Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	What Is An Inventor?
Focus:	Inventors and Inventions

Materials:

- Food and Drink Timeline Template
- Reading Selection HO- What Is An Inventor?
- Story Map #4

Opening
State the objective • Introduce students to the Inventors theme by exploring the definition of an inventor
Gain prior knowledge by asking students the following questions • What is an inventor?

Content (the "Meat")	
Instruction/Demonstration ("I do" – "We do") **Invention Timeline- Food and Drink** *<u>K-2</u> Recreate the Food and Drink Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *<u>3-5</u> Give each student a copy of the Food and Drink Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss. **<u>Fun Facts: The Invention of the Sandwich</u>** • The sandwich was invented in 1762 by John Montagu. He was the 4th Earl of a place called Sandwich. • The stories say that Montagu was playing cards for 24 hours straight one night. He didn't want to stop playing, but he was hungry. So, he put a slice of beef in between two slices of bread so he only had to use one hand and could keep playing cards! **Reading the Selection-**	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher

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Depending on the age level of your group, choose one of the following ways to read the story:

- Read Aloud- the leader or a capable student can read the story aloud to the group.
- Small Group Reading- students can form small groups and take turns reading portions of the story to one another.
- Partner Reading- students can form partners and take turns reading the story to one another.
- Individual Reading- Students will read the story to themselves.

Students Practice ("You do")

Map It Out!

- Give each student a Story Map #4 Handout.
- Students will use words or pictures to describe the topic and three details about it.

Students can share their story maps with a partner or the whole group when completed.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

What's Important About That?: This strategy allows for the debriefing to take a single student's learning and thinking deeper. Unlike other strategies which encourage the facilitator to get the input of many students, this strategy focuses on one student's opinion and thinking. Students are reminded of what they just participated in. The first question asking students generically, what is important about (that, use the words to describe the activity that was just completed. Ex. If you have just finished your homework time, the student is asked, "What is important about completing your homework?") When one student responds, it is important to listen for what the student says is important about the activity that was just completed. Building on that statement, the question again is "What is important about that (whatever was stated by the student.) This process up to five times, each time taking the child's understanding of what is important to a deeper level. At the end, the facilitator states, "Then what I heard you say is that the importance of (this activity that we just finished) is important because (fill in with the last thing that the student said.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

What Is An Inventor?

An inventor is considered the first person to create a new item or different way of doing something. Inventors are highly original thinkers who tend to look for ways to solve problems and improve on existing ideas to develop a useful item that fills a need. Some early famous inventors have changed the way entire nations of people live.

Thomas Edison, born 11 February 1847 in Milan, Ohio, was an inventor who certainly changed the world with his invention of the light bulb in 1880. Edison not only invented the light bulb, but also the systems to use it with such as electricity generators for homes. He also created systems for sound and film recording.

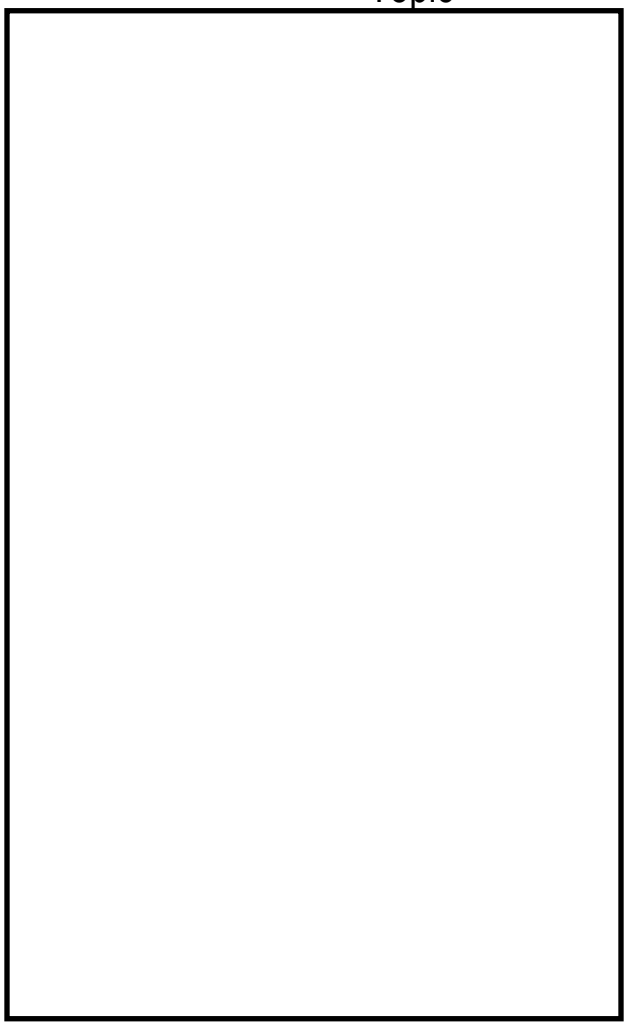
It's important to note that perfecting an invention until it's completely usable is an important quality of being an inventor. Inventors aren't people who just come up with a new idea. Rather, inventors actually create a finished product or method of doing something. Anyone could potentially become an inventor, but few people have the perseverance to follow an idea through to an original, perfected product or method because this takes a great deal of time, research and experimenting.

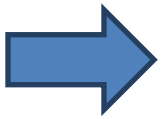
***from wisegeek.com

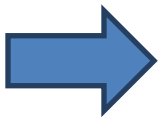
Consult 4 Kids Lesson Plans

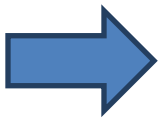
Topic

Details









The Invention of Food and Drink

_____

1792

_____

1886

_____

1930

1853

_____

1894

_____

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Food and Drink Timeline
Focus:	Inventors and Inventions

Materials:

- Food and Drink Timeline Template (found in Day 1 materials)
- Drawing/Writing paper and drawing/writing utensils

Opening
State the objective • To practice our creative writing skills
Gain prior knowledge by asking students the following questions • What is your favorite cereal? • Have you ever eaten Cornflakes? Did you like them? Why or why not?

