

## **BUSINESS PLAN**

# **BioGeeks**

*- Now Biology is a Geeky Thing!*

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# **EXECUTIVE SUMMARY**

## **Objectives of the Venture**

The primary objective or the aim of the venture is to offer kits that educate and aid students in their quest for learning more about Biotechnology. The kits will provide students with easy and object oriented protocols for various interesting experiments that can be performed even at home without any sort of guidance other than from the manual.

The manual will also provide detailed theory behind the experiments and contain answers to a lot common questions thereby satisfying the curiosity as well as improving the knowledge of the user.

Another objective is to provide experimental resources to the students well versed with theory but lacking practical experience in important areas.

## **Introduction to Products**

Our product range includes wide variety of biotechnology kits (analogous to do-at-home electronic kits) that will contain the following:

- An experimental manual containing protocols for experiments that can be performed using the kit.
- The necessary equipments to aid in carrying out the experiments given in the manual.

# MARKET ANALYSIS

Biotechnology is a growing field with people becoming increasingly curious about the field. There is a lot of hype surrounding the field due to various developments such as cloning, DNA fingerprinting, etc.

However there is not a lot of awareness and knowledge about the actual principles and Technical know-how involved behind the various experimental techniques. The general perception is that learning (even the basics of) Biotechnology is very difficult. Unlike, electronics, computer programming, physics, etc. there is no trend of pursuing Biotechnology as a hobby. What we offer is simple: “a safe, easy and affordable way of learning experimental biotechnology at home”. This is exactly what people require these days.

The growing market can be assessed simply from the fact that for the academic session 2003-2004 the Central Board of Secondary Education (CBSE) in India introduced Biotechnology as an elective subject at the 10+2 level.

## **Target market**

Our target market is schools teaching science, groups of 10-18 year old students or individual students themselves who have an orientation towards life sciences/biotechnology.

As far as targeting schools are concerned, initially, we want to target secondary schools based in NCR region that offer science as an option at 10+2 level. However, we will expand to the entire metropolitan cities in India. It is extremely important to mention here that our kits will complement the school teachers and the curriculum. The kits can also be custom designed for schools.

The students whom we want to target will be those who are inclined towards science, particularly life sciences and who would like to learn practical techniques perform various experiments out of their sheer curiosity.

Since a single student is unlikely to be able to afford costly biotechnology kits, therefore our main focus will be to sell our kits to schools, institutes or groups of students who can buy the kits and perform the experiments collectively.

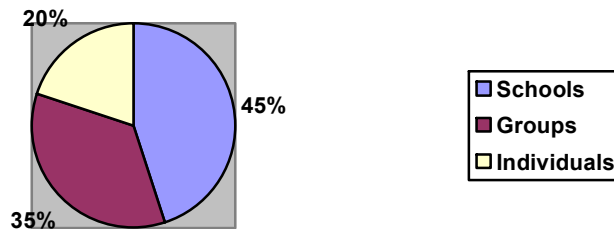
Our teams will contact various schools and institutes of India. We will offer them our kits for the purpose of practical biotechnology education to the students. We will train the instructors about how to use the kits and then they can teach their students about how to use these kits.

According to ministry of education statistics there are 133492 High/Hr. Sec/ Inter /Pre. Jr. Colleges in India in 2001-2002. Even if we target just 1% of schools initially, we will

have more than 1000 schools to which we can sell our kits. Thus, we believe that our sales projection can be met easily. In a nutshell, it can be said that our target market is quite huge and it can be expected to increase further.

*Target Group based on Income:* In case of selling our products to individuals, our target group will be the people whose family income is greater than Rs. 20,000 a month which provides us with a huge market.

