Getting Creative with Pororo

The Little Penguin

Educational Animation on IP for Children

A Practical Guide
for Parents and Teachers

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Getting Creative with Pororo The Little Penguin

Educational Animation on IP for Children

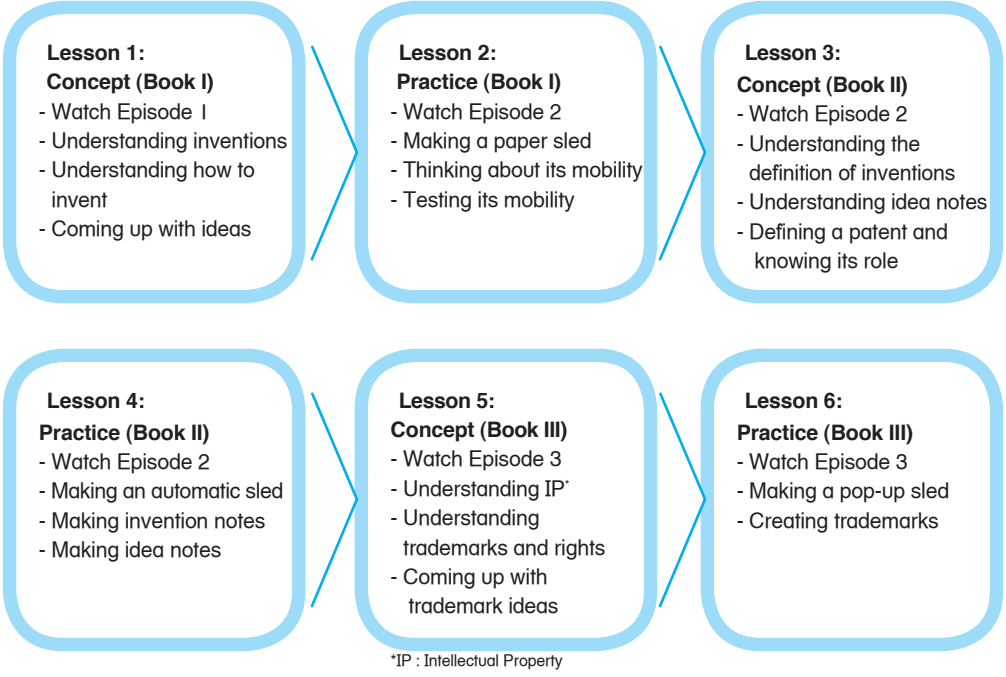
Table of Contents

1. Educational Outline for the 'Getting Creative with Pororo'

Teachers' guide for 'Great Ideas'…

There is a 3D animated character, Pororo, who is so popular among children that he is even called the 'President of Children.' Pororo has aired in 82 different countries, in different languages, inspiring children with hopes and dreams all over the world.
The World Intellectual Property Organization and the Korean Intellectual Property Organization have created three episodes of Pororo for educational purposes to teach children about inventions.
The episodes teach children about inventions in a fun and natural way by showing Pororo and his friends inventing a new sled. The episodes talk about how to come up with ideas, how to keep notes on your ideas and understanding patents, trademarks and copyrights. These videos have been uploaded to YouTube, and are watched by many people around the world.
This guide is a teacher's reference to using the three episodes to teach children at the preschool level to lower levels of elementary school about inventions. The workbooks do not teach by just providing text. Instead, the students learn by crafitng materials and practical exercises.

Flowchart of the 'Getting Creative with Pororo' Lessons



*IP : Intellectual Property


Getting Creative with Pororo
The Little Penguin
1
Great Ideas
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PORORO SUPER SLED
PORORO SUPER SLED
STICKER 1-1(2page)
idea
stone
water
fire
think
try
creative

Practical Guide for Workbook I

‘Great Ideas’

1) Video Content Analysis
2) Summary of Lessons
3) Lesson Objectives and Important Notes
4) Lesson Analysis
5) Lecture Summary

2. Practical Guide for Workbook I 'Great Ideas'

I) Video Content Analysis

Workbook I is based on the episode 'Great Ideas'. First, show the students the episode to make the lesson fun.

Episode 1: Summary of 'Great Ideas'

Pororo is riding snow sleds with his friends. Eddy shows up with a rocket-shaped sled and surprises his friends. How can they make a sled that is faster and more fun? Eddy says that in order to invent a new sled they must use idea notes. Will Pororo and his friends be able to invent a new sled?

Pororo gathers ideas with his friends for their new sled invention. How will they make a fast sled? 'What if we use wind?' But that's useless without wind. 'What if we use a balloon?' Although it's fast, it doesn't go in the direction we want. 'What if we use a fan?' They made a sled using a fan, but it was too weak to push the sled forward.

Why isn't it moving? In order to discover the problem, Pororo and his friends gather their thoughts. 'We can increase the power by adding more fans.' 'We can increase power by compressing air, like a balloon.' What if we use two more fans and compressed air? That's the principle of jet engines.

Pororo and friends neatly make their idea notes and draw blueprints. They are successful in inventing a jet engine! The friends tie the other sleds to the jet engine sled and ride together.

2) Summary of Workbook I

Try this!
In the video, Pororo and friends use keywords about inventions. Ask the children to raise their hands and talk about what they remember from the video, then set a goal together.

Summary (lines)

'You have to make good idea notes in order to invent.'
'This is a blueprint. I designed the rocket-shape to stream the airflow.'
'I first started making inventions by reading books.'
'Can we also invent? Of course, anyone can invent.'
'The sled must be able to go not only down a slope, but be able to move on its own.'

3) Lesson Objectives and Important Notes

① **Lesson Objectives for Workbook I**
- Instead of giving the dictionary definition of 'invention', teach the children to learn naturally.
- Have the children find inventions and inventors in their daily lives.
- Have the children learn to come up with their own ideas.
- Have the children learn the steps to an invention and have them reach an idea.
- Show the children the fun of inventing through practice.
- Have the children learn ways to improve their inventions through comparison.

② **Important Notes**
- Give children the confidence to believe that anyone can invent.
- Do not make the lesson into a lecture about the word.
- Make sure to show the video and go through the practice before the lesson.
- Create an environment for the students to do it themselves.
- Have the children share their ideas and discuss with other children, to create active participation.
- Make sure that the children do not get paper cuts during the practice!
- You need to schedule enough time for the students to learn effectively.

4) Lesson Analysis (Lesson 1 – Concept)

- Workbook 1 Page 2~3 Understanding 'Inventions'
  Answers: idea, try, think, creative (p2) pencil, light bulb, glasses, car (p3)

Try this!

√ What do the children think of inventions? Have them write down the inventions in their daily lives.

√ Teach them the difference between discoveries and inventions. Give the children a quiz on inventions, to be clear about them.

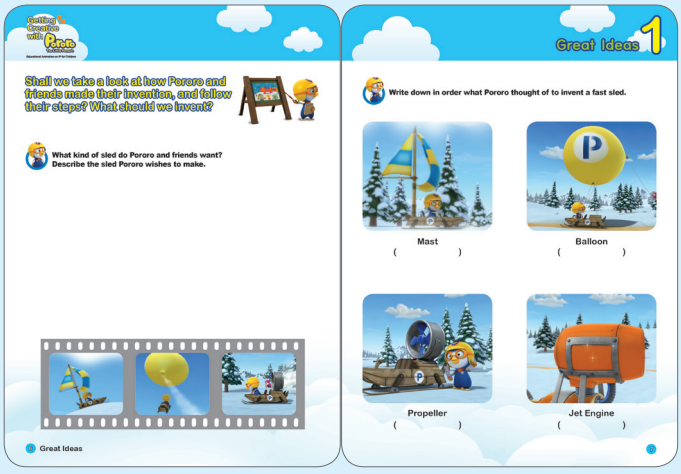
- Workbook 1 Page 4 Understanding 'Inventions and Inventors'
  Answers: Thomas Eddison-light bulb, The Wright Brothers-airplane, Alexander Bell-telephone, James Watt-steam engine (p5)

Try this!

√ Once the children understand inventions, ask them who can invent. Make them discuss the inventors that they know.

√ See which inventor made which invention. Talk about the inventors and the inventions and become familiar with the concept of inventions.

Guide book 1



• Workbook I Page 6~7 "Features of An Invention"
Answers : mast, balloon, propeller, jet engine (p7)

Try this!

√ Follow the steps of inventing that the characters take in the video and guide the children to come up with their own invention ideas. First, make a list of the features of the invention they decide to make, to understand about coming up with ideas.

√ Go over the steps Pororo took to make the final invention, a jet-engine sled, to teach the children about the steps in inventing.

Additional Notes +

Definition of Invention

An invention is making something new using creative ideas and technology. Get into the habit of looking for things that could improve people's daily lives – even elementary school students can invent!