Content (the "Meat")	
Instruction/Demonstration ("I do" – "We do") **Invention Timeline- Food and Drink** *<u>K-2</u> Recreate the Food and Drink Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *<u>3-5</u> Give each student a copy of the Food and Drink Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss. **<u>Fun Facts: The Invention of Cornflakes</u>** • An American man named Will Kellogg worked with his family at a health resort. They made healthy vegetarian meals. • In 1894, he was experimenting with boiled wheat. He found that when the coiled wheat dried, and was crushed between rollers, it broke into little flakes. • He began to sell Toasted Corn Flakes by mail and later they started to sell in stores. • In 1906, he added sugar and salt to the Cornflakes. • Twenty years after he invented them, Cornflakes were being sold everywhere and Will	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Kellogg was very rich!

Instructions for Creative Writing Assignment

Say: We have learned about the invention of the light bulb, the sandwich, potato chips, Coke, and Cornflakes.

Write the following writing prompt on the board.

"What is your favorite invention and why?"

Students Practice ("You do")

K-1: Give students drawing paper and crayons. Allow them to answer the question by drawing pictures of the items and writing words to describe them.
2-5: Give students writing paper and pencils. Allow time for students to write grade level appropriate responses.
Students can share with a partner or the whole group when they have completed their assignment.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Four Step Debrief: This strategy has four steps, each one designed to help the student "connect the dots" between the activity, the learning, and how that learning may be used in their everyday life both immediately and in the future.

Step 1: Describe: Student(s) describe what they did during the activity.
Step 2: Interpret: Students answer one, some or all of the following questions:
What were your key learnings when you participated in this activity?
What skills did you need to utilize to participate in this activity?
How did you feel when participating in this activity?
Step 3: Generalize: How can you use the skills or your key learnings in your life?
Step 4: Apply: How can you use the skills or your key learnings at school?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)

Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	The History of Ketchup
Focus:	Inventors and Inventions

Materials:

- Engine Power Timeline Template (found in Day 6 materials)
- Reading Selection HO- the History of Ketchup?
- Story Map #1

Opening
State the objective • Introduce students to the invention and history of ketchup, a popular condiment that all students will have prior background for.
Gain prior knowledge by asking students the following questions • What is ketchup? Do you like ketchup? How do you use it?

Content (the "Meat")	
Instruction/Demonstration ("I do" – "We do") **Invention Timeline- Engine Power** *K-2 Recreate the Engine Power Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *3-5 Give each student a copy of the Engine Power Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss. **Fun Facts: The Invention of the Bicycle** • The bicycle was invented in 1838 by Kirkpatrick MacMillan from Scotland. • The bicycle that he invented and that we used today was an improved model of a velocipede. MacMillan added pedals to the velocipede and called it a bicycle. **Reading the Selection-** Depending on the age level of your group, choose one of the following ways to read the story:	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

- Read Aloud- the leader or a capable student can read the story aloud to the group
- Small Group Reading- students can form small groups and take turns reading portions of the story to one another.
- Partner Reading- students can form partners and take turns reading the story to one another.
- Individual Reading- Students will read the story to themselves.

Students Practice ("You do")

Map It Out!

- Give each student a Story Map #1 Handout.
- Students will use words or pictures to describe the sequence of events.

Students can share their story maps with a partner or the whole group when completed.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

What's Important About That?: This strategy allows for the debriefing to take a single student's learning and thinking deeper. Unlike other strategies which encourage the facilitator to get the input of many students, this strategy focuses on one student's opinion and thinking. Students are reminded of what they just participated in. The first question asking students generically, what is important about (that, use the words to describe the activity that was just completed. Ex. If you have just finished your homework time, the student is asked, "What is important about completing your homework?") When one student responds, it is important to listen for what the student says is important about the activity that was just completed. Building on that statement, the question again is "What is important about that (whatever was stated by the student.) This process up to five times, each time taking the child's understanding of what is important to a deeper level. At the end, the facilitator states, "Then what I heard you say is that the importance of (this activity that we just finished) is important because (fill in with the last thing that the student said.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

The History of Ketchup

Indonesian and Asian culture invented what we know today as ketchup. The spicy, pickled fish sauce made of anchovies, walnuts, mushrooms and kidney beans, dating back thousands of years was called ke-tsiap or kecap and was popular in 17th-century China. British seamen brought ke-tsiap home with them where the name was changed to catchup and then finally ketchup. It wasn't until the late 1700s though that canny New Englanders added tomatoes to the blend.

Henry J. Heinz began making ketchup in 1876 but he was neither the inventor nor the first to bottle it. His recipe remains the same to this day.

When Heinz introduced commercial ketchup to American kitchens it became so popular that other manufacturers rushed to catch-up to the ketchup craze. Soon there were Ketchup, Catsup, Catchup, Katsup, Catsip, Cotsup, Kotchup, Kitsip, Catsoup, Katshoup, Katsock, Cackchop, Cornchop, Cotpock, Kotpock, Kutpuck, Kutchpuck and Cutchpuck. All were tomato based and bottled and vied to become a household word. Only 3 major brands remained to steal the spotlight...Heinz Ketchup, Del Monte Catsup, and Hunts, who could not decide on a spelling and bottled under the names Hunts Catsup (east of the Mississippi), Hunts Ketchup (west of the Mississippi), and Hunts Tomato Cornchops (in Iowa only). In the 1980's ketchup was declared a vegetable by the government for school lunch menus. Suddenly Del Monte's Catsup, because of its spelling, was not on the approved list. Shortly afterward Del Monte changed the product's name to Del Monte Ketchup. So ketchup it is.

