

Eureka - Project Brief

Eureka offers hand-on science activity kits for students from grade 3-8. The company (ThinkLabs Technosolutions) wanted a complete visual facelift for this product.

These kits were aimed at helping students, understand the physical/practical applications of all the concepts they learn in textbooks. It was an interesting challenge to provide the best hands-on experience in a pocket friendly range, such that the product was easily accessible to as many students as possible. To start off, we gamified the activities by adding attractive visuals corresponding to each activity, thereby making it more engaging and fun for the students.



Activity, Mirror Mania: I illustrated the product visuals here, to gamify an activity on 'Reflection' into a treasure hunt game. The background visuals were also created by me using paper cut outs, for the product photoshoot.



Learner Notes: The instruction manuals with every activity (which we called Learner Notes) were also a very important part of this kit. These learner notes not only had instructions to conduct the activity, but also had related questions and helped in better understanding the concept behind each activity.

I redesigned these Learner Notes ensuring that they are informative, functional and yet attractive and fun for the kids. Keeping in mind the age groups of the users my design was more vibrant, visual and playful for the younger age group (grade 3-5) whereas for grade 6-8 I used a relatively more matured visual style.



Learner Notes: Since stories can be a great way of learning, for grade 3-5 (younger age group), I used visual storytelling as a medium to explain the scientific concepts . The illustrated stories help the students understand and retain the concepts better, it also evokes a feeling of curiosity and excitement with every activity box .

Part 2: Plant a Plant

Varun's mystery seed could be anything. Maybe a Papaya or it could be a Corn plant. Let's plant these two plants to see what they look like, their similarities and differences.

1. Take the wooden base and insert into the slots on the cardboard.
2. Fix the stand on each side by inserting the slots into the foam.
3. Your plant bed is ready. Let's plant a Papaya tree first.
4. Take the thick stem, insert it in one of the slots in the base.
5. Peel the papaya sticker. On the sticky side sprinkle a few seeds, but it will give you an idea of how fruits keep the seeds protected inside them!
6. Carefully pass the papaya through the top of the stem. Now fold and stick the fruit together.
7. Your plant has a Tap Root system in which several small roots grow out of the main root. Paste the correct root system sticker at the bottom of the stem. Your papaya tree is ready!
8. It's time to plant the Corn now. Take the thinner stem.
9. Peel and paste the sticky foam strip on it.
10. It's time to plant the Corn now. Take the thinner stem.
11. Peel and paste the sticky foam strip on it.
12. Paste the other side of the bottom of the stem. This is the Fibrous Root system where numerous roots grow at the end of the stem. Your Corn plant is ready!

Plant Play

Hello Mrs. D'Souza! See I found a mystery seed!
Ouch! Let's plant it right away and see what plant comes out of it!
Just a little while, until the seeds sprout!
Do we have to wait very long?
Mrs. D'Souza, can you tell me what part of the plant you'll be able to see above the ground?



Learner Notes: Another spot illustration from one of the learner manuals



Learner Notes - Grades 6-8

Observation

1. The blue ink_____

- rises up and moves over towards the hotter side
- rises up and falls back down
- spreads from the bottom and moves towards the hotter side and then rises up
- rises up and moves towards the hotter side and then comes back down

2. The red ink_____

- rises up and moves over towards the hotter side
- rises up and falls back down
- spreads from the bottom and moves towards the hotter side and then rises up
- rises up and moves towards the hotter side and then comes back down

Conclusion

1. The ink in the hot region _____ and moves towards the cold region.

- rises to the top
- spreads from bottom

2. Near Earth's surface _____ (hot/cold) air rises up whereas _____ (hot/cold) air situated at a higher altitude comes down.

Conclusion

1. The hot winds from _____ (Rajasthan/ Arabian Sea) rise and the cold winds from _____ (Arabian sea/Rajasthan) move towards the hotter region.

2. This mode of heat transfer within the tray was due to _____

- conduction
- convection
- both conduction & convection

Reflection

1. True or False

- Heat transfer by conduction does not require direct contact.
- Heat transfer by convection takes place in solids.
- Heat transfer by radiation requires direct contact.

2. Which set of images are correct?

A.

B.

3. Which of the following is NOT a method of heat transfer?

- Radiation
- Conduction
- Convection
- Connection

4. Which of the following methods of heat transfer takes place when two solid bodies are in contact with each other?

- Radiation
- Conduction
- Convection
- Connection

Convection Current

Have you ever wondered how land and sea breeze are formed? Why hot air above the candle or a flame rises up? Why does a glass filled with warm water, when kept undisturbed for some time, contain colder water at the bottom? It is likely that you would have asked these questions. Do you think these questions are connected in some sense?

Let's get at the heart of these questions by doing an interesting activity.

Material List

Eureka Cube	10ml syringe	Spatula
Foam frame cut-out	Red ink	Water
Hot pack		