### Segmentation of Target Market

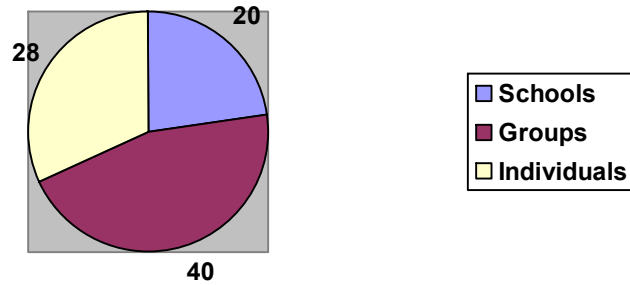


### Experimental Survey

In an experimental survey carried out among 50 students who are currently related to the field of life sciences;

1. 14 i.e. 28% said that they would be interested to buy such kits for their personal use.
2. 20 i.e. 40% said that they would like to buy it in groups.
3. A further 10 said that they would like to use such kits if their school purchased it for them.

Therefore, a total of 44 students, i.e. 88% of our experimental sample were interested in our venture.



*Survey of 50 students*

Thus, based on the above statistics it can be safely said that our product will be a success and our sales projections, as listed later can be easily met.

## **IMPLEMENTATION STRATEGY**

At the beginning, we plan to focus ourselves on designing and selling Biotech-Kits that are analogous to electronics kits. In other words, our kits will be simple and enable students to perform experiments easily without much hassle. But, later we can expand our product portfolio to include e-books, interactive courses, games, etc. related to biotechnology.

### **Product Design:**

Two types of kits will be offered:

- Biotech@Fun
- Biotech@Education

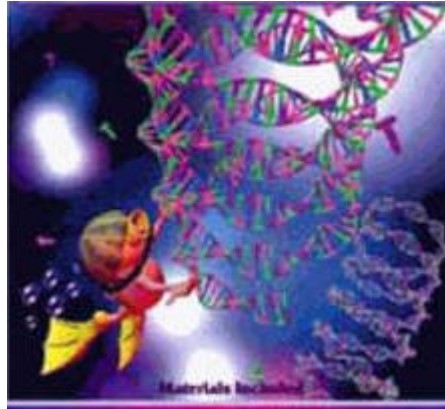
### **Biotech@Fun:**

Kits under this category are aimed at younger people (aged 10-14). The kits will facilitate the students to develop biotech as a hobby. These kits will be based on basics of biotechnology. The theory behind the kits will be simple enough to be understandable by young students. It will promote the students to carry out simple experiments, which are fun and interesting.

In the process of experimenting they will, thus, learn the basics of biotechnology.

*Example Kit:*

### **Basics of DNA kit**



*Price Range:* Rs. 1000-1500/-

By using this kit, kids can experiment and learn about DNA with this extremely user-friendly science kit. This kit will teach kids about the uniqueness of DNA and molecular biology, but in a fun, innovative way that makes it easy to understand!

With this kit, kids will

- Learn about the basic building blocks of life,
- Extract DNA from fruits and vegetables,
- Build a DNA ladder,
- And solve a chromosome puzzle!

This kit also includes basic supplies and a fully illustrated manual to teach and guide.

With this kit, kids will get an introduction to the "smaller parts" of science!

### **Biotech@Education:**

These kits will be based on intermediate to advanced concepts in biotechnology aimed at age group 14+. These will be aimed more towards educating biotechnology. We will try to collaborate with various educational institutes so as to integrate these kits into their practical curriculum for biotechnology.

Moreover, we will also market these kits to students who want to buy these kits independently.

*Example Kit:*

### **DNA Fingerprinting Electrophoresis Lab System**

Learn how forensic scientists around the world use DNA "fingerprints" to solve crimes



*Price Range:* Rs 4500-6000/-

This safe, affordable system lets students electrophoretically separate four DNA samples, then determine the individual "fingerprint" of each sample by comparing the number and location of DNA bands in each lane.

The DNA stain provides easy-to-see results, and you can de-stain with plain tap water. This kit contains materials to run 10 individual gels.

Includes: electrophoresis chamber, gel casting tray, six-well comb, patch cords, platinum electrodes, DNA stain, prepared agarose, running buffer, droppers, staining tray and illustrated teacher's guide with step-by-step instructions.

Please note: Five 9V batteries and DNA samples are required but not included.

### **Development of more kits**

Professors of Universities may be contacted for developing more experimental manuals. These manuals will range from basic learning kits like DNA modeling to more sophisticated kits like Five Station DNA Electrophoresis, which requires skill. After this, along with each of these manuals, the required equipments can be packaged together and sold.