Read more at globalgourmet.com

Story Map #1

Story Title: _____

Sequence of Events:

First,	Next,	Then,
After that,	Then,	Finally,

_____

1838

_____

1896

_____

1959

1885

_____

1952

_____

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Crayon Rubbings
Focus:	Inventions and Inventors

Materials:

- Food and Drink Timeline Template (found in Day 1 materials)
- Paper
- Crayons

Opening
State the objective • To learn about how crayons were invented • To use crayons to make art
Gain prior knowledge by asking students the following questions • How do you use crayons? • How do you think crayons are made?

Content (the "Meat")	
Instruction/Demonstration ("I do" – "We do") **Invention Timeline- Food and Drink** *<u>K-2</u> Recreate the Food and Drink Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *<u>3-5</u> Give each student a copy of the Food and Drink Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss. **<u>Fun Facts: The Invention of Chocolate Chip Cookies</u>** • Chocolate Chip cookies were invented, like a lot of things, by accident. • One day in 1930, Ruth Wakefield, from America, was going to make chocolate cookies. • Instead of putting in the chocolate powder she usually did, she put in chopped up pieces of chocolate candy bar. • Instead of making the whole cookie chocolate, the chocolate bar didn't melt all of the way and stayed in little chips when it was baked.	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

- This is how the chocolate chip cookie was invented…by accident!!!

Instructions

Share this information about crayons with students:

- Crayola crayons were invented by two cousins named Edward Binney and C. Harold Smith in 1903.
- When they first made them, there were only eight colors. Can you guess which colors were the original eight colors? (black, brown, blue, red, purple, orange, yellow, green).
- They were sold for a nickel a pack!
- Today, there are more than one hundred different types and colors of crayons. Some have glitter and sparkles in them, some glow in the dark and some even smell like flowers!

Demonstration

Show students how to create crayon rubbings. Choose an item, such as a leaf, a paper clip or any other relatively flat, textured item. Place the item under a sheet of paper. Choose a crayon to color over the top. You will be able to see the outline and details of the item under the paper in the crayon rubbing!

Students Practice ("You do")

Give each student access to crayons and paper. Allow students time to gather items to create their crayon rubbings.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three "what" questions: 1. What did you enjoy most about this activity? 2. What was the biggest challenge with this activity? 3. What did you learn from the group?
Reflection (Confirm, Tweak, Aha!) • Ask students to think about what they did today. • Ask them to comment on what they did today was something they already knew how to do. (Confirmation) • Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak) • Ask them to comment on something (if anything) they have learned today that was brand new to them.

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Invention Convention-Transportation
Focus:	Inventions and Inventors

Materials:

- Food and Drink Timeline Template (found in Day 1 materials)
- Junk Box items- cardboard tubes (paper towel rolls, toilet paper rolls, pipe cleaners, scratch paper, buttons, cotton balls, toothpicks, etc.. Whatever extra supplies you have lying around!!)
- Glue, tapes, scissors, etc

Opening

State the objective

- To experience what it feels like to be an inventor
- To invent a new creation

Gain prior knowledge by asking students the following questions

- What is transportation? What are different modes of transportation?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Food and Drink

*<u>K-2</u> Recreate the Food and Drink Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*<u>3-5</u> Give each student a copy of the Food and Drink Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

<u>Fun Facts: The Invention of Coca-Cola</u>

- Coke was invented in Atlanta, Georgia by Dr. John Pemberton.
- On May 8, 1886, Dr. Pemberton, created a pitcher of syrup. The people that tried it said it was "excellent"!
- They added carbonated water to the syrup. This created the Coca-Cola that we drink today!

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

- The original Coca-Cola was sold for 5 cents a glass!

Instructions for the Invention Convention

Write the word transportation on the board. Ask students to talk about current forms of transportation.

Explain to students that inventions are often created because people want to solve a problem with the current way something is made. Ask students if they have any ideas about current problems with transportation? How might they change or fix that?

Explain to students that inventions are also created by someone that has a new idea. Ask students if they have any new ideas about transportation. What new transportation idea would they create?

Students Practice ("You do")

Place students in small groups.
Allow groups to choose items from the Junk Box to create new inventions regarding transportation.
Allow groups time to complete their model inventions.
Allow groups to share their inventions with the other groups.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Liked Best, Next Time (LBNT):** In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Inventor Skits
Focus:	Inventions and Inventors

Materials:

- Food and Drink Timeline Template (found in Day 1 materials)
- Inventor Information Cards Handout
- Junk Box items- cardboard tubes (paper towel rolls, toilet paper rolls, pipe cleaners, scratch paper, buttons, cotton balls, toothpicks, etc.. Whatever extra supplies you have lying around!!)
- Glue, tapes, scissors, etc

Opening

State the objective

- To experience what it feels like to be an inventor
- To learn about an inventor and their invention

Gain prior knowledge by asking students the following questions

- What is a skit?
- What is an inventor?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Food and Drink

*K-2 Recreate the Food and Drink Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Food and Drink Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of Chocolate Chip Cookies

- Chocolate Chip cookies were invented, like a lot of things, by accident.
- One day in 1930, Ruth Wakefield, from America, was going to make chocolate cookies.

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

- Instead of putting in the chocolate powder she usually did, she put in chopped up pieces of chocolate candy bar.
- Instead of making the whole cookie chocolate, the chocolate bar didn't melt all of the way and stayed in little chips when it was baked.
- This is how the chocolate chip cookie was invented…by accident!!!

Instructions for the Inventor Skits

Split students into groups. Give each group an Inventor Information Card.

Allow students time to read their cards.

Explain to students that they will have time to create a model of the invention that their Inventor created. They will share out their model invention and the information about their inventor. During their group time, they should build the model and prepare their presentation.

Students Practice ("You do")

Group Time:
Allow students time to build their models with materials from the Junk Box. Remind students to prepare their presentations of the model and inventor information.