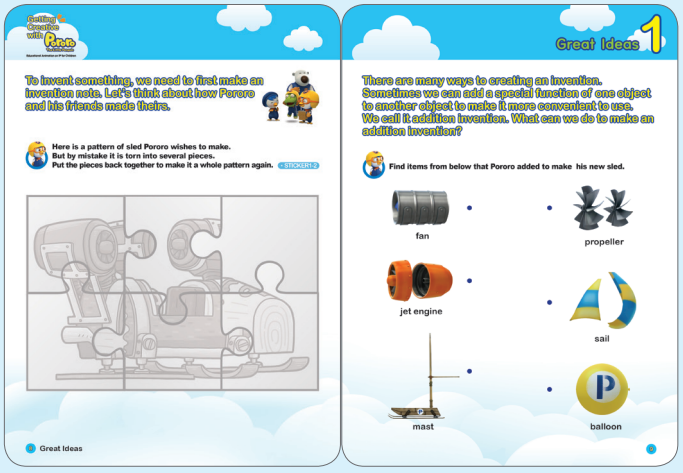
A new idea could improve humanity greatly and bring wealth to the person and the nation. In the modern, competitive world, the importance of creative invention is getting greater.

Invention ideas and how to invent:

There is no specific equation, technique or method for coming up with invention ideas. However, brainstorming, PMI*, addition and subtractions to an existing invention, changing the shape or size, changing the use, imitation invention and other invention techniques can help you come up with ideas.

One of the methods used most by inventors and designers to express the shape of an object is to make a free-hand sketch. Free-hand sketching is a technique for drawing your thoughts on paper quickly and easily.

*PMI : A decision-making method that encourages us to look at an idea from more than one point of view. PMI means Plus (a benefit), Minus (a downside) and Interesting (an interesting point).



• Workbook I Page 8~9 "Invention Ideas"
Answers : fan-balloon, jet engine-propeller, mast-sail (p9)

Try this!

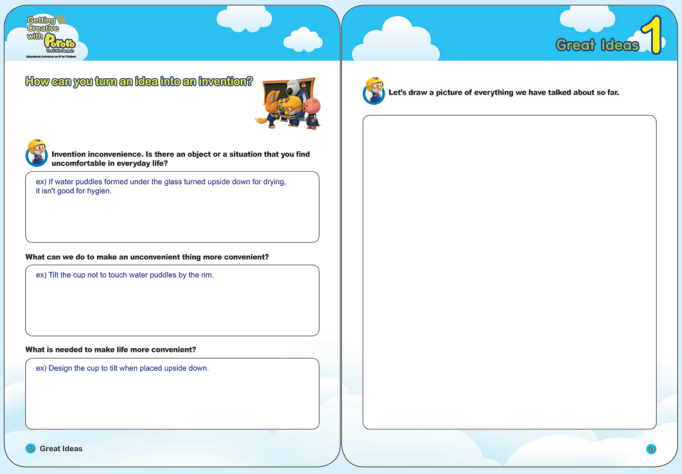
√It's lesson break. Complete the puzzle and find the features of the sled.
√ This is the step of learning specific steps in inventing. The first method is addition inventions. Find addition inventions in the video.

• Workbook I Page 10~11 "Invention Ideas"
Answers : roof, cord, seeds (p11)

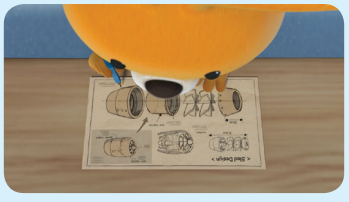
Try this!

√ Find examples of the inventions in daily life and ask them how the "addition" was made to these inventions. Ask the children if there are any objects to which they can apply an addition in their homes. Have a discussion about other "addition inventions" in their lives to better understand the concept.
√ Learn about "subtraction inventions" after learning about addition inventions. Learn about the differences between subtraction inventions and addition inventions, and find examples of each.

Guide book 1



• Workbook I Page 12~13 "Invention Ideas"



Try this!

√ This is the stage of developing your idea for an invention. Have the children think about inconveniences in life and come up with ideas to realize the importance of inventions.

√ This is the stage of developing the idea. If they have found inconveniences, have them try to think of ways of mitigating them.

√ Have a discussion about mitigating an inconvenience. If there are, or could be problems with an idea, have the children discuss how they could solve them.

√ This step is the process of showing the results in drawings. The children's art skills may vary. They must be well guided, to show their thoughts in their drawings.

Additional Notes +

The 10 principles of inventing that you must know.

❶ When you have an idea, make a note immediately.
❷ Necessity is the mother of invention.
❸ Adding is also an invention.
❹ Change the shape.
❺ Finding a different use is also inventing.
❻ Thinking in a different way is also inventing.
❼ Mimicking one's idea is also inventing.
❽ Making something bigger or smaller is also inventing.
❾ Using waste.
❿ Changing the material is also inventing.

Additional Notes +

Addition Invention

Written by – WANG Yeon-joong (Director of Research Center for Korean Invention Education)

The easiest form of math is “addition”. Similarly, the simplest form of inventing is “addition”. It’s adding an object to another object, or adding a method to another method. You don’t need to add new objects or new methods. You can put existing objects or methods together. The person who demonstrated this method the best was an American artist, Hymen.

Hymen was a poor art student in Philadelphia who nursed his sick single-mother from when he was 15. He had to draw to make a living. His days would start very early. One problem he always faced was losing his eraser while working on his sketches.

“Where did my eraser go?”

Hymen searched his room thoroughly, but he couldn’t find the eraser. He ended up not drawing a single line. This happened quite often to Hymen because he was absent-minded. The next day, he tied an eraser to his pencil.

“I won’t lose it now.”

He was only satisfied for a second. The eraser hanging off the pencil gave him a lot of discomfort while drawing. Then one day, when Hymen put on his hat and stood in front of the mirror, an idea came to him.

“Why don’t I put the eraser on top of the pencil like a hat?”

Hymen fixed an eraser to the end of a pencil using small metal pieces. He had finally solved his problem. With help from a friend, he registered the patent, then visited a pencil manufacturer. The president of the company purchased the patent for $5,000 every year for 10 years. The new kind of pencils, with their eraser ends, sold very well. With the help of his patent, Hymen built a proper artist’s studio and officially entered the American art world.

There are countless cases of “addition inventions”. When telephones were first invented, the microphone and the speaker were separate parts. Then, someone had the idea to put the speakers and microphones together, making them more convenient. Rice cookers that can keep rice warm, clocks with radios, decorative lights, necklace watches, bookshelves added to desks and one-piece dresses are all examples of combining two items. Recently, inventions have had three or four features added into one item. Examples include adding a camera and internet access to telephones, adding calculators and games to clocks and adding a video player and singing programs to television sets. Addition inventions will continue into the future.

4) Lesson Analysis (Lesson 2 – Practice)

Try this!

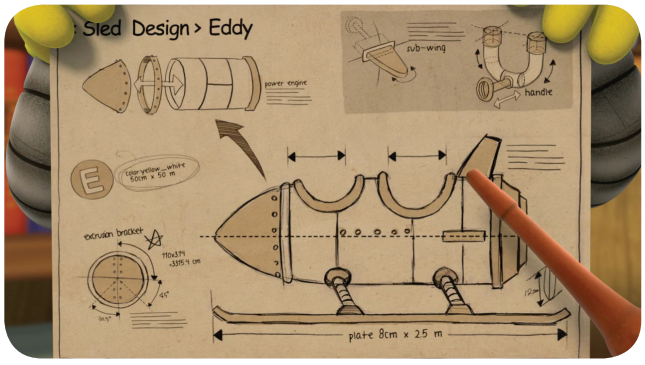
You can have two lessons, Lesson 1 and Lesson 2, after watching “Getting Creative with Pororo”. We have designed Lesson 1 to be about the concept behind inventions. Lesson 2 will focus on the practice. If you’re not continuing to Lesson 2 from Lesson 1, then show the video one more time to refresh the concept.

The paper sled used in the practice is based on the rocket sled that Eddy makes in the video. Children can perform experiments by adding sails or a balloon to the sled.

• Workbook I Page 18 "Paper sled"

Try this!

√ Lesson 2 has been designed to practice Lesson I. It is important to guide the children to follow the steps thoroughly. The main focus of the lesson is for the children not to rush and to be detail-oriented. This lesson should be guided and given enough time.