# **EXECUTION STRATEGY**

We will operate in two simultaneous ways:

- Offline base
- Online shop

## **Offline Base**

We will start by offering and selling Biotech kits offline through various agents and shops. We also plan to approach schools personally so that they may include our kits in their biology practical curriculum. We plan to setup India as our base. This is because of:

- Huge market in education area
- The Hype generated around Biotech
- The supplies are cheaper and abundant

However, setting up our base at India has a few disadvantages too:

- Legal issues
- Corruption in India
- Market more demanding/conscious which actually is a blessing in disguise as it keeps us on our toes and makes us strive for the best and forces us to continuously improve our product which will work to our advantage at the global level.

## **Online Shop**

In addition to launching biotech kits offline, we also plan to setup an online shop to sell our products world over. The online site will also serve as a good marketing tool for the company.

Importance of the online shop:

- It generates a passive income (almost)
- We can target a larger market
- It goes with our vision to go global.

## **Supply Chain**

Our supply chain will have 3 components

- Manufactures and Suppliers of constituents of kits
- Assemblers and Packagers of the kits
- Marketers of the kits

We plan to carry out operations 2 and 3 in house and to outsource operation 1.

Outsourcing of manufacturing/suppliers has following considerations:

- We don't invest in costly manufacturing plant
- As our kits will have diverse constituents we wont be able to manufacture all of them

- It will let us concentrate more on design and marketing of kits

For the selection of manufacturers we will prefer the India based companies because that would free us from worries regarding legal issues related to import of chemicals.

However, at the time of starting up of our business, we may also outsource the assembly and packaging also. This is incase we don't have sufficient funds to employ our own people for assembly and packaging.

## **PROMOTION**

Our product is going to be promoted as an educational kit that helps students in understanding biotechnology better. So we will adopt the following promotion techniques to ensure our product reaches the target market.

- Have promotional rallies at secondary schools, Junior Colleges, Poly-tech and Universities.
- Advertisements in science magazines.
- Have live demonstrations and product exhibits at various other places where people visit a lot (like a few shopping malls). This will gather their attention and make them want to buy the product.
- Sales will also take place through the Internet as an online shop that will be advertised using Google or other e-advertising means. This will give the opportunity for anybody to have a look at our product and make shopping for the desired kit easier.

## **MARKETING**

These are the few ways in which we intend to market our product: -

- First of all having link-ups with a few well-established laboratories that manufacture the required reagents for our kits. The advantages of this are that: -
  1. They will already have well-established labs in which we could carry out research and come up with new kits.
  2. They will have a well-established logistic system. This will help in transportation and managing the inventory stock of the kits.

3. They will have a good manufacturing department that will aid in converting the kits on paper to reality and package it in a very attractive way.
  4. For them, there are no extra investment costs.
  5. Finally, we could share the amount of profit that we earn from our kits.
- Second way is that we could make our kits as a part of the workshop (practical/labs) for school students. We may work this out by getting licensing from the government. The reason why this is feasible: -
1. Naturally students are keen to learn and get more hands on experience in the field of biotech.
  2. Many students are making crude DNA models and have vague ideas about DNA fingerprinting, DNA isolation etc.
  3. Our kits will greatly aid them in understand these better.
  4. Prices of our kits are reasonable and they are not harmful as long as they are being used as prescribed.

Higher standards of kits can be brought along as the research continues with the aid of professors. These kits will then target Junior College, Poly-tech and University students.

## **COMPETITION ANALYSIS**

We face competition from the existing web companies selling biotechnology kits internationally. There are web companies such as:

- <http://www.modernbio.com/>
- <http://www.sciencekit.com/>

These players in the market are well established and offer a comprehensive range of kits. Their business model is completely online. This means that if a student/school has to buy some kit then he has to first search for these website and then place order online. They then deliver the product in a few working days.

### **Competitive Advantage**

Since we are based in India and we concentrate on our offline business operations, hence we are better connected to Indian students. Moreover, we will be quite active in marketing our kits in India where this concept is relatively new. Few people in India know that this type of kits exist in market, hence thanks to our marketing, we will have a first mover advantage in India.