Allow time for each group to perform their Inventor's Skit, sharing their model and the information about the inventor.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

WHI?
Ask the following three question:

1. What were some of the questions that came up in your group?
2. How did you go about including everyone?
3. If you were to try this again, what might you do differently?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Lego • Invented in 1932 • Ole Kirk Christianson invented the automatic binging blocks • In 1955, his son, Godfried Christianson began selling them. • Today, seven Lego sets are sold each second.	**Monopoly** • Invented in by American Charles B. Darrow • In 1935, he sold his idea to Parker Brothers. • Darrow got his idea for Monopoly from a game called Landlord's Game. • Landlord's Game was designed to show how people renting houses were exploited by landlords.
The Walkman • Invented in 1979 • Invented by Masura Ibuka, the head of Sony • It was created for business people on long flights to relieve their boredom without disturbing other people.	**Basketball** • Invented in 1891 • Invented by James Naismith • Naismith was a PE teacher in Springfield, Massachusetts. • It was originally played using two baskets used to collect peaches, called bushel baskets. This is how it gets its name.

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Giant Hat Inventions
Focus:	Inventions and Inventors

Materials:

- Internet Timeline Template (found in Day 11 materials)
- 1 large paper bag per student
- Scissors
- Stapler (adult use only)
- Crayons or markers
- Odds and ends (pipe cleaners, pom poms, sequins, etc)
- Glue

Opening

State the objective

- To create our own invention
- To experience the feeling of being an inventor

Gain prior knowledge by asking students the following questions

- Have you ever invented anything before? What? How did you do it?
- Have you ever invented or designed your own hat before? What did it look like?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Internet

*K-2 Recreate the Internet Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Internet Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of the Yahoo!

- Yahoo!- a search engine- was created in 1994. David Filo and Jerry Young, two

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn"

students at Stanford University are credited with the creation.

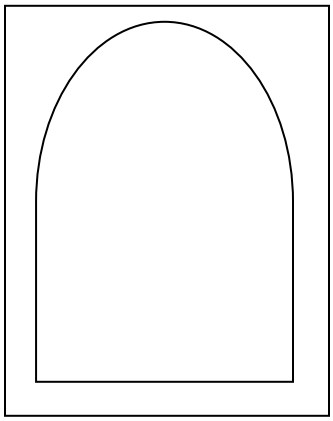
- A search engine allows you to put in a topic; the search engine will search for websites that relate to your topic.
- Since 1994, many other search engines have been created.

Instructions

Explain to students that today they will be inventing their own design for a really gigantic hat!

Demonstration

Show students how to draw a hat outline on the paper bag.



Show students how to cut this shape out of one side of the paper bag, then trace it onto the other side. Cut the other hat shape out.

opportunity and have the student become the teacher.

Students Practice ("You do")

Allow students to begin their drawing, tracing and cutting. As students finish, staple around the outside edges of the hat, leaving the bottom open to fit over students heads.

When the hat is stapled together, allow students to use the art supplies to create their hat designs.

Allow time for students to share their hats with the group.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three "what" questions:

1. What did you enjoy most about this activity?
2. What was the biggest challenge with this activity?
3. What did you learn from the group?

Consult 4 Kids Lesson Plans

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	3-5
Lesson Title:	Inventor Skits
Focus:	Inventions and Inventors

Materials:

- Engine Power Timeline Template (found in Day 6 materials)
- Inventor Information Cards Handout
- Junk Box items- cardboard tubes (paper towel rolls, toilet paper rolls, pipe cleaners, scratch paper, buttons, cotton balls, toothpicks, etc.. Whatever extra supplies you have lying around!!)
- Glue, tapes, scissors, etc

Opening

State the objective

- To experience what it feels like to be an inventor.
- To learn about an inventor and their invention.

Gain prior knowledge by asking students the following questions

- What is a skit?
- What is an inventor?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Engine Power

*<u>K-2</u> Recreate the Engine Power Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*<u>3-5</u> Give each student a copy of the Engine Power Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

<u>Fun Facts: The Invention of the Seat Belt</u>

- Seal belts were invented by a man named Nils Bohlin in 1959.
- He created them to strap people into the car.
- They prevent millions of injuries! Always wear your seat belt! These days, it is against

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

the law in many places to ride in a car without one.

Instructions for the Inventor Skits

Split students into groups. Give each group an Inventor Information Card.

Allow students time to read their cards.

Explain to students that they will have time to create a model of the invention that their Inventor created. They will share out their model invention and the information about their inventor. During their group time, they should build the model and prepare their presentation.

Students Practice ("You do")

Group Time:

- Allow students time to build their models with materials from the Junk Box. Remind students to prepare their presentations of the model and inventor information.
- Allow time for each group to perform their Inventor's Skit, sharing their model and the information about the inventor.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

WHI?

Ask the following three question:

- What were some of the questions that came up in your group?
- How did you go about including everyone?
- If you were to try this again, what might you do differently?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Inventors Cards

Postage Stamps

- In the 1800's people used to pay for their letters based on how long it had to travel and how many pages it was. The person who received the letter had to pay for it, not the sender.
- In 1840, the British Post Office created the first adhesive postage stamp.
- Postage stamps were printed in black and white, and were called penny stamps.
- Today, stamps are printed in all different shapes and colors, with pictures and characters on them.

Cells Phones

- The 1st cell phone call was made in 1973.
- The 1st text message was sent in 1992. It read "Merry Christmas!".
- In 2000, the first camera phone was created.
- August of 2001 marked the first month that 1 billion text messages were sent by cell phones.

The Telephone

- Invented by Alexander Graham Bell and his assistant Thomas Watson, in 1876.
- The first words spoken on the telephone were 'Mr. Watson, come here, I want you!"