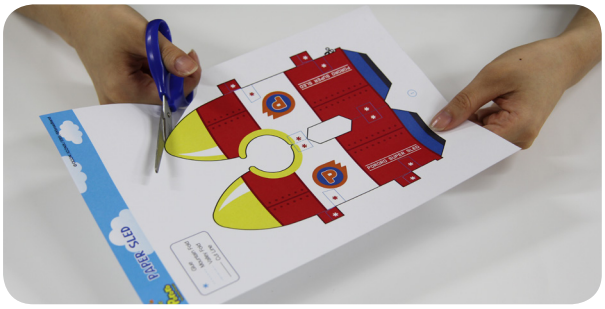


Additional Notes +

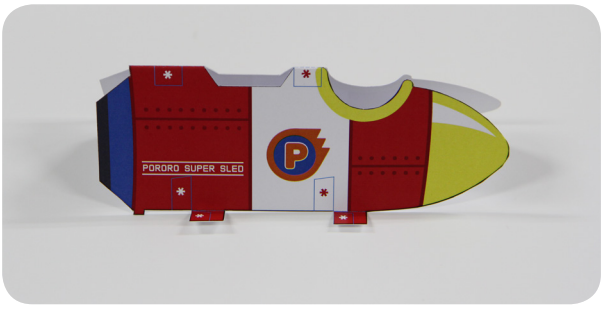
Precautions in paper crafting

- You must take extra care when using crafting paper.
- For toddlers and kindergarten children, make sure that they don't get paper cuts.
- Keep water away from paper materials.
- If the paper you are using is too thin, glue some sheets together to increase thickness.
- Fold the dotted line (– – –) inwards and alternating dashed lines (•–•–••) outwards.
- Do not try the paper sleds in places with high friction.
- When teaching two or more students, have them compare sails and balloons.

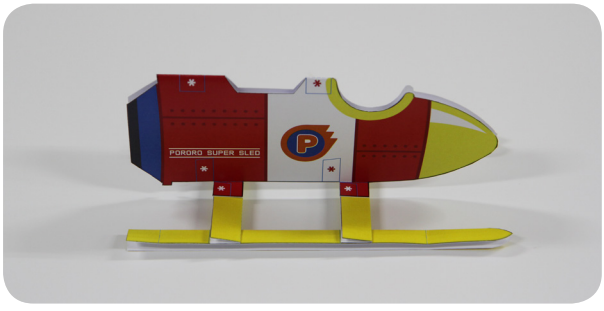
Paper sled



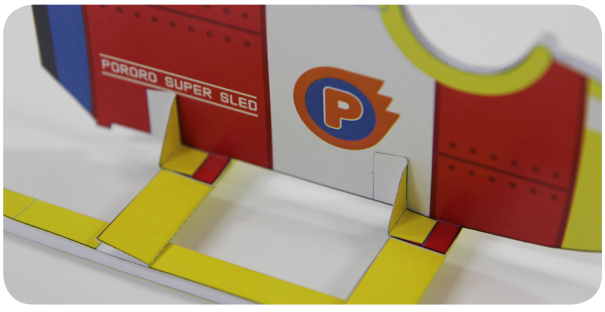
❶ Cut along the cutting line on the sheets.
(Be careful not to harm your hands!)



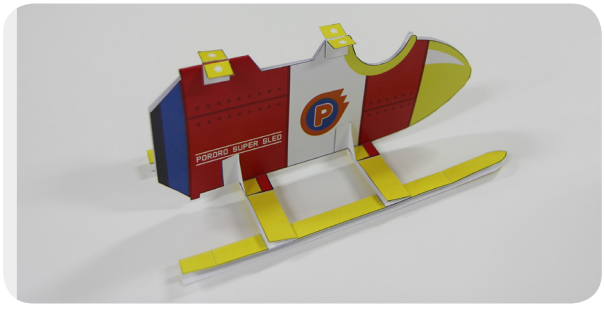
❷ Fold the body. (①)



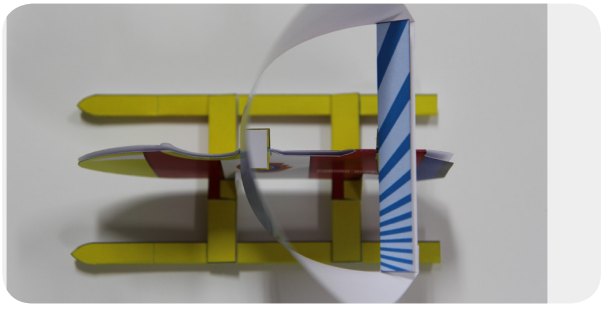
❸ Attach the leg to the body. (②～⑤)



❹ Attach the rest of the component and fix it.
(⑥～⑨)



❺ Attach remaining parts onto the body. (⑩～⑬)



❻ Set sail. (⑭～⑮)

Additional Notes +

Invention Methods

1. Addition Method
- Adding a different item or a new function to an existing item.
- Xerox + printer → Combination printer

2. Subtraction Method
- Subtracting a material, function, or a shape from an existing item.
- Telephone – wire → Wireless phone

3. Opposite Method
- Making an existing item perform its function in the opposite way.
- Motor → Generator

4. Method of Finding a Different Use
- Finding a different use for an existing item.
- Thermometer → Clinical thermometer

5. Method of Changing the Material
- Changing the material of an existing invention to make it more convenient.
- Wooden toothpick → Starch toothpick

6. Method of Changing Shape
- Changing a shape to make it more convenient and to gain a new function.
- Straight straw → Bent straw

7. Method of Borrowing Ideas
- Applying others' ideas to make something more convenient.
- Sun glasses → Sun-cap

8. Method of Enlarging or Reducing
- Making an existing item bigger, smaller, thicker, thinner, longer or shorter to make it more convenient.
- Speakers → Earphones

9. Method of Using Waste
- Using waste to make something new.
- Milk cartons → Paper rolls

• Workbook I Page 19 "Comparison"

Try this!

√ The main focus of the practice lesson is not the crafting, but the comparison of the finished work. Divide the children into two groups, either making sails or balloons. Or give both tasks to each student for comparison.

√ Have a discussion about the observations that the students make during the experiment. Try to think about inventions in our lives that use the wind as a power source.

5) Lecture Summary

① An invention is something new from creative ideas and technology produced to improve our lives.

② See in which part of life Pororo and friends needed to make improvements, and see how they tried to do so.

③ Pororo took good idea notes for making his sled. Not only did he draw designs in the notes, he made a log of his experiments and their dates. (Continued in episode 2)

④ Pororo and his friends came up with the idea of making the sled together.

⑤ In order to improve it with air or a balloon, they used the addition method.

⑥ An addition invention is adding one item to another item. You don't need to make something new or think of a new way. You just need to add existing items or methods together.

⑦ The subtraction method is taking out something inconvenient or reducing it to increase functionality.

⑧ Lesson 1 is conceptual and Lesson 2 is practical. The children can make the paper sleds and come up with further ideas to improve them.

⑨ Experiment by powering the paper sled with wind or balloons and see the difference.

⑩ Watch the video, solve the problems in the workbook and craft the paper assignments for the discussions.

Teach the children that they can invent together. Also, emphasize the cooperative aspects when making something together.


Getting Creative with Pororo The Little Penguin
2
The Invention Contest
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STICKER 2-1(4page)
STICKER 2-3(10p
STICKER 2-2(7page)
to make life easier
making
new things
using new ways and skills
STICKER 2-4(12page)
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Practical Guide for Workbook II

‘The Invention Contest’

1) Video Content Analysis
2) Summary of Lessons
3) Lesson Objectives and Important Notes
4) Lesson Analysis
5) Lecture Summary

3. Practical Guide for Workbook II 'The Invention Contest'

I) Video Content Analysis

Workbook II is based on the episode "Invention Contest". First show the students the episode to make the lesson fun.

Episode 2 : Summary of "Invention Contest"

Pororo experiments with his new sled, which now has two jet engines. Then he runs into the Rabbit Twins, who are on their way to the Invention Contest. Pororo hears about the Invention Contest and decides to take part too.

The Invention Contest starts and the first participant, Deer, shows his electric car. Deer's electric car can run without gasoline, with just electricity. However, it can't get very far without the power cord. Because it is impractical, the judge decides that it cannot be considered an invention. The next contestant, Monkey, shows his toaster, fan, and thermos bottle. However, they are already items in use, so cannot be considered as inventions.

The last contestants – the Rabbit Twins and Pororo – come out with their jet-engine sleds. The judge asks them both to show their idea notes, and then decides that it was Pororo who invented jet-engine sleds first. This was because his idea notes logged his progress with dates. But the Rabbit Twins' notes only said that they had made reference to Pororo's sled. The Rabbit Twins learn that they shouldn't have made the jet-engine sleds without Pororo's permission and apologize to Pororo. Pororo gives permission to the Rabbit Twins to make jet-engine sleds. Pororo is the winner of the competition.

2) Summary of Workbook II

Try this!
In the video Pororo and his friends mention keywords about inventions. Ask the children to raise their hands and talk about what they remember from the video, then set a goal together.

3) Lesson Objectives and Important Notes

Summary (lines)

"Inventions must be practical."
"Inventions are making new items that can improve our lives. You cannot call items that we are already using 'inventions'."
"It is important to keep everything in your idea notes when you're inventing."
"An invention is the result of the hard work of the inventor. The inventor deserves the reward for it."

① Lesson Objectives for Workbook II
- Teach what can and cannot be considered inventions.
- Have the children learn about inventions naturally.
- Have the children understand about patents and their importance.
- Have the children understand the importance of idea notes.
- Have the children understand how to make idea notes.
- Have the children write idea notes by themselves and learn the steps.