## FINANCIAL PLAN

The calculations of our financial plan have been done keeping some rough estimates and figures in mind, derived from actual trends and markets.

<b>Balance Sheet for next four years</b>	
<b>Parameters</b>	
Backup period (in months)	3
Operating costs per month (Rs.)	85,000
Average cost price of our products (Rs)	2,500
Profit margin (%)	30
Duration of research period (in months)	2
Average growth in cost of supplies (%)	6
Average growth in Operating costs (%)	5
Increase in kits sold/month	8
<b>Initial one time investment (in Rs)</b>	
For online shop	15,000
Backup money for operations	336,600
Research investment	170,000
Pre-launch Marketing costs	40,000
<b>Total</b>	<b>561,600</b>
<b>First Year Projections</b>	
Avg. No. of kits sold/month	53
Average cost price of one kit	2,500
<b>Expenditure</b>	
<i>Variable Costs</i>	
Avg. Cost of kits per month	132,500
<i>Fixed costs</i>	
Maximum Online marketing expenditure	6,000
Offline marketing expenditure	20,000
<i>Operating costs</i>	
a) Salary of the Executives	48,000
b) Salary of sales representative	5,000
c) Petrol reimbursement	3,000
d) Packaging and Delivery	10,000
e) Miscellaneous	4,000
f) Office Space Rent	15,000
<b>Total</b>	<b>85,000</b>

Website maintenance cost	1,200
Total fixed cost	112,200
<b>Total Cost per month (Rs.)</b>	244,700
<b>Sales</b>	
Avg. Selling price of one kit	3,250
<b>Avg sales per month (Rs.)</b>	172,250
<b>Second Year Projections</b>	
Avg. No. of kits sold/month	148
Average cost price of one kit	2,650
<b>Expenditure</b>	
<i>Variable Costs</i>	
Avg. Cost of kits per month	392,200
<i>Fixed costs</i>	
Maximum Online marketing expenditure	6,000
Offline marketing expenditure	25,000
<i>Operating costs</i>	
a) Salary of the Executives	50,000
b) Salary of sales representative	5,500
c) Petrol reimbursement	3,000
d) Packaging and Delivery	11,000
e) Miscellaneous	4,000
f) Office Space Rent	15,750
<b>Total</b>	89,250
Website maintenance cost	1,200
Total fixed cost	121,450
<b>Total Cost per month (Rs.)</b>	513,650
<b>Sales</b>	
Avg. Selling price of one kit	3,445
<b>Avg sales per month (Rs.)</b>	509,860
<b>Third Year Projections</b>	
Avg. no. of kits sold/month	244
Average cost price of one kit	2,809
<b>Expenditure</b>	
<i>Variable Costs</i>	

Avg. Cost of kits per month	685,396
<i>Fixed Costs</i>	
Maximum Online marketing expenditure	7,000
Offline marketing expenditure	26,000
<i>Operating Costs</i>	
a) Salary of the Executives	52,000
b) Salary of sales representative	6,000
c) Petrol reimbursement	4,000
d) Packaging and Delivery	11,000
e) Miscellaneous	4,175
f) Office Space Rent	16,538
<b>Total</b>	<b>93,713</b>
Website maintenance	1,200
Total fixed costs	127,913
<b>Total Cost per month (Rs.)</b>	<b>813,309</b>
<b>Sales</b>	
Avg. Selling price of one kit	3,652
<b>Avg. sales per month (Rs.)</b>	<b>891,015</b>
<b>Fourth Year projections</b>	
Avg. no. of kits sold/month	342
Average cost price of one kit	2,978
<b>Expenditure</b>	
<i>Variable Costs</i>	
Avg. Cost of kits per month	1,018,319
<i>Fixed Costs</i>	
Maximum Online marketing expenditure	8,000
Offline marketing expenditure	28,000
<i>Operating Costs</i>	
a) Salary of the Executives	54,000
b) Salary of sales representative	6,000
c) Petrol reimbursement	5,000
d) Packaging and Delivery	11,000
e) Miscellaneous	5,034
f) Office Space Rent	17,364
<b>Total</b>	<b>98,398</b>
Website maintenance	1,200