Direct Dial Phone

- When phone were first created, you would dial the operator and tell him whom you would want to speak with. They would then push a plug into that person's socket on a large board.
- In 1889, in Kansas, a phone company owner learned that his operator was married to one of his rivals. She was pushing all of the calls people made to her husband, so that he could make the money!
- Her boss, Almon Strowger, invented the first automatic telephone switch. This switch could connect on phone to another, so you could dial through directly.

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	The Magic Key
Focus:	Inventors and Inventions

Materials:

- Reading Selection HO- The Magic Key
- Story Map #1

Opening
State the objective • To remind students that imagination leads to invention.
Gain prior knowledge by asking students the following questions • Do you like to read? Why or why not? • What is imagination? When do you use your imagination?

Content (the "Meat")	
Instruction/Demonstration ("I do" – "We do") **Reading the Selection-** Depending on the age level of your group, choose one of the following ways to read the story: • Read Aloud- the leader or a capable student can read the story aloud to the group. • Small Group Reading- students can form small groups and take turns reading portions of the story to one another. • Partner Reading- students can form partners and take turns reading the story to one another. • Individual Reading- Students will read the story to themselves.	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.
Students Practice ("You do") **Map It Out!** • Give each student a Story Map #1 Handout. • Students will use words or pictures to describe the sequence of events. • Students can share their story maps with a partner or the whole group when completed.	

Consult 4 Kids Lesson Plans

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **What's Important About That?:** This strategy allows for the debriefing to take a single student's learning and thinking deeper. Unlike other strategies which encourage the facilitator to get the input of many students, this strategy focuses on one student's opinion and thinking. Students are reminded of what they just participated in. The first question asking students generically, what is important about (that, use the words to describe the activity that was just completed. Ex. If you have just finished your homework time, the student is asked, "What is important about completing your homework?") When one student responds, it is important to listen for what the student says is important about the activity that was just completed. Building on that statement, the question again is "What is important about that (whatever was stated by the student.) This process up to five times, each time taking the child's understanding of what is important to a deeper level. At the end, the facilitator states, "Then what I heard you say is that the importance of (this activity that we just finished) is important because (fill in with the last thing that the student said.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

The Magic Key

Martin was now so old that for his birthday that year his father gave him a book without any pictures in it! Martin's father noticed his disappointment, and told him,

"Son, this isn't just any old book, it's a magic book. But, to discover its magic you'll have to read it."

Well, that was better; Martin liked everything to do with magic. He started reading it, even though he wasn't overly enthusiastic. The next morning, his father asked him,

"Have you found the magic key?"

So... there was a key to find! Martin ran off and flicked through the book, but there was no sign of the key. He came back, very annoyed, but his father warned him,
"You won't find it like that. You have to read the book."
Martin didn't have much patience, and he stopped reading the book, thinking his father was trying to trick him into reading a bit more, just as Martin's teacher had suggested to his dad. A little later, his sister, Angela, who was just a bit younger than him, asked him for the book so she could try reading it. After several days of trying to read it without great success, she appeared in the lounge, happily screaming,

"I've found it! I've found the key of the magic book!" And she would not stop talking about all the worlds and places she had visited using that magic key.
All the talk ended up convincing Martin to resume reading the book. At first it was a pain; there wasn't even one miserable picture in the thing. But, gradually, the story started springing to life, and Martin got interested in the adventurous Prince's life. Then, suddenly, he was there.

The book itself was the key!

It was true that whenever he opened it, he felt transported to its valleys and seas, and he lived the adventures of its pirates, Princes, and wizards, as though they were himself. And his head and his dreams filled with adventures whenever they got a chance.
However, the best thing about that story was that from then on, in every new book, he saw a new key to a thousand worlds and adventures. Martin never stopped travelling and travelling on those letters and words.

From freestoriesforkids.com

Story Map #1

Story Title: _____

Sequence of Events:

First,	Next,	Then,
After that,	Then,	Finally,

Moral of the Story: _____

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Reasons People Use the Internet
Focus:	Inventors and Inventions

Materials:

- Internet Timeline Template
- Reading Selection HO- 9 Reasons People Use the Internet
- Story Map #2

Opening
State the objective • To familiarize students with how the Internet came to be. • To learn ways in which the Internet can be used responsibly.
Gain prior knowledge by asking students the following questions • What is the Internet? Why do you use it? • What are some Internet safety rules that you have been taught?

Content (the "Meat")	
Instruction/Demonstration ("I do" – "We do") **Invention Timeline- Internet** *<u>K-2</u> Recreate the Internet Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *<u>3-5</u> Give each student a copy of the Internet Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss. **<u>Fun Facts: The Invention of the Email</u>** • The first email was sent in 1971 by Roy Tomlinson, a computer engineer. **Reading the Selection-** Depending on the age level of your group, choose one of the following ways to read the story:	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

- Read Aloud- the leader or a capable student can read the story aloud to the group
- Small Group Reading- students can form small groups and take turns reading portions of the story to one another.
- Partner Reading- students can form partners and take turns reading the story to one another.
- Individual Reading- Students will read the story to themselves.

Students Practice ("You do")

Map It Out!

- Give each student a Story Map #2 Handout.
- Students will use words or pictures to describe the sequence of events.
- Students can share their story maps with a partner or the whole group when completed.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

What's Important About That?: This strategy allows for the debriefing to take a single student's learning and thinking deeper. Unlike other strategies which encourage the facilitator to get the input of many students, this strategy focuses on one student's opinion and thinking. Students are reminded of what they just participated in. The first question asking students generically, what is important about (that, use the words to describe the activity that was just completed. Ex. If you have just finished your homework time, the student is asked, "What is important about completing your homework?") When one student responds, it is important to listen for what the student says is important about the activity that was just completed. Building on that statement, the question again is "What is important about that (whatever was stated by the student.) This process up to five times, each time taking the child's understanding of what is important to a deeper level. At the end, the facilitator states, "Then what I heard you say is that the importance of (this activity that we just finished) is important because (fill in with the last thing that the student said.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