② Important Notes
- Encourage the children to invent their own ideas.
- Guide the children to act rather than to sit and listen.
- Have the children watch the video and go over the practice before learning.
- Create an environment where children may learn by themselves.
- Have the children discuss their ideas for active participation.
- Plan enough time for the practice to give the best learning experience.

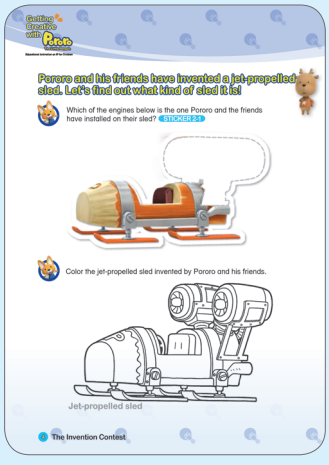
4) Lesson Analysis (Lesson 3 – Concept)

• Workbook II Page 2~3 "Knowing the Inventions in the Competition"
Answers : Pororo-jet-engine sled, Deer-electric vehicle, Monkey-thermos, toaster (p2)


(p3)

Try this!

√ Find out which participant made which invention. Talk about the participants and their inventions to give the children an introduction to the lesson to come.

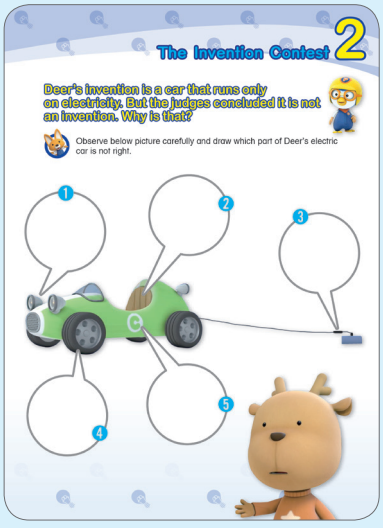


• Workbook II Page 4 "Observing Inventions"

Try this!

√ Instruct the children to observe and describe the features of each product. Let the children think about the definitions of invention.
Guide the children to find out the intentions of the inventor.

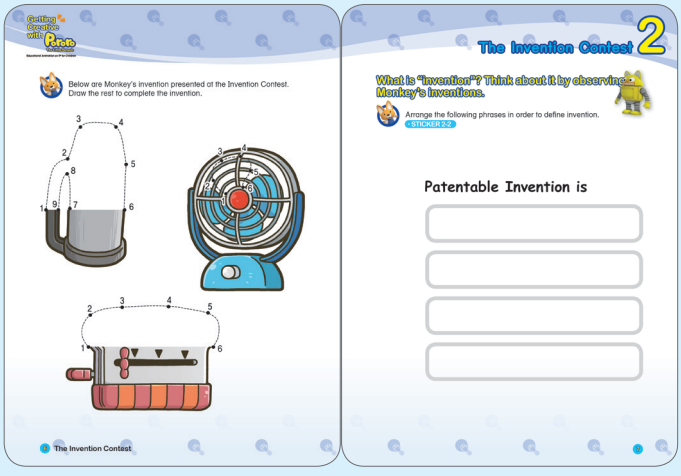
Guide book 2



• Workbook Ⅱ Page 5 “Requirements of Inventions”

Try this!

√ Understand the problems with Deer’s invention. Guide children to think about the ways to improve on Deer’s invention and remind them of the definitions of invention.



• Workbook Ⅱ Page 6~7 “Understanding Inventions”

Answers :

1. to make life easier
2. new things
3. using new ways and skills
4. making (p7)

Try this!

√ Try to think about various inventions around us, by talking about what Monkey’s inventions are.

√ Set up an activity to put the words in order to make a sentence about what an invention is. Guide the children to speak about inventions by themselves, to make the correct sentences.

• Workbook II Page 8~9 "Requirements of Inventions"

Try this!

√ Try to think about what was wrong with Deer's and Monkey's inventions, according to the definition of an invention mentioned above. Also, have a discussion about 'new' things.

Additional Notes +

The inventor of an engine, Heron

Pororo made a sled with jet engines. But who invented the engine? It was Heron, an ancient Greek mathematician.
Heron made more than 100 inventions with his gift for mathematics. One of his best inventions is the first engine known to mankind, the Aeolipile. The Aeolipile was designed to spin with steam power. It's the first steam engine known to mankind. Heron even made an automatic gate to the temple with this device.
Heron also invented the first vending machine for holy water. Similar to how toilets work, the weight of the coin would open the stopper and the holy water would flow out. It was the first vending machine.
Heron also invented the first rifle and came up with a mathematical equation called Heron's formula, which calculates the area of a triangle when you know the lengths of all three sides.
Because of his achievements in machine engineering, his contemporaries called him 'the machine man'.

Guide book 2

• Workbook II Page 10~11 “Understanding Idea Notes”
Answers : above-Pororo, below-the Rabbit Twins (p10) Pororo (p11)

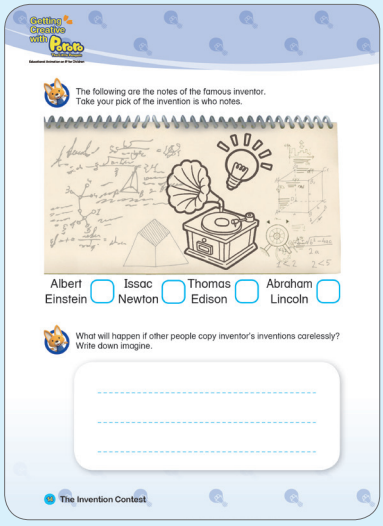
Try this!

√ Guide the children to learn about the importance of idea notes by comparing good and bad examples
√ Guide the children to find out critical differences between similar inventions.
√ Teach them the reason why Pororo won the prize.

• Workbook II Page 12~13 “Thinking About It”

Try this!

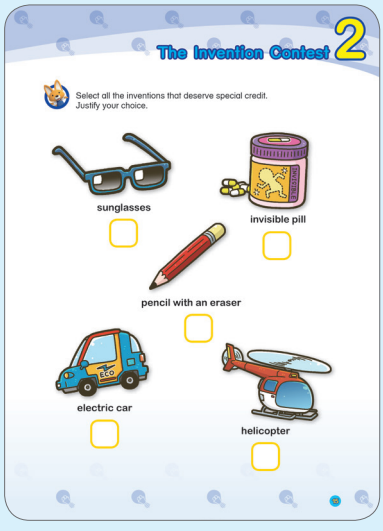
√ This is the stage, understanding the processes needed to make a patented item. Discuss freely why Pororo gave his approval and encourage the children to come up with creative answers.
√ This is the time to imagine what kind of jet engine sleds the Rabbit Twins will make. Think about the steps to inventing that we have learned so far and encourage the children to expand on their ideas.



• Workbook II Page 14 "Importance of Idea Notes"
Answer : Thomas Edison

Try this!

√ Instruct the children to make idea notes of various inventors' design inventions from idea notes.
√ This is where the children learn about the importance of patents. Try to imagine what would happen if people just copied inventions without permission. Have the children understand the importance of protecting ideas and why we need to do so.



• Workbook II Page 15 "Requirements of Inventions"
Answer : Invisible pill

Try this!

√ Teach the children how to distinguish the existing items from inventions to educate them that inventions require a new method or a technology. Also show them that many inventions have started from imaginary items in movies and cartoons.

Additional Notes +

Inventions that changed history

"Necessity is the mother of invention"
-Plato

An ancient philosopher and scientist, Plato gave us the quote above. He means that inventing is people making what is necessary to have a more convenient life.

In reality, people have made various inventions to suit what they need in their lives. Thanks to these inventions, humanity has the civilization that we live in today. It all started about 3,000 years ago, when mankind first made letters. With a system of letters, people could share their knowledge and leave it in records for the future. Later, people were able to propagate their knowledge further with the invention of the printing press. They could make books faster and in larger quantities with printing technology. Thanks to this technology, more people could read books and learn, and even more inventions could be made.

In the 18th Century, James Watt invented the first steam engine in England and ushered in the industrial age. Items could be made faster in factories. This resulted in a shift in the economy from agriculture to manufacturing.

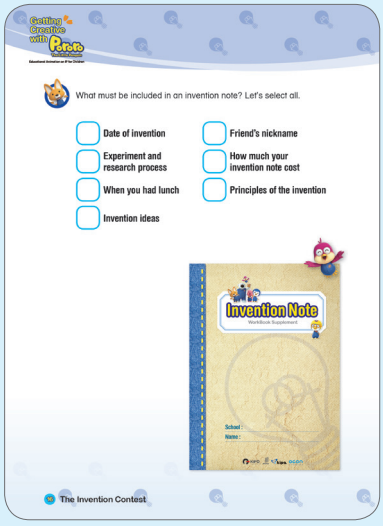
That's not all. Cars, telephones, televisions and computers are the inventions that brought us the technological era of today. The discovery of penicillin and other antibiotics have also led to giant leaps in medicine.