Total fixed costs	135,598
<b>Total Cost per month (Rs.)</b>	<b>1,153,917</b>
<b>Sales</b>	
Avg. Selling price of one kit	3,871
<b>Avg. sales per month (Rs.)</b>	<b>1,323,814</b>

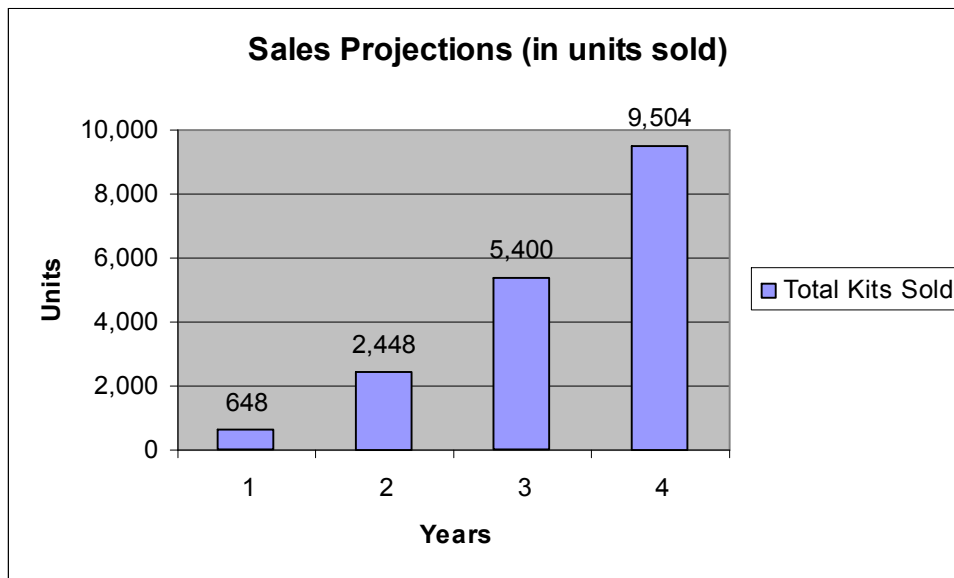
## Sales Projections

Months	Kits Sold/Month	Sales in Rs.
1	10	32500
2	18	58500
3	26	84500
4	34	110500
5	42	136500
6	50	162500
7	58	188500
8	66	214500
9	74	240500
10	82	266500
11	90	292500
12	98	318500
13	106	365170
14	114	392730
15	122	420290
16	130	447850
17	138	475410
18	146	502970
19	154	530530
20	162	558090
21	170	585650
22	178	613210
23	186	640770
24	194	668330
25	202	737643.4
26	210	766857
27	218	796070.6
28	226	825284.2
29	234	854497.8
30	242	883711.4
31	250	912925
32	258	942138.6
33	266	971352.2
34	274	1000566
35	282	1029779
36	290	1058993

37	298	1153499
38	306	1184465
39	314	1215432
40	322	1246398
41	330	1277365
42	338	1308331
43	346	1339297
44	354	1370264
45	362	1401230
46	370	1432197
47	378	1463163
48	386	1494130

