

# Put Your Energy into a Project

Chapter

32

Related subjects: Physics (Electronics), General skills

**Collaborating is something you have to learn.**

**You cannot always do everything yourself. In society people usually collaborate.**

**Learning how to collaborate also means learning how to divide tasks.**


This is what Peter, Max, Maureen and Alisha will find out. These four friends are going to show how to ‘do a project’ seemingly effortless.

They have to make a PowerPoint presentation about renewable energy sources.

The ource boast off to the computers. They find hundred pages of useful information. Way too much! How are they going to select what they need?

## Solar energy

- **Heat**
  - to warm your body
  - to heaten up water
  - focussed in solar furnace
- **Light**
  - to make electricity in a solar cell
  - to produce biomass in plants



## 32.1

a) What is the greatest advantage of collaborating with only friends?

\_\_\_\_\_

Mention a disadvantage as well.

\_\_\_\_\_.

b) You can also form groups of pupils with the same interest.

Mention an advantage: \_\_\_\_\_

\_\_\_\_\_.

Mention a disadvantage as well.

\_\_\_\_\_.

Meanwhile, a less boastful group approaches the assignment quite differently.

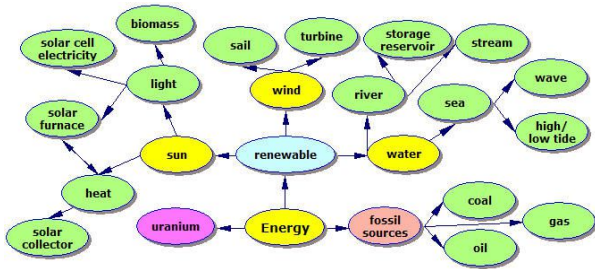
They start by making a **mind map** in which they write the things they already know. They find some missing information in the coursebook. Then they make a list of all the tasks and estimate how much time they need for them.

In this theme, you are independently going to do a big group assignment. As a group, you will decide on what you are going to do and how to organise that project.

## Assignments

### Make a mind map

A good and fast way to start organising a project is by making a **mind map**.



In 8 steps you can learn to handle this tool, learning by doing.

There is a Task Sheet you can use.

### 32.2



You need:

- a large sheet of paper
- felt-tip pens
- **Task Sheet 32.1**

- a) Follow the instructions on the Task Sheet.
- b) Write down what your project is about and what result you expect it to have.

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### The list of tasks

You cannot start a project without knowing *what* you have to do.

Time to practise planning again!

Use the **4Wh**-approach.

### 32.3

You need:

- description of your project from assignment 32.2.
  - sheets of paper or a spreadsheet on the computer.
- a) Make a detailed list of all tasks.
  - b) Look if you can divide any tasks into smaller sub-tasks.

### What time does it cost?

### 32.4

You need:

- The list of tasks from assignment 32.3.
- a) What has to be done first? Write a 1 by this task.  
Continue numbering the tasks.
  - b) Determine which tasks do not have to wait till another has been done.
  - c) Make a new list, with all tasks in the right order.
  - d) Behind each task: write down how much time that task will cost.

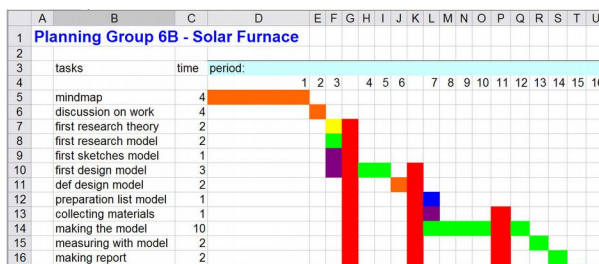
### Third 'Wh': Where?

#### 32.5

- a) Some tasks need to be done in the classroom. Mark them with a **C**.
- b) Mark the tasks that can best be done at home with an **H**.
- c) If other places are involved, mark these too.



### Finally: Who gets this task?



### Do you need some theory?

#### Forming groups

A group can be based on *friendship*. The advantage is that you know each other well. The disadvantage is that correcting your friends is not always that easy.

#### 32.6

Make a schematic list like the one above. Mention this:

- Each colour is referring to a worker or a group of workers.
- Some tasks can start at the same moment.
- A task can only start if there is a worker available.
- Also plan some time to discuss the progress of the project.

You can also form a group looking at someone's *talents, expertise and experience*.

The advantage is that the group is based on all the expertise that is available.

The disadvantage is that you will not surprise yourself by discovering some hidden talents.

A group can also be based on 'learning styles'.

The advantage is that you know your own strong points and can use them.





### Conflicts

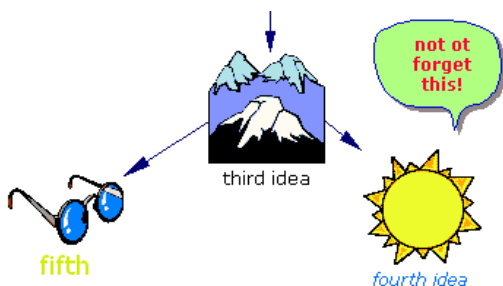
Working together does not always go that smoothly. Sometimes there is a row or an argument.

The reason is often that someone does not stick to the agreements. Conflicts can be prevented by making clear rules about the jobs. And then see to it that these rules are observed by everyone.

### Making a mind map

Making a mind map is the fastest way of getting an overview of the tasks.

You write down everything that springs to mind. These initial ideas are then ordered and linked.



### Planning

You worked with a planning for the first time in Chapters 19 and 28.

You can again study the theory in these chapters.

The **4Wh**-approach is the best:

- 1 What has to be done;
- 2 When does it need to be done;
- 3 Where takes it place;
- 4 Who does this task?

### Log book

It's good to keep a log book.

You enter what you have done, and how it was done, as accurately as possible. Later, you can always check to see what went well and what went wrong.

You may also need the log book when your teacher wants to assess you.

### What next ...?



**Do you know...?**

Do you know what you need to know?

**32.7**

a) A group can be formed on various basic principles. Which of these principles applied to your group?  
*Friendship / talents / expertise / learning style.*

What was the main advantage of this choice?

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\_\_\_\_\_.

Mention a disadvantage, too.

\_\_\_\_\_

\_\_\_\_\_.

b) What is the advantage of forming groups based on expertise?

\_\_\_\_\_

\_\_\_\_\_.

Mention a disadvantage, too.

\_\_\_\_\_

\_\_\_\_\_.

c) Making mind maps has several advantages. Mention two.

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_.

**32.7**

d) Adding the names of the group members to your planning is done last. Why is that?

\_\_\_\_\_

\_\_\_\_\_.

e) Why is it necessary to have regular discussions of progress?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_.

f) Mention two reasons why you have to keep a log book.

1 \_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_



## Room for notes