs	Planning First Draft (24 hrs) **Milestone: Planning complete**	1 hr 4 hrs	1 hr	
4	6 hrs	First Draft	4 hrs	2 hrs	
5	10 hrs	First Draft Pictures & Illustrations (2 hrs)	7 hrs 1 hr	2 hrs	
6	10 hrs	First Draft Pictures & Illustrations **Milestone: Pictures & Illustrations complete**	6 hrs 1 hr	3 hrs	

Wk	Time Avail	Activity	Time Allocated	Spare Time	Actual Time
7	10 hrs	First Draft **Milestone: First Draft Complete**	8 hrs	2 hrs	
8	10 hrs	Prepare Final Draft (6 hrs) **Milestone: Final Draft Complete**	8 hrs	4 hrs	
9	10 hrs	Checking & final revision (5 hrs)	4 hrs	6 hrs	
10	6 hrs	Checking and final revision **Milestone: Project Complete**	1 hr	5 hrs	

In this example, we have milestones at the end of weeks 2, 3, 6, 7, 8 and 10.

Managing Risks

Very often, when something goes wrong, we can look back and say "Yes, I thought that could happen." If we had thought it could happen, why did we not do anything about it? The answer is that we are not brought up to manage risks. What we need to do is to brainstorm what could go wrong before we start. When we come up with a risk, we need to look at:

- Impact. What impact will it have on our project? (High, Medium or Low)

- Probability. How likely is it to happen? (High, Medium or Low)

Where a risk has two highs (It is highly likely to happen, and it will have a high impact) we need to look at what we can do about it. Depending on the size of the project, we might also want to look at high/medium and medium/medium risks.

Example:

Here are some risks and things we plan to do if the risks become reality.

Risk	Impact/Probability	Action
Invitations to social events on the weekend that will reduce time available for the project.	High/High	Only accept invitation if it will not effect achievement of the next milestone. Give up Monday or Friday commitments if necessary.
Flu is going through the school. I might catch it.	High/Medium	If I catch the flu, change the schedule to catch up in weeks 4, 5 and 6 where I have some spare time

Managing to the schedule

A plan is not static. Things are bound to change. The schedule is not just something you file away and forget. As the weeks pass, constantly review the schedule. Enter the actual time you spend. Adjust the time estimates if you find they have changed. Manage yourself to the schedule.

Importantly, focus on the next milestone. Work towards the next milestone and adopt a railway station approach.

Provided you go through each station on time, you will get to your destination on time.