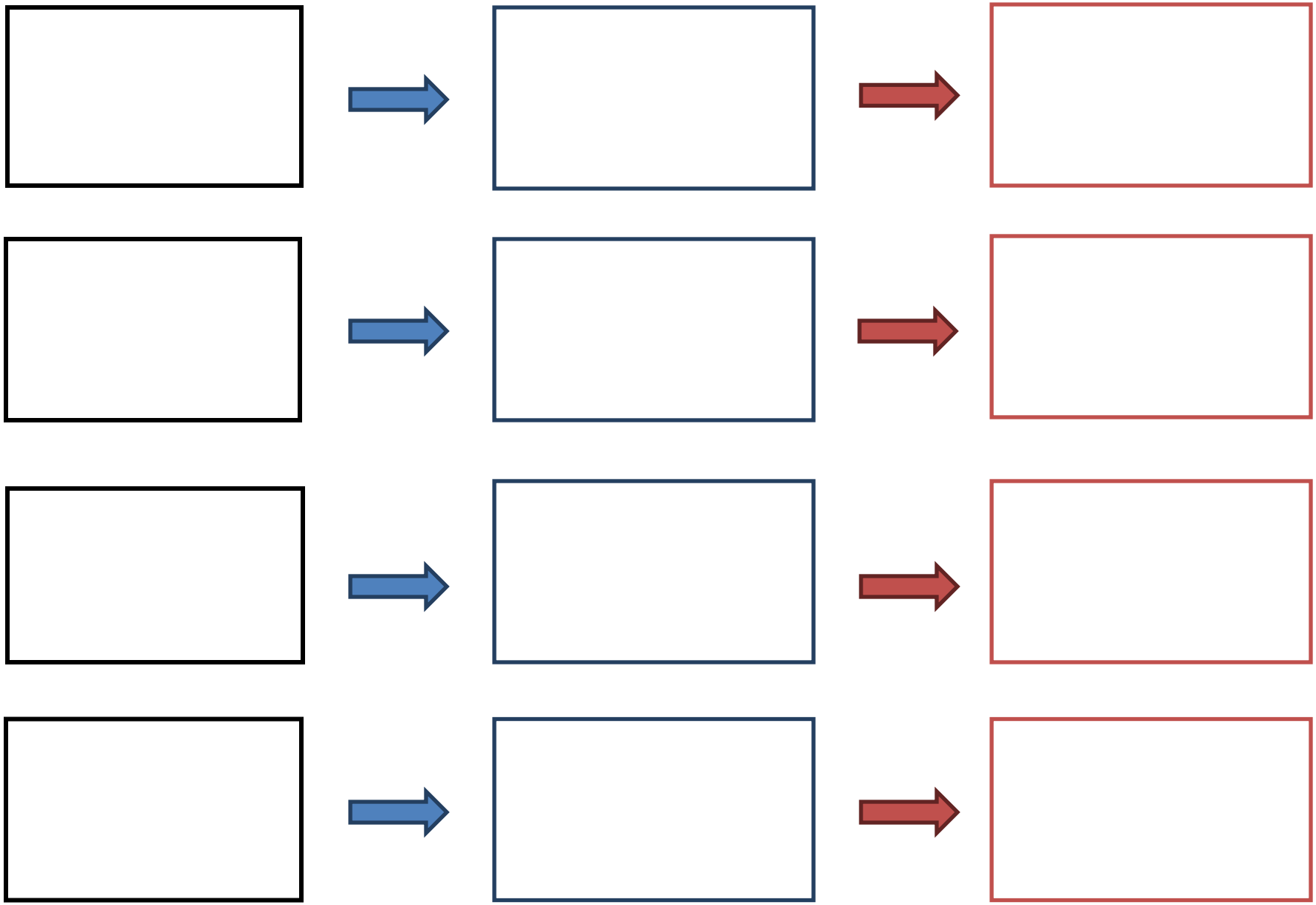
9 Reasons People Use the Internet

1. Education- Many people are choosing to go to school on the Internet. There are many programs or certificates that you can receive by taking classes on the Internet. People who live far away from colleges can take classes on their home computer through the Internet.
2. Marketing- Businesses and other companies can do their marketing on the Internet. There are a lot of people who use the Internet and will see their advertisements. They use the Internet for advertising like you may see commercials on TV.
3. Make Money- People can make money using the Internet. They can sell things to people far away who wouldn't be able to come into their stores.
4. Save Time- People use the Internet to save time. They can pay their bills online, do things that they would normally have to drive to the bank to do and even make reservations and buy tickets online.
5. Entertainment- There are many videos, movies and games that people enjoy playing on the Internet. You can play BINGO in California with someone from Japan!
6. Current Events- People can get up-to-the-minute news on the Internet. They can also participate in popular activities such as Fantasy Football.
7. Transferring of Information- People use the Internet to transfer documents instead of sending them in the mail.
8. Communication- Whether through video chat, email or Instant Messaging, people can communicate with their friends and family who are far away.
9. Information- Many students and adults use the Internet for researching projects for school or looking at encyclopedias.

It is important that your parent or teacher always know what you are doing on the Internet and that you have permission to be on the Internet. The Internet, like most things, must be used properly.

Story Map #2

Reason	Picture	Description



Consult 4 Kids Lesson Plans

Invention Timeline of the Internet

_____

1971

_____

1979

_____

1994

1973-1974

_____

1983

_____

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Invention Convention-School and Education
Focus:	Inventions and Inventors

Materials:

- Engine Power Timeline Template (found in Day 6 materials)
- Junk Box items- cardboard tubes (paper towel rolls, toilet paper rolls, pipe cleaners, scratch paper, buttons, cotton balls, toothpicks, etc.. Whatever extra supplies you have lying around!!)
- Glue, tapes, scissors, etc

Opening

State the objective

- To experience what it feels like to be an inventor
- To invent a new creation

Gain prior knowledge by asking students the following questions

- What is education? How do you receive education?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Engine Power

*<u>K-2</u> Recreate the Engine Power Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*<u>3-5</u> Give each student a copy of the Engine Power Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

<u>Fun Facts: The Invention of Ford Motor Company</u>

- In 1896, in Detroit, Michigan, Henry Ford built his first car in his backyard.
- In 1903, he opened up the Ford Motor Company.
- He is most famous for creating the assembly line, in 1913, where a car moves along a mechanical track and at each station a worker added one more piece to the car until it was completed. This proved to be very efficient.