What is more interesting is that the items previously only seen in movies are being made in real life through inventions. We have a new device invented in 2012, which can produce real items from drawings, called a 3D printer. The US, Canada and Japan are all working on the Invisibility Cloak worn by Harry Potter.

The future will change with the inventions that we make now. How will these inventions shape our future? What possibilities lie ahead of us?

Getting Creative with Pororo The Little Penguin

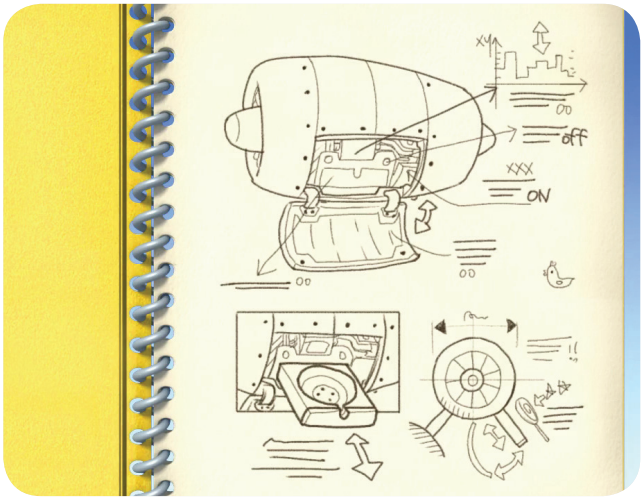
Educational Animation on IP for Children



• Workbook II Page 16 "Understanding Idea Notes"
Answers : Date of invention, Experiment and research process, Invention ideas, Principles of the invention

Try this!

√ This is the stage of learning about the important factors in idea notes. Guide the children to learn about the importance of idea notes by taking the example of the Rabbit Twins and Pororo.

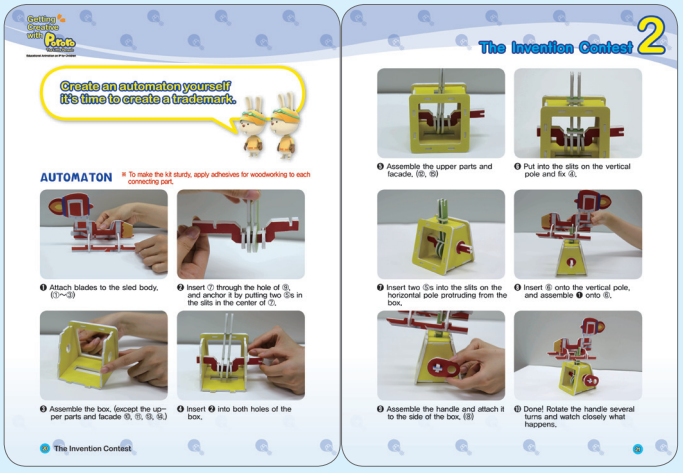


4) Lesson Analysis (Lesson 4 – Practice)

Try this!

You can have two lessons – Lesson 3 and Lesson 4, after watching "Invention Contest." We have designed Lesson 3 about the concept behind inventions. Lesson 4 will focus on the practice of the idea. If you're not continuing to Lesson 4 from Lesson 3, then show the video one more time to refresh the concept.

The automaton used in the practice is based on the sled that Pororo has invented in the video. Children can examine how the automaton works.

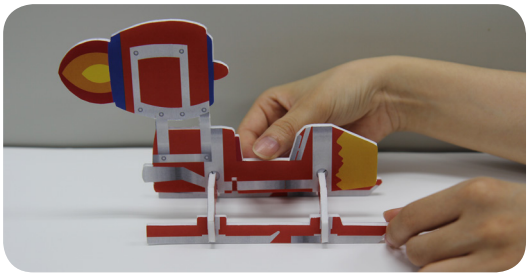


• Workbook II Page 18~19 "automaton"

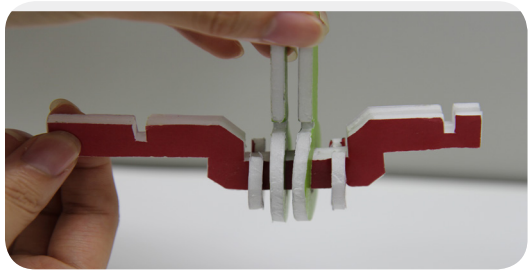
Try this!

√ Lesson 4 has been designed to practice Lesson 3. It is important to guide the children to follow the steps thoroughly. The main focus of the lesson is for the children not to rush, and to be detail-oriented. This lesson should be guided and given enough time.

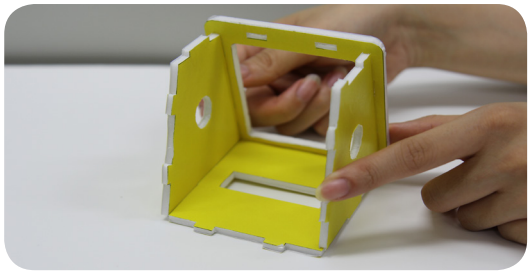
Create an automaton yourself.



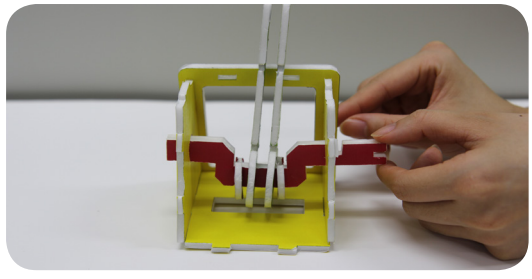
❶ Attach blades to the sled body. (①~③)



❷ Insert ⑦ through the hole of ⑨, and anchor it by putting two ⑤s in the slits dented on the middle of ⑦.

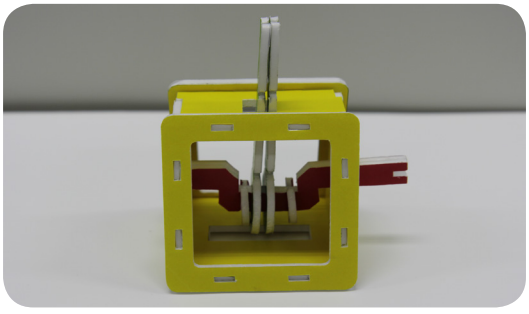


❸ Assemble the box. (except the upper parts and facade ⑩, ⑪, ⑬, ⑭.)

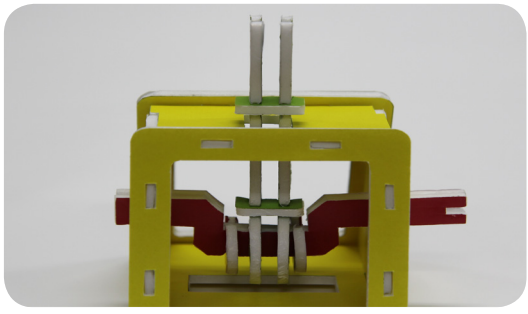


❹ Insert ❷ into both holes of the box.

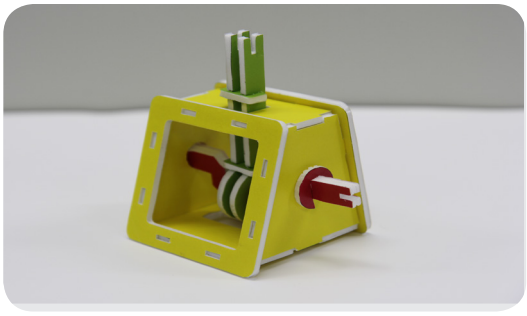
Guide book 2



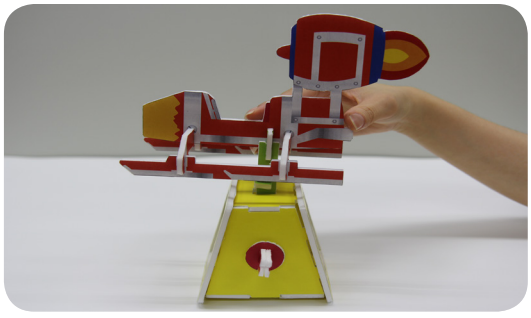
❺ Assemble the upper parts and facade. (⑫, ⑮)



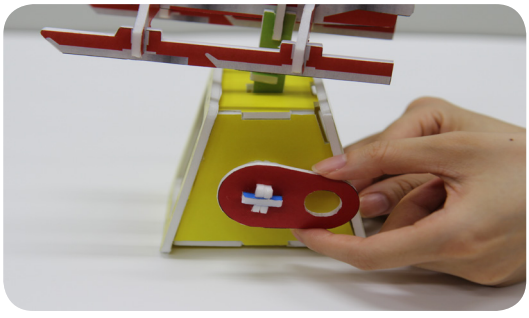
❻ Put into the slits on the vertical pole and fix ④.



