

# Planning the Project

## 1. Selecting a Topic

You should do some brainstorming in class to come up with topics and ideas of interest. Write everything on the blackboard. If more ideas are needed, then visit the school library to look at books and magazines. You may also make use of a computer lab to search the Internet. There are so many interesting areas of knowledge in today's world that everyone should be able to find something he or she would like to know more about.

Let us see some key important points of selecting a project topic

### 1.1 Forming the Best Questions    1.2 Making a Good Guess (Hypothesis)

#### 1.1 Forming the Best Questions

Now that you have ideas, you are ready to ask questions. It is important to think about how you ask questions. The way you ask a question will often determine how it can be answered.

Consider, for example, these various approaches or different ways to ask a question.

- Some questions can be answered by "yes" or "no."

**Examples:** *Did you eat breakfast today?*

*Did you take a shower this morning?*

- Some questions can be answered by making a choice.

**Examples:** *Do you like jam or peanut butter better?*

*Which colour do you like better—red or blue?*

- Other questions can't be answered "yes" or "not" or by making a choice.

**Examples:** *How much taller are boys than girls?*

*How much faster is a car than a bicycle?*

Do you see now that how you ask the question will determine how you answer it? This is important in scientific investigations—especially when it comes time to report the results of an experiment.

Think about your favourite ideas. What is it that you want to find out about them? Then ask questions about these ideas. Consider what materials and resources are available when forming questions for the science fair projects. Remember that the science projects questions should be ones that you can answer on their own by carrying out investigations.

Below is a list of general topics which may be used to help you think of more specific things you would like to know about.

Mirrors	Sound	Animals	Rockets	Plants	Energy
Birds	Computers	Food	Jets	Toys	Electronics
Money	Weather	Space	Sports	Cars	Health

1. Make a list of things that you are interested in and would like to know more about.

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2. Write your two favourite ideas in the space provided.

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Below is a favourite idea, and questions about you're your favourite idea

Idea: Musical Sounds

Questions : Does a flute make higher pitched sounds than a tuba?

{This question can be answered by "yes" or "no."}

Will thin or thick rubber bands make higher pitched sounds?

(This question can be answered by making a choice.)

How are musical sounds produced?

(This question can't be answered by "yes" or "no" or by making a choice.)

1. Read the following question and write its type in the space provided.

Question : Can water be used to make musical sounds?

Question Type:

2. Write your favourite idea below. Favourite Idea:

3. Think about your idea and decide what you want to find out about it. In the space below, tell what you know about your idea and also what more you would like to know.

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4. Write four questions about your idea. Include a question that can be answered by "yes" or "no," a question that can be answered by making a choice, and a question that can't be answered by "yes" or "no" or by making a choice.

### Questions

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5. Take a close look at your questions. Decide which one is best for your science project. You want to select a question that can be investigated with materials and resources that are readily available to you. Materials include supplies, and resources include books, magazines, people, computers, etc. Write your best questions inside the happy face.

Best Question-----

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6. Make a list of materials and resources available to you in the columns provided.

Materials-----

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Resources-----

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## 1.2 Making a Good Guess (Hypothesis)

Once you have asked the best questions for a science project, you are ready to form a hypothesis— a good guess that answers the question. For this step, it is best to learn as much as possible about the topics of their questions so that their answers are smart guesses. You can do research to find information on topics by reading, talking with knowledgeable people, using past experiences, watching television, and by using the computer to search the Internet.

You are now ready to start research assignments on the topics of your questions. And work with others to form a hypothesis for each one. This is good practice before beginning a personal project.

Examples

Question: Which dissolves more completely in water—salt or flour? Hypothesis: Salt will dissolve more completely in water.

Question: How does the length of a vibrating object affect its sound? Hypothesis: The longer the object is, the lower the pitch will be.

Making a Good Guess (Hypothesis)

1. Use your past experiences to write a hypothesis for each question.

QUESTION: Who can run faster—boys or girls?

HYPOTHESIS: \_\_\_\_\_

QUESTION: How long does it take for a tray of water to form icecubes after it has been placed in a freezer?

HYPOTHESIS:

Write the question for your science Project. Show your question to your teacher for approval

3. Research (find information for) the topic of your science project question. Obtain information by reading, talking to knowledgeable people, using past experiences, watching television, and by using the computer to search the Internet. In the space provided, write a short paragraph about your science project topic.

4. Now write the hypothesis for your science question.

MY HYPOTHESIS:-----

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your hypothesis to your teacher for approval.