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

- Ford cars and trucks are bought and sold by the millions today!

Instructions for the Invention Convention

Write the words school and education on the board. Ask students to talk about what they currently like and dislike about school or education.

Explain to students that inventions are often created because people want to solve a problem with the current way something is made. Ask students if they have any ideas about current problems with school or education? How might they change or fix that?

Explain to students that inventions are also created by someone that has a new idea. Ask students if they have any new ideas about school or education. What new school or education idea would they create?

Students Practice ("You do")

Place students in small groups.

Allow groups to choose items from the Junk Box to create new inventions regarding school and education.

Allow groups time to complete their model inventions.

Allow groups to share their inventions with the other groups.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three "what" questions:

- What did you enjoy most about this activity?
- What was the biggest challenge with this activity?
- What did you learn from the group?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	3-5
Lesson Title:	Inventor Skits 2
Focus:	Inventions and Inventors

Materials:

- Airplanes Timeline Template (found in Day 11 materials)
- Inventor Information Cards Handout
- Junk Box items- cardboard tubes (paper towel rolls, toilet paper rolls, pipe cleaners, scratch paper, buttons, cotton balls, toothpicks, etc.. Whatever extra supplies you have lying around!!)
- Glue, tapes, scissors, etc

Opening

State the objective

- To experience what it feels like to be an inventor
- To learn about an inventor and their invention

Gain prior knowledge by asking students the following questions

- What is a skit?
- What is an inventor?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Airplanes

*<u>K-2</u> Recreate the Airplanes Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*<u>3-5</u> Give each student a copy of the Airplanes Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

<u>Fun Facts: The Invention of the First Flight Around the World</u>

- While it's not exactly an invention, the first flight around the world is pretty important to the timeline of the airplane.

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

- In 1986, the first nonstop flight was made by two Americans- Richard Rutan and Jeana Yeagar.
- The flight lasted 9 nine days. The pilots didn't even have to stop to refuel!

Instructions for the Inventor Skits

Split students into groups. Give each group an Inventor Information Card.
Allow students time to read their cards.
Explain to students that they will have time to create a model of the invention that their Inventor created. They will share out their model invention and the information about their inventor.
During their group time, they should build the model and prepare their presentation.

Students Practice ("You do")

Group Time:

- Allow students time to build their models with materials from the Junk Box. Remind students to prepare their presentations of the model and inventor information.
- Allow time for each group to perform their Inventor's Skit, sharing their model and the information about the inventor.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

WHI?

Ask the following three question:

- What were some of the questions that came up in your group?
- How did you go about including everyone?
- If you were to try this again, what might you do differently?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Inventors' Cards

The First Flushing Toilet

- In 1596, the godson of Queen Elizabeth I, created a joke book that included the drawings of the first flushing toilet. People didn't take it very seriously. He built only two of his designs, one for himself, the other for the queen.
- In the 1800's, a man named Thomas Crapper, began to develop the toilet even more. These became the toilets that we use today.

Diapers

- Baby diapers used to be made from cloth and pins. Some people still use this method today.
- An American man named Vic Mills, didn't like the cloth diapers his granddaughter wore, so he wrote a letter to Proctor & Gamble asking them to invent a solution.
- Many years later, in 1961, plastic diapers called Pampers began to sell. These are the types of diapers many use today!

Jeans

- Many people were having problems with their work pants ripping. Tailor, Jacob Davis, came up with the idea of using metal rivets to hold pants together where they would normally rip. This worked very well.
- Jacob teamed up with Levi Strauss and on May 20, 1873, they sent their denim pants design to be patented. This was the birth of blue jeans.
- The term "jeans" began to be used to describe the pants in 1960.

The Raincoat

- The raincoat was invented in 1823.
- Charles Macintosh invented a way to use rubber to make a waterproof cloth.
- His name became a very popular brand of raincoats.

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	How Are Airplanes Built?
Focus:	Inventors and Inventions

Materials:

- Airplanes Timeline Template
- Reading Selection HO- How Are Airplanes Built?
- Story Map #4

Opening

State the objective

- To familiarize students with how modern airplanes are built
- To learn new science vocabulary

Gain prior knowledge by asking students the following questions

- Have you ever flown on an airplane? What was it like?
- If you haven't, would you want to? Why or why not?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Airplanes

*K-2 Recreate the Airplanes Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Airplanes Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of the Airplane

- On December 17, 1903 brothers Wilbur and Orville Wright fly their plane in North Carolina. The plane was called the Flyer.
- Only 5 people saw this first flight.
- The flight only last 12 seconds. It does not go as high as the planes we can fly today. Wilbur ran alongside the plane and held its wing to keep it on course.
- This was credited as the first airplane flight!

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Reading the Selection-

Depending on the age level of your group, choose one of the following ways to read the story:

- Read Aloud- the leader or a capable student can read the story aloud to the group
- Small Group Reading- students can form small groups and take turns reading portions of the story to one another.
- Partner Reading- students can form partners and take turns reading the story to one another.
- Individual Reading- Students will read the story to themselves.

Students Practice ("You do")

Map It Out!

- Give each student a Story Map #4 Handout.
- Students will use words or pictures to describe the sequence of events.