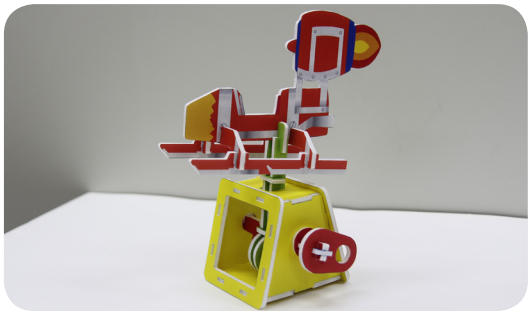
❼ Insert two ⑤s into the slits on the horizontal pole projecting from the box.



❽ Insert ⑥ onto the vertical pole, and assemble Ⅰ onto ⑥.



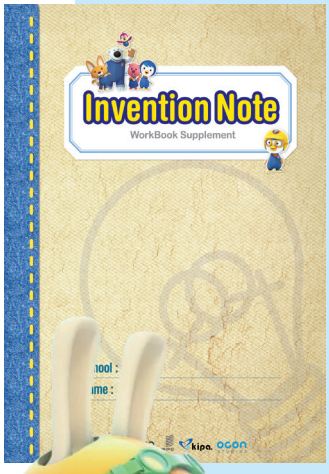
❾ Assemble the turning handle and attach it to the side of the box. (⑧)



❿ Done! Rotate the handle several turns and watch closely what happens.

※To make a sturdy kit, apply woodrock bond to each connecting part.

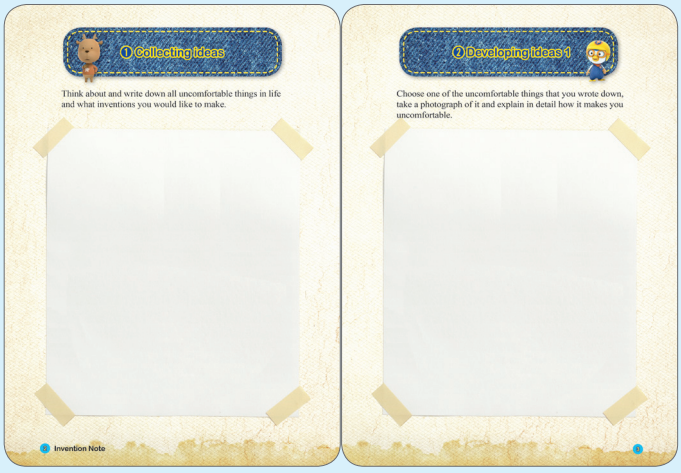
4) Lesson Analysis (Supplement– Practice)



Try this!

You can learn about basic principles and methods for inventions. We provide you with idea notes (see “Invention Note”) to practice what you’ve learned. Please guide students to practice an invention on their own. Inspire and encourage them.
In the idea notes, make sure they write their names, dates and a title for each idea note. Through the process of finding a name for the idea notes, the children may take an interest in coming up with their own ideas.

Guide book 2

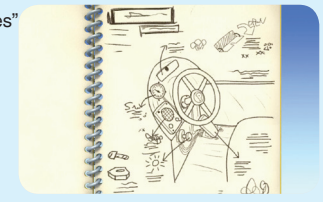


• Idea Notes Pages 2~3 “Making Idea Notes”

Try this!

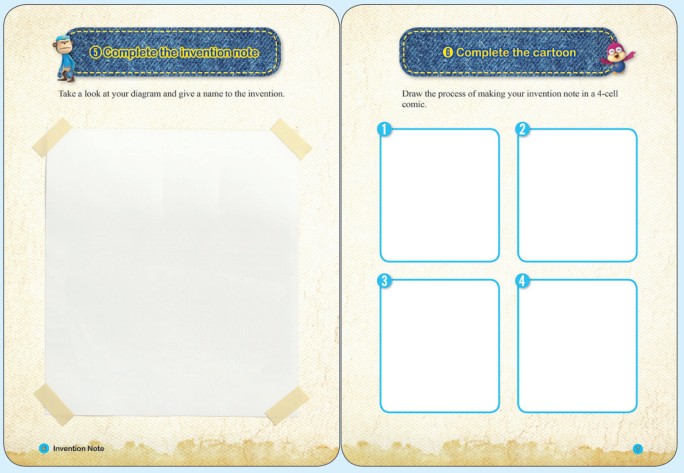
√ Lesson 4 has been designed to put into practice the idea notes from Lesson 3.
√ The most important factor when making idea notes is to keep a record of successful and failed experiments and their dates. Plan the lesson so that the students have enough time to come up with their creative ideas.
√ Discuss freely the inconveniences in life. Attach the pictures, explain them and guide the children to make their own idea notes.

• Idea Notes Pages 4~5 “Making Idea Notes”



Try this!

√ Guide the children to record their ideas in drawings. Teach them that they can keep a record of their idea notes with sketches and not only in writing.
√ Teach the children that they can get a better understanding of the layout of an invention by drawing designs. However, if the idea is too complex, guide them on the details in the core parts. Give the students confidence that they can invent by making designs by themselves.



• Idea Notes Pages 6~7 “Completing Idea Notes”

Try this!

√ By naming their own designs, children can feel a sense of ownership for their inventions. Guide them to name their inventions creatively.

√ This is the last step in writing the idea notes. Guide the children to draw a cartoon of making idea notes in four scenes. Children can pick inventions and record them through cartoons. By making designs by themselves, they can gain the confidence to invent.

5) Lecture Summary

① An invention must be practical. An electric car unable to go far without its power cord cannot be considered as an invention.

② An invention is something new that can improve our lives. A toaster, fan or a thermos bottle cannot be considered as inventions because they already exist.

③ It is important to keep a record of everything in the idea notes. That way we know who first made the invention.

④ Pororo kept a detailed note of making his jet engine with dates. But the Rabbit Twins only had a note of taking reference to Pororo's sled. Pororo could prove that he was the first one to invent the jet-engine sled.

⑤ An invention is the result of hard work by the inventor. The inventor deserves the reward for the invention. The idea for the invention is considered as intellectual property.

⑥ You cannot copy an invention without the inventor's permission. Thus, you can copy with the inventor's permission. The rights of the inventor are reserved as patents.

⑦ Lesson 3 is a conceptual lesson while Lesson 4 is a practical lesson. Make the idea notes on your own to understand idea notes.

⑧ Collect ideas and improve them in your idea notes in forms of pictures or drawings.

⑨ Watch the video, solve the problems in the workbook and craft the automaton for discussions. Teach the children that it can be fun to invent. Also provide open circumstances to encourage the children to use their creativity in inventing.


Getting Creative with Pororo
The Little Penguin
3
Pororo Makes His Mark
Porong Porong Super Sled
KIPO
WIPO
kipa
ocon STUDIOS
STICKER 3-1(7page)
RAIN
STAR
BABY
CAT
LOVE
SONG
DOG
APPLE
©OCON/ICONIX/EBS/SKbroadband
Getting Creative with Pororo
POP-UP SLED
Pororo
Pororo

Practical Guide for Workbook III,
‘Pororo Makes His Mark’

1) Video Content Analysis
2) Summary of Workbook III
3) Lesson Objectives and Important Notes
4) Lesson Analysis
5) Lecture Summary

4. Practical Guide for Workbook III, 'Pororo Makes His Mark'

1) Video Content Analysis

Lessons 5 and 6 are based on the episode 'Pororo Makes His Mark'. First show the students the episode to make the lesson fun.

Episode 3 : Summary of 'Pororo Makes His Mark'

Pororo and his friends improved their jet-engine sleds to make new jet-engine sleds. They look great. Then other friends come. They complain that their sleds broke down a lot. When they took a closer look, their sleds were not made by Pororo. Instead, they were sleds made by the Rabbit Twins.

How could they distinguish Pororo's sleds from the Rabbit Twins' sleds? The answer is "trademarks". If they put trademarks on their products, they could distinguish theirs from products made by other people. But how do we make a trademark?

The friends try to think of a trademark together. How about "Airplane"? But the word "airplanes" already exists and will not help make the sleds distinguishable. You can't use a general name or a material name as a trademark. How about "Pretty Sleds"? The trademark should reflect the features of the product. It is difficult to distinguish them just by "Pretty". Also, you can't use a trademark already in use by someone else. It must also be easy to read and write, so that it's easy to remember.

Then how about "Porong-Porong Super Sleds"? Pororo thinks of the product characteristics and functions and thinks of a trademark. A symbol, number or the shape of the product could all become a trademark. The friends design a trademark with a symbol and a name.

Now that they are distinguishable, everyone is asking for Porong-Porong Super Sleds!

2) Summary of Workbook III

Try this!
In the video, Pororo and friends use keywords about inventions. Ask the children to raise their hands and talk about what they remember from the video, then set a goal together.