### Cumulative Sales Projections

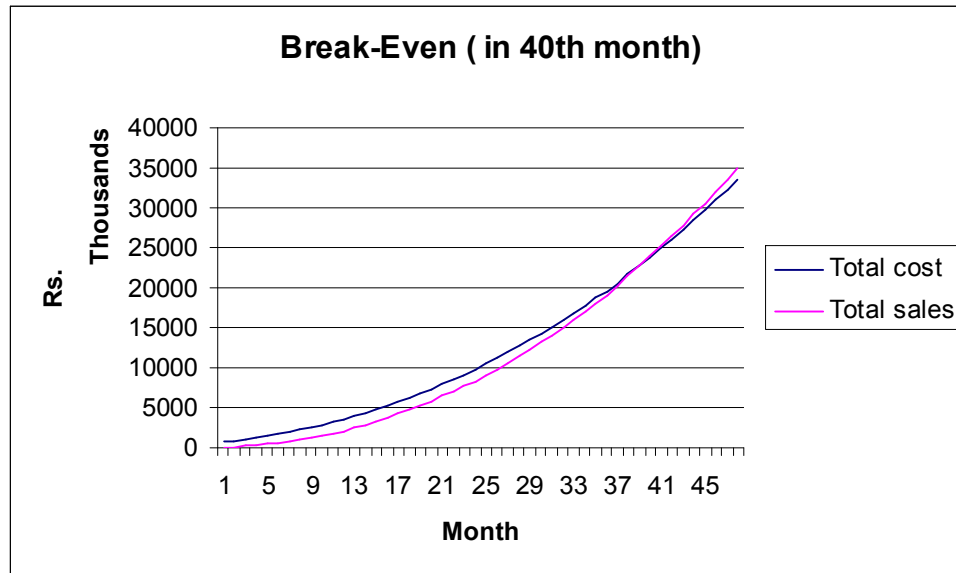
Year	1	2	3	4
Sales in Units	648	2,448	5,400	9,504



### Break even analysis

Initial one time costs				486,600
Months	Fixed costs	Variable costs	Total cost	Total sales
1	112200	25000	698800	32500
2	112200	45000	856000	91000
3	112200	65000	1033200	175500
4	112200	85000	1230400	286000
5	112200	105000	1447600	422500
6	112200	125000	1684800	585000
7	112200	145000	1942000	773500

8	112200	165000	2219200	988000
9	112200	185000	2516400	1228500
10	112200	205000	2833600	1495000
11	112200	225000	3170800	1787500
12	112200	245000	3528000	2106000
13	121450	280900	3930350	2471170
14	121450	302100	4353900	2863900
15	121450	323300	4798650	3284190
16	121450	344500	5264600	3732040
17	121450	365700	5751750	4207450
18	121450	386900	6260100	4710420
19	121450	408100	6789650	5240950
20	121450	429300	7340400	5799040
21	121450	450500	7912350	6384690
22	121450	471700	8505500	6997900
23	121450	492900	9119850	7638670
24	121450	514100	9755400	8307000
25	127912.5	567418	10450731	9044643
26	127912.5	589890	11168533	9811500
27	127912.5	612362	11908808	10607571
28	127912.5	634834	12671554	11432855
29	127912.5	657306	13456773	12287353
30	127912.5	679778	14264463	13171064
31	127912.5	702250	15094626	14083989
32	127912.5	724722	15947260	15026128
33	127912.5	747194	16822367	15997480
34	127912.5	769666	17719945	16998046
35	127912.5	792138	18639996	18027825
36	127912.5	814610	19582518	19086818
37	135598.1	887306.9	20605423	20240317
38	135598.1	911127.2	21652148	21424783
39	135598.1	934947.6	22722694	22640215
40	135598.1	958767.9	23817060	23886613
41	135598.1	982588.2	24935246	25163978
42	135598.1	1006409	26077253	26472309
43	135598.1	1030229	27243080	27811606
44	135598.1	1054049	28432727	29181870
45	135598.1	1077869	29646195	30583100
46	135598.1	1101690	30883483	32015297
47	135598.1	1125510	32144591	33478460
48	135598.1	1149330	33429520	34972590



## Cost Analysis

### Terminology

*Backup Period:* It refers to number of months we should be able to sustain even if we earn nothing.