Students can share their story maps with a partner or the whole group when completed.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

What's Important About That?: This strategy allows for the debriefing to take a single student's learning and thinking deeper. Unlike other strategies which encourage the facilitator to get the input of many students, this strategy focuses on one student's opinion and thinking. Students are reminded of what they just participated in. The first question asking students generically, what is important about (that, use the words to describe the activity that was just completed. Ex. If you have just finished your homework time, the student is asked, "What is important about completing your homework?") When one student responds, it is important to listen for what the student says is important about the activity that was just completed. Building on that statement, the question again is "What is important about that (whatever was stated by the student.) This process up to five times, each time taking the child's understanding of what is important to a deeper level. At the end, the facilitator states, "Then what I heard you say is that the importance of (this activity that we just finished) is important because (fill in with the last thing that the student said.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

How Are Airplanes Built?

Airplanes are made of materials that are hard, strong, and lightweight. The first airplanes were made from fabric and wood that were light but strong. Later, they were built with lightweight sheet metal. Today, airplanes are built from a mix of metals and other materials such as plastics, which provide strength without being very heavy.

Airplanes have to be very strong to fly when the four forces of flight—weight, lift, thrust and drag—are at work. They must be hard so that each part stays in the right place while the aircraft is flying. Airplanes can be made harder and stronger by using heavier material. However, airplanes that are too heavy cannot carry as much cargo or as many passengers. So, airplane designers need to make airplanes strong but also as light as possible so they will fly.

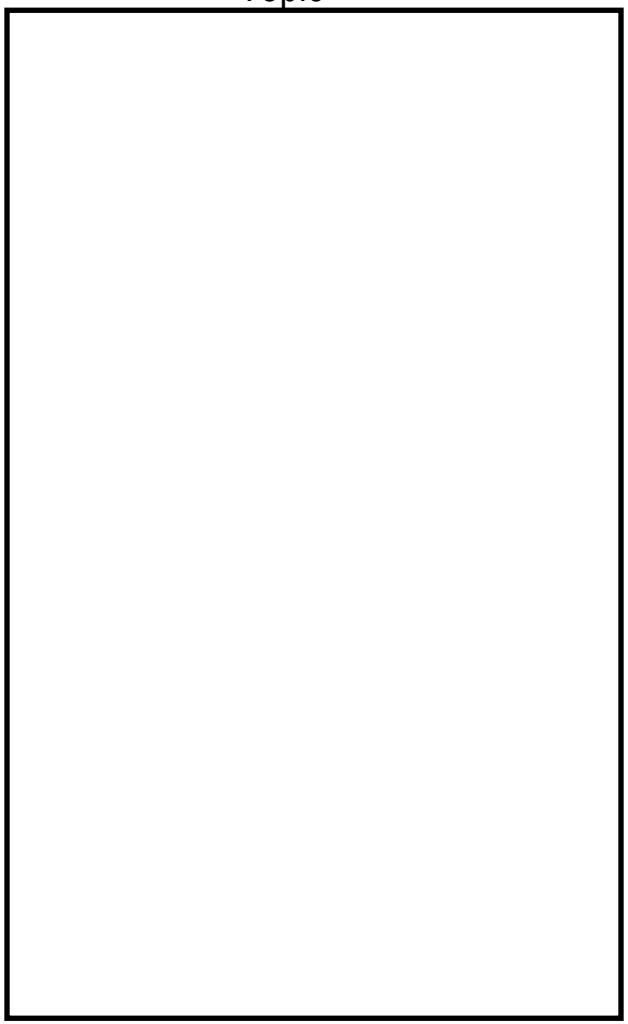
There are five main parts on an airplane. These are: the main body, the wings, the tail, the engines, and the landing gear. The main body is also known as the fuselage.

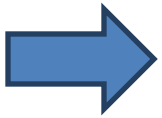
Learn more at wingsovermars.acr.nasa.gov

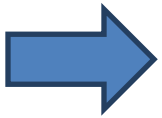
Story Map #4

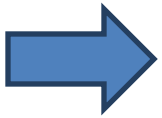
Topic

Details









The Invention Timeline of Airplanes

1903

1932

1986

1907

1952

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Paper Airplanes
Focus:	Inventions and Inventors

Materials:

- Airplane Timeline Template (found in Day 11 materials)
- Paper, 8 ½ x 11, white copy paper
- Crayons

Opening

State the objective

- To learn about flight
- To use airplane vocabulary to make paper airplanes

Gain prior knowledge by asking students the following questions

- Have you ever made a paper airplane? Did it fly well? How did you make it?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Airplanes

*K-2 Recreate the Airplanes Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Airplanes Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of the First Flight Around the World

- While it's not exactly an invention, the first flight around the world is pretty important to the timeline of the airplane.
- In 1986, the first nonstop flight was made by two Americans- Richard Rutan and Jeana Yeagar.
- The flight lasted 9 nine days. The pilots didn't even have to stop to refuel!

Instructions

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Use the Paper Airplanes Directions Handout to lead students through making their own paper airplanes. This can be done individually or in pairs. Encourage students to decorate their airplanes with crayon, so they are able to distinguish among airplanes. **Demonstration** Once airplanes have been made, take students outside. Demonstrate how to throw the airplanes to maximum flight efficiency (this may take some trial and error).	
Students Practice ("You do") Allow students to practice throwing their airplanes. You may want to set up competitions for longest flight with students.	

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three "what" questions: 1. What did you enjoy most about this activity? 2. What was the biggest challenge with this activity? 3. What did you learn from the group?

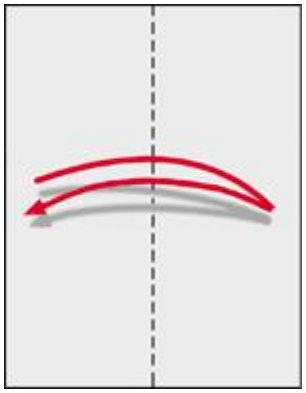
Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