3) Lesson Objectives and Important Notes

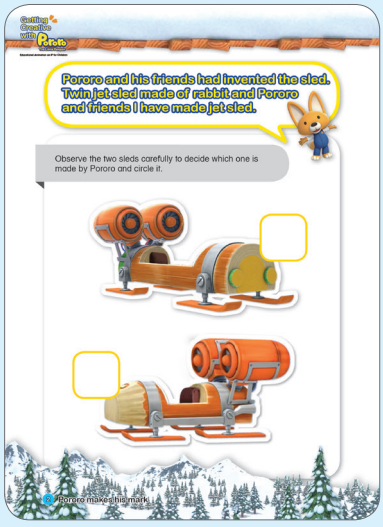
Summary (lines)

"Let's make a trademark. We can distinguish ourselves from other sleds, and other people can tell who made the sleds."
"There are a few things you need to watch out for when making a trademark. You can't use a general name or a material as the trademark. Otherwise, people could get the wrong idea."
"You cannot confuse people about how the product was made, how it works, or what it looks like with the trademark."
"You must remember that your trademark cannot be the same or similar to a trademark from someone else. We make trademarks to distinguish ourselves. If two trademarks look the same, they won't be distinguishable."
"It will be good if it's easy to read, write and remember."
"It doesn't even have to be a word. It can also contain numbers or symbols. The shape of the product or even its sound could be a trademark.
"You must take responsibility for the trademark and manage the quality of your products."

① Lesson Objectives for Workbook III
- Understand about trademarks.
- Understand why we need trademarks.
- Make trademarks and apply them.

② Important Notes
- Give confidence to the children that anyone can make trademarks.
- Children should understand about copyright when learning about trademarks.
- Make sure to show the video and go through the practice before the lesson.
- You should plan enough time for the students to learn effectively.

4) Lesson Analysis (Lesson 5 – Concept)

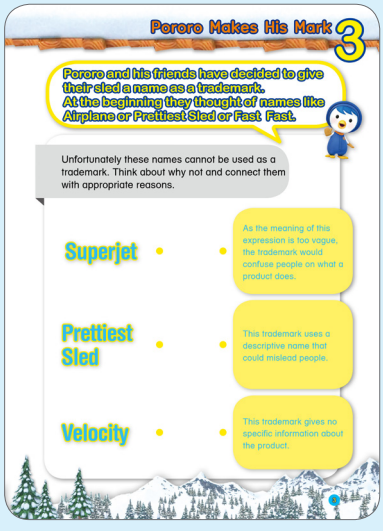


• Workbook III Page 2 “Role of a Trademark”
Answer : lower sled

Try this!

√ This is the part of learning about what a trademark is. Try to find real trademarks and how we use them. Preparing trademarks and pictures of them is also a good activity.

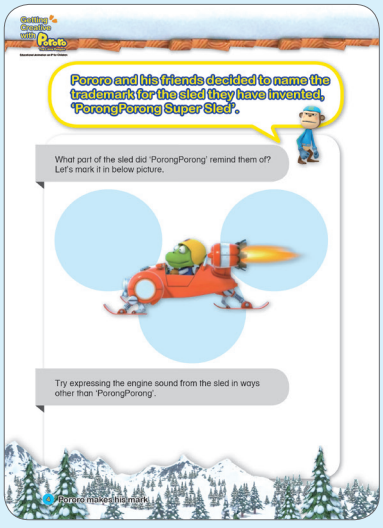
√ Compare the sleds of the Rabbit Twins and Pororo shown in the animation. Have the children name their own sleds and think about the roles of trademark.



• Workbook III Page 3 “Features of an invention.”
Answers : Superjet - second paragraph
Most Pretty Sled - first paragraph
Velocity - third paragraph

Try this!

√ Find out what you have to do when creating a trademark. The video tells us that we can’t use existing materials as trademarks. Think about what the video has taught us and try to think of the reasons why these cannot be used as trademarks.



• Workbook III Page 4 "Trademark Ideas"
Answer : engines

Try this!

√ In the video, Pororo and his friends make a trademark that they call "Porong-Porong Super Sled". First, find out how they came up with the name in the video.
Have the children figure out if the trademark used is a shape, form or sound.

Additional Notes +

Definition of a Trademark

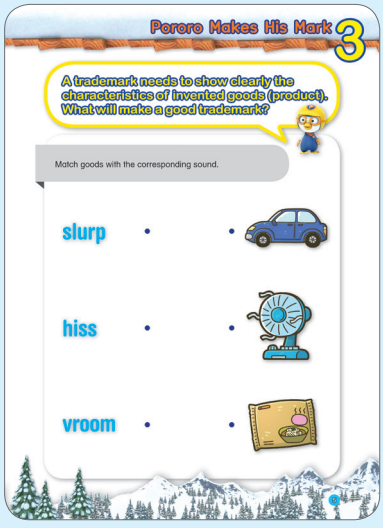
A trademark is a symbol, letter or shape that manufacturers use to distinguish their products from those of other people. Trademarks can be distinguished just by looking at them. But in some countries, even the sounds of products can be a trademark and be protected by law.
The role of trademarks is to prevent copying as well as to ensure the quality of the products.

SAMSUNG

Mercedes-Benz

Coca-Cola

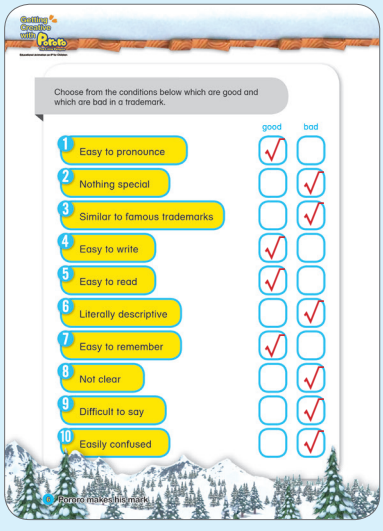
Walt Disney PICTURES



• Workbook III Page 5 “Trademark Ideas”
Answer : slurp-noodles vroom-car hiss-fans

Try this!

√ Look at the features of some existing trademarks and see how they relate to the name. Look at common trademarks and find the characteristics under the name.



• Workbook III Page 6 “Trademark Ideas”
Answers : Good- Easy to pronounce, Easy to write, Easy to read, Easy to remember
Bad- Rest of the examples

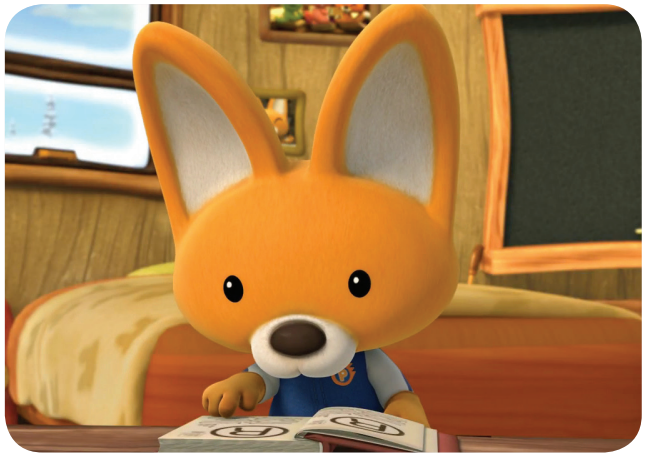
Try this!

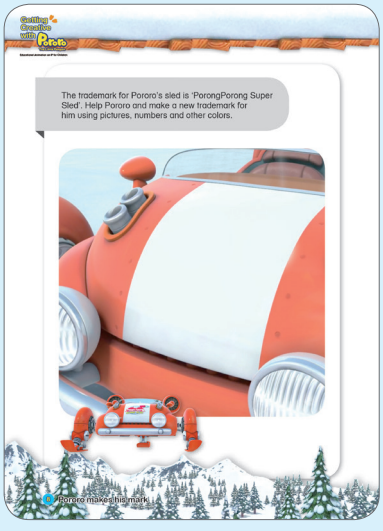
√ Figure out how to make good trademarks. Find the characteristics that good trademarks have and guide the children to understand.

• Workbook Ⅲ Page 7 “Trademark Components”
Answers : picture, word, color, number

Try this!

√ Understand how trademarks are made and how they work. Also, make sure the children understand that various methods can be used to make a trademark.





• Workbook Ⅲ Page 8 “Making Trademarks”

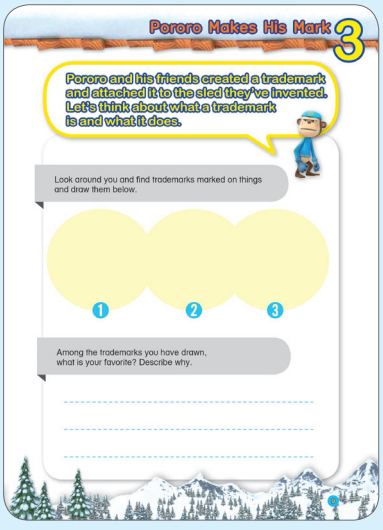
Try this!

√ Have the children experience making trademarks with the trademark mentioned in the video.