*Research period:* It is the number of months we will spend researching for supplies, experiments and then setting up the business itself

*Backup money for operations:* Backup Period \* Fixed Cost/month

*Research Investment:* Research Period \* Operating Cost/month

### Data

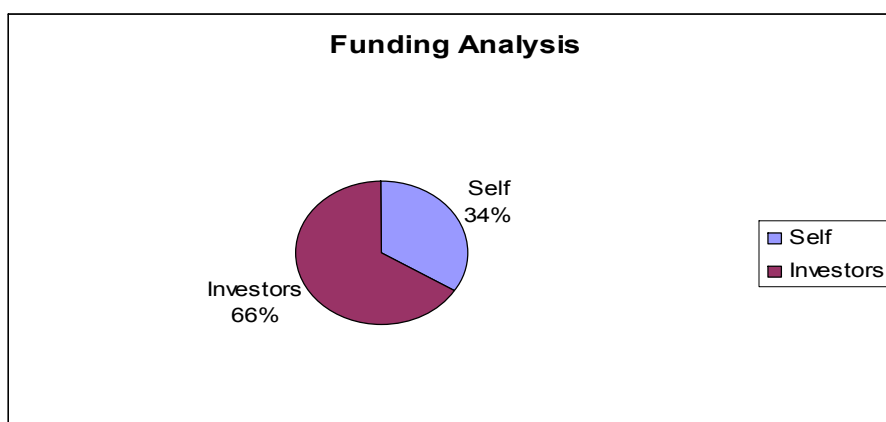
The data below shows the financial requirements for startup of our business:

Backup period (in months)	3
Duration of research period (in months)	2

Initial one time investment (in Rs)	
For online shop	15,000
Backup money for operations	291,600
Research investment	140,000
Pre-launch Marketing costs	40,000
<b>Total</b>	<b>486,600</b>

Startup Costs (in Rs.)	
Initial One time Investment	486,600
Cash Balance on Start Date	250,000
Startup Inventory	150,000

<b>Funding (in Rs.)</b>	
Self	300,000
Investors	586,600
<b>Total</b>	<b>886,600</b>



## **SWOT ANALYSIS**

### **STRENGTHS:**

- First mover advantage in India.
- Products are license protected.
- Expanding market.
- Both online and offline operations will help us market our products better.
- Our marketing will be targeted.
- Product is one of its kinds in India.

### **WEAKNESSES:**

- Product easy to duplicate.
- Initial promotion requires lot of efforts.

### **OPPORTUNITIES:**

- Business can be easily and quickly expanded to all targeted territories.
- Opportunity to introduce other educational resources like e-books.
- We can offer training courses in biotechnology
- We can move into other branches of science.

### **THREATS:**

- Rivals can be expected in the market
- International companies may also enter the Indian market.
- Product is susceptible to government policies.

## **CONTINGENCY PLAN**

Since we are very passionate about our venture, we will try our level best to make it successful. There is an extremely low probability that things will not go as projected in this business plan. To tackle any eventualities, we have some ideas in form of contingency plan:

- We can modify or drop our online business model if it works out to be unprofitable.
- We may shift the marketing division to some other company on commission basis.
- Just in case our produce does not succeed as per our expectations then after a period of two years (subject to revision) we shall start selling the components of our kits individually.
- We may also sell the manuals as accessory practical booklets at just enough prices to recover our investment.

## **EXIT STRATEGY**

We will consider exiting the business under following conditions:

- No substantial profits to the company for five years in row.

On deciding that we want to exit the business, and based on the market conditions at that time, we will consider one of the following options:

- Selling the business: We will try to sell our business to a potential buyer. The company's workforce will possibly remain unchanged under the new acquirer. The company will benefit from the expanded and fresh inflow of capital from the acquirer.
- IPO: We will sell the shares of the company to the public. From the capital obtained by selling shares, we can expect to expand the marketing budget and improve our overall business model.

## **FUTURE GOALS**

### Global Vision

We will, from the start, have a global vision. That means we will sell our products to students world over, not just India. However, it should be noted that India would remain our major focus.

### Expansion

Once we have established ourselves well in this country, we could move overseas to other countries like Singapore. The reason we chose Singapore as our second area of expansion are: -

- Singapore has shown great prospects in terms of growth in biotech areas.
- Lot of educated people who are interested in this field. Hence, a huge market.
- Being very close to India, co-ordination becomes easy. Transportation of goods will be cheaper and more effective.
- Internet being well established as a major source of marketing in Singapore, it will be easy for people to make orders through our online shops.

Later on we could move into other countries like Malaysia, China and finally target the west. It's a matter of time depending on how we grow and establish ourselves.