

Challenge #1: Kitchen Gadgets

In this activity, you will look at all the gadgets in the kitchen and imagine how they might be changed or combined to make them better. You will use creativity and a bit of engineering to come up with your new and improved gadget.

Instructions

1. Print the worksheet provided on the next page.
2. Draw a picture of each of the three kitchen gadgets you have chosen and write the name (example: tongs or peppermill).
3. Complete the chart.
4. Don't forget to name your new gadget!

Challenge Objective

The objective of this challenge is to find three gadgets in the kitchen and either improve on one of them or come up with a new gadget that using one or more of the gadgets you have found.

What You'll Need

- A variety of Kitchen gadgets to examine
- A printed version of the worksheet provided
- A pencil
- Markers, crayons, or colored pencils

DID YOU KNOW?

Modern toasters look very different from early models. The first electric toaster was invented by Alan MacMasters in Scotland in 1893, but it wasn't perfect. Not only was it a fire hazard, it only toasted one side of the bread at a time! In 1905, Albert Marsh built a new heating element that was safer to use. He and George Schneider received U.S. Patent 825,938 for their electric cooker in 1906.

In 1915, the Copeman Electric Stove Company added an automatic bread turner to their toaster. In 1919, Charles Strite modernized the toaster by adding a timer and an automatic popup. He was granted U.S. Patent 1,394,450 for his bread-toaster in 1921.



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Draw a picture of your kitchen gadget and write the name.	What does this gadget do?	What else could it do?	How could you change this to do something else?
1.			
2.			
3.			

Your new kitchen gadget name:

(Draw your gadget here)

Challenge #2: Investigative Observer

In this activity, you will observe the world around you and make notes of what you see. Have fun watching people, places and things, paying close attention to patterns and real-world problems that people encounter in their everyday lives.

Challenge Objective

The objective of this challenge is to design and create a simple maze using the materials provided to guide your marble from the start to the end.

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What You'll Need

- A small notebook
- A pencil or pen

Instructions

1. Have you ever seen an investigator on TV? They usually take notes when they get to a crime scene or when they are looking for answers right? It's your turn to be an investigator. So keep your notebook and pencil with you at all times throughout the day and write down things you observe! Look at things with a new point of view. What does your family do in the mornings at home? If it's a school day what happens when you get to school? What about at lunch time? If you go to a sports game, what are players doing? What are the people watching doing?
2. Do you see anyone having problems with things they are doing? Maybe there's something at school that's an issue (for example, the lines to get food are too long at lunch time) - Stay observant looking for potential problems to fix!
3. Observe the world around you including: things your family does in the morning at home, if it is a school day what happens when you get to school, things that happen at lunch time, if you go to a sports game - what are the players doing? How about the people watching the game? If you go to the grocery store with your Mom what do you see there?



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Challenge #3: Pet Perfect

In this activity, you will have fun inventing a new technology for your pet! Even if you don't have a pet, you can ask friends who do have a pet for assistance. Whether the pet is a dog, cat, guinea pig, hamster, or even a fish – enjoy coming up with a new device to make your pet's life easier (or your life easier when taking care of your pet).

Instructions

1. Fill out the chart below identifying some problems either your (or your friend's) pet has or you might have taking care of them.
2. Pick one problem and brainstorm some solutions (think about some kind of technology focused solution).
3. Using the poster board and markers/crayons – draw your new invention for your pet or pet care.

Challenge Objective

The objective of this challenge is to invent a new technology for your pet (or your friend's pet if you don't have one). This could be something to make it easier to care for your pet or to make your pet's life easier. (Example: an automated doggy door – it opens by remote control to let your dog in or out).

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What You'll Need

- A printed version of the worksheet provided
- Poster board
- A pencil
- Markers, crayons, or colored pencils

DID YOU KNOW?

Second-grader Ethan Mott invented a device that alerts dog owners when their pet's water bowl is nearly empty. The 8-year-old said his dog drank out of a clear water bowl and he never knew when it was empty.

The invention is made up of a wooden box that holds a water bowl. When the water is low, a light activates notifying the owner that more water needs to be placed in the bowl.

Good inventors are constantly tinkering with their inventions. Ethan explained "I was originally going to make it flash, but I decided it was going to be scary for a dog maybe, so I changed it to a straight lightbulb."



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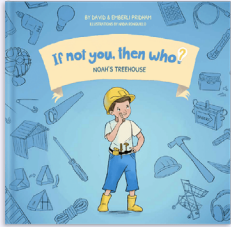


Type of Animal:

Problem	Category (Pet Problem or Pet Care Problem)
Example: I hate the smell of the cat food when I have to feed my cat	Pet Care Problem
1.	
2.	
3.	
4.	
5.	

Selected Problem:**Possible Solutions:**

1.
2.
3.



Challenge #4: Design Your Dream Bedroom

Inspired by Book 2 - "Noah's Treehouse"

In this activity, you will have fun using your creativity to design your dream bedroom. Have fun creating the room of your dreams while learning about planning, design and spatial awareness.

Challenge Objective

The objective of this challenge is to design your dream bedroom. What would it look like? What would be in it? What color would it be? You are the architect, inventor, and interior designer. Have fun!

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What You'll Need

- Poster board or large sheet of paper
- Construction paper
- A pencil
- Markers, crayons, or colored pencils
- Glue

Instructions

1. With your ruler, draw the perimeter of your room (is it a square, a triangle or maybe it has a different shape with cutout corners and angles).
2. Now use your creativity to design your room. You can cut out pieces of construction paper to glue on as your bed, desk etc. or you can draw it in using markers, crayons. (HINT: lightly plan out using a pencil first before you use the markers etc. to be sure you get everything in that you want in your room).
3. If it helps, you can label different items in the room so people know what they are when they look at your drawing.
4. Have fun and be creative! You can even add an invention in your room that no one has yet!

COMMON THINGS FOUND IN BEDROOMS:

- Beds (different types of beds include waterbeds, hammocks, futons, bunkbeds)
- Bedside Table or Nightstand
- Convenient Sockets and Electronic Plug-Ins
- Lamps and other light sources
- Wall decorations
- Dressers or armoires
- Mirrors
- Desks
- Armchairs
- Rugs



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Challenge #5:

Invention Scavenger Hunt

In this activity, you will search your home and/or school to locate the items on the list. This activity will help you understand how inventions fill your everyday life.

Challenge Objective

The objective of this challenge is to locate every item on the list and mark down where you found it. Each item on the list has a point value. Keep count of your points as you find the items.

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What You'll Need

- A printed version of the worksheet provided
- A pencil

Instructions

1. With the worksheet provided, find the items listed.
2. When you find an item write down where you found it.
3. Keep track of your score as you go.
4. Have fun searching!

DID YOU KNOW?

According to game scholar Markus Montola, scavenger hunts evolved from ancient folk games. Gossip columnist Elsa Maxwell popularized scavenger hunts in the United States with a series of exclusive New York parties starting in the early 1930s.

If you love solving clues, then you will love celebrating National Scavenger Hunt Day on the 24th of May every year.



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Item:	What it is and where you found it	Points
1. Something to hold pieces of paper together (6 points)		
2. Something to dry wet items or hands (8 points)		
3. An item you use to write with (7 points)		
4. Something you use to communicate with someone else (10 points)		
5. Something you can play with outside (10 points)		
6. Something that helps you get from one place to another (12 points)		
7. Something that has a keyboard (9 points)		
8. Something made of plastic (13 points)		
9. An item that you can drink out of (9 points)		
10. Something that you can use to carry things in (10 points)		
BONUS: One item that makes your day easier (6 points)		
TOTAL:		



Challenge #6: Dance Break!

Inspired by Book 3 - "Let The Games Begin!"

In this activity, you will have fun being creative coming up with your own dance. Not everyone likes to play sports and not everyone likes to go to dance class but everyone loves to move to the music! With this activity you will learn that creativity comes in all forms - from drawing, to singing, to dancing, to experimenting with science.

Challenge Objective

The objective of this challenge is to be creative, have fun and create your own dance break. Take all those dances that you do with your friends and put them together into your own dance. Write it down or... have a friend or family member record it on their phone or video camera. Challenge your friends to do your dance.

What You'll Need

- Your favorite music and a lot of creativity.
- Paper, pencil and/or a video camera/phone

Instructions

1. Pick your music.
2. Practice your moves and then put them together into your own dance break.
3. Challenge your friends or family to follow your moves.

DID YOU KNOW?

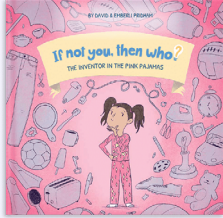
In ballet, dancing en pointe means dancing on the toes. Ballerinas first danced en pointe in 1795. That year, Charles Didelot invented a flying machine that used a rope and pulley to lift dancers onto their toes.

In 1832, Marie Taglioni became the first ballerina to dance en pointe without the flying machine. Her satin slippers were sewn at the sides and toes to help the shoes hold their shape.

In the 1900s, Anna Pavlova created her own version of pointe shoes. Pavlova had slender feet and high arches, so she added a stronger sole and a hard box in the toe for extra support and safety.



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Challenge #7: Cool School Tools

Inspired by Book 1 - "The Inventor In The Pink Pajamas"

In this activity, you will invent a new tool to use at school to make your day easier. Like Brooke in "The Inventor In the Pink Pajamas", you will imagine how you can make your day easier by coming up with a new tool to use or improving one you already use.

Challenge Objective

The objective of this challenge is to invent a new cool school tool to make your day easier. All those tools you use in school were invented at some point. The ruler, the stapler, the tape dispenser, the pen...to name a few. Use your creativity and imagination to come up with your own new tool.

What You'll Need

- Printed version of provided worksheet
- A pencil
- Paper

Instructions

1. Think of your desk at school or the place you so your homework at home. What are some of the objects you use each day to help you do your work? What tools are there in your classroom?
2. Use the worksheet to help you come up with your new "cool school tool" to make your day a little easier.
3. Don't forget to give it a name!

DID YOU KNOW?

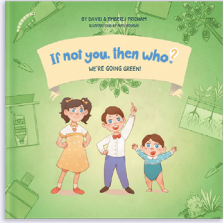
Before the modern day backpack was invented, students used something called bookstraps. Book straps were belts that students wrapped around their books so they could sling them over their shoulders.

In the 1938, the true ancestor of the modern school backpack was invented. It sprung from an enthusiasm for the outdoors. Gerry Cunningham invented the first zippered backpack, primarily designed with rock climbers in mind.

Cunningham continued to improve upon his initial design by using nylon, which made the packs lighter, more durable, and water resistant.



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Challenge #8: Trash To Treasure

Inspired by Book 4 - "We're Going Green!"

In this activity, you will be challenged to reimagine your trash. Make a treasure out of trash. You might make a pencil holder out of an old paper towel tube, or something to hold your pennies out of an old cardboard box. All ideas are good ones! Use your imagination and be creative. Use crayons and markers to make them colorful. Use other craft items you may have on hand to enhance your designs.

Challenge Objective

The objective of this challenge is to make something useful out of discarded items. You have learned about recycling, reducing, and reusing trash to help our environment. In this challenge, you need to reimagine your trash and create something new and useful!

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What You'll Need

- Markers, crayons, or colored pencils
- Any other craft supplies available
- Scissors
- Glue
- String

Instructions

1. Find 2-3 items in your home that are being thrown away. They should be small enough to carry and shouldn't have any sharp edges. Suggestions: empty paper towel or Toilet paper rolls, aluminum foil, cardboard box, newspapers, bag from bread (no crumbs) etc.
2. Think about what happens to these items if they are thrown away. How will they affect the environment? They could end up in a landfill and stay there for up to 500 years! Or they might end up in the water where they hurt the fish and sea life.
3. Using craft items that you have (glue, string, markers/ crayons, scissors, construction paper etc.) make something new from your 2-3 items. All ideas are good ones! Use your imagination and be creative. Use crayons and markers to make them colorful. Use other craft items you may have on hand to enhance the designs. The only requirement is it must have a use. Not just for decoration.

DID YOU KNOW?

The average person throws away 4 pounds of trash every day and makes about 1.5 tons of solid waste a year.

What's ironic about it is that 75% of our trash can be recycled. Recycling is when used waste and materials are converted into new products, so that it can be used again. This practice ensures that we don't waste perfectly reusable materials.

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