Additional Notes +

Choose and Register Your Trademark carefully

If a product becomes too popular before it is registered as a trademark, sometimes it's difficult to exercise the trademark rights.
The most famous example is "Chocopie". In 1974, Orion, a confectionery company produced a chocolate-covered cake with marshmallow inside. They named the sweet Chocopie and registered the trademark as "Orion Chocopie".
As Chocopie became popular, other companies produced similar goods and sold them under the name "Chocopie" with their company name as the modifier. Orion realized their mistake. As the original registered trademark was "Orion Chocopie", Orion couldn't prevent other companies from using the name "Chocopie". They tried to register "Chocopie" as a trademark, but at that point Chocopie became so widely used that it had become a noun. People started calling any sweet similar to Chocopie "a Chocopie". Like aspirin and Vaseline, the word Chocopie couldn't be registered as a trademark.
In order to prevent a situation like this, you should choose trademarks deliberately and naver wait until the product becomes famous. Coca Cola is famous enough to refer to all cola products. But its name is still registered as a trademark. This is because Coca Cola was registered as a trademark in 1893, long before it had become famous.

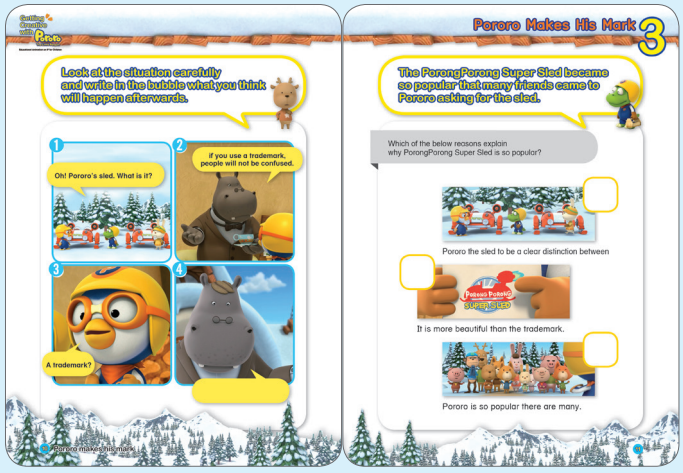


• Workbook III Page 9 "Roles of a Trademark"

Try this!

√ This is the part of learning about what a trademark is. Try to find real trademarks and how we use them. Preparing trademarks and pictures of them is also a good activity.
√ Try to think of the roles of the trademark. What do trademarks show, how do they look and what roles do they have? Have the children think about that, on their own, to try to understand the roles.

Guide book 3



• Workbook Ⅲ Pages 10~11 “Roles of a Trademark”
Answer : The mark for the sled must be clearly distincguishable from others (p11)

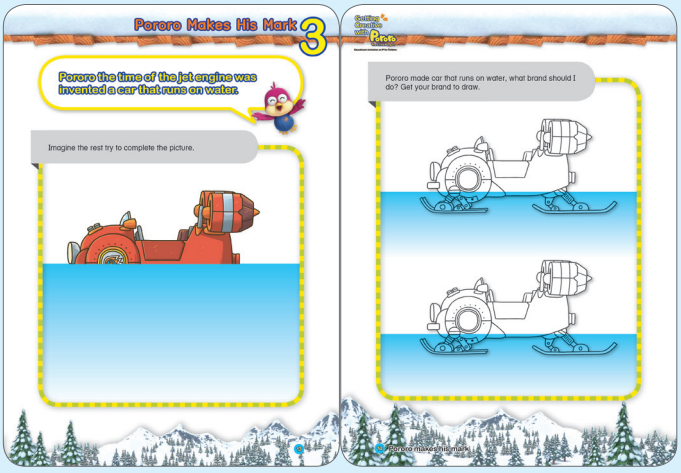
Try this!

√ This is the time for thinking about the roles of trademarks. We have learned about trademarks, and how they can be made. We also need to think about their roles.

• Workbook Ⅲ Page 12 “Roles of a Trademark”
Answer : the performance and quality of the sled

Try this!

√ This is about a trademark’s role in quality assurance and intellectual property rights. When you have a trademark, you have rights to your products. At the same time, you have the responsibility to assure consumers of your products’ quality. You should understand that a trademark comes with responsibility and rights.



• Workbook III Page 13~14 “Making Trademarks”

Try this!

√ Make an invention in your imagination and design a suitable trademark for it. It’s only in your imagination but think of its characteristics and try coming up with some different names.

Additional Notes +

What can become a trademark and what cannot

There is a lollipop company that has taken over the world market. It’s “Chupa Chups”. You can easily get a Chupa Chups in Korea. The name is easy to remember and unique. It’s loved by many children all over the world.
What is the meaning of Chupa Chups? The manufacturer of Chupa Chups is in Spain. Chupa Chups originates from the Spanish word, “Chupador”. It means to lick. Chupa Chups is a great name for people to picture someone eating a lollipop. Can’t we just name it “candy” then? A trademark not only implies the characteristic of a product, but possesses an intellectual property right. A trademark prevents confusion in the market. If you name it “Candy”, then you’re claiming rights to all the candies in the world. This cannot be done.

4) Lesson Analysis (Lesson 6 – Practice)

Try this!

You can have two lessons, Lesson 5 and Lesson 6, after watching "Pororo Makes His Mark." We have designed Lesson 5 to be about the concept behind trademarks. Lesson 6 will focus on the practice of the idea. If you're not continuing to Lesson 6 from Lesson 5, then show the video one more time to refresh the concept.

The pop-up card used in the practice was made based on the house where Pororo lives. On the card, we have inserted the front part of the sled that Pororo and his friends made. Guide the children to make a trademark themselves, like Pororo, and attach it to the card. Inside the card is a place to write. Guide the children to write their reasons for naming their trademark and the meaning behind the shape of the trademark.

Try this!

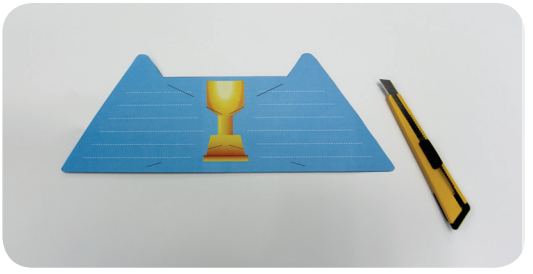
√ We have designed Lesson 6 to be a practice on trademarks, as we learned about them in Lesson 5.

You must guide the children to follow the directions step-by-step. It is important not to rush and to pay attention to detail. You must plan enough time for the children to learn effectively.

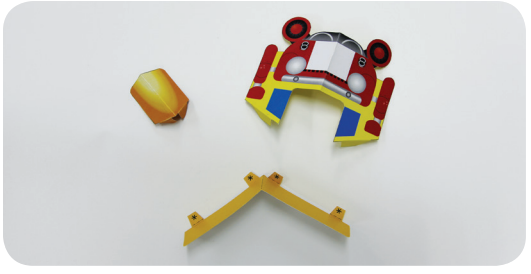
Getting Creative with Pororo
The Little Penguin
Educational Animation on IP for Children

How to Make the Trademark Popup Cards

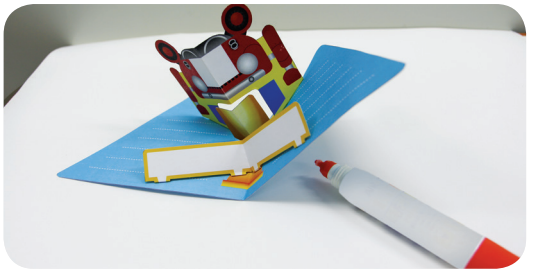
❶ Print 2 pattern sheets on both sides of a thick A4-sized sheet.



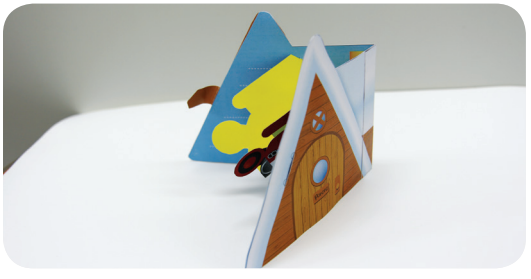
❷ Cut out part ①, and make a cut along the unbroken lines.



❸ Cut out parts ②~④, and fold along the dotted lines.



❹ Combine ❷ to ❸, and fix with glue.



❺ Put parts ⑤, ⑥ on the outside of the card and fix them.

❻ Done!

※ Let's make a brand of the pop-up card with a short description to put on the name plate.

5) Lecture Summary

① A trademark is a symbol, letter or shape or a combination of these to distinguish one product from other products.

② In the video, think about what Pororo and his friends did to distinguish their products from other people's products. The story should connect with the lesson.

③ A trademark should give an idea of how the product was made, how it operates, and what it looks like. It should not give any false impressions.

④ If you use the trademark with a general name or the name of the material, it can cause confusion. You should avoid this.

⑤ When deciding on a product name, you should make sure that the characteristic of the product really shows. Pororo and his friends named theirs for the sound of their jet engine.

⑥ Other factors to consider for a trademark, apart from the name, include the specific shape, color, etc. Think about the trademark in terms of its use.

⑦ One of the roles of a trademark is in intellectual property rights and quality assurance. When you have a trademark, you have the rights to your own products, as well as the responsibility for their quality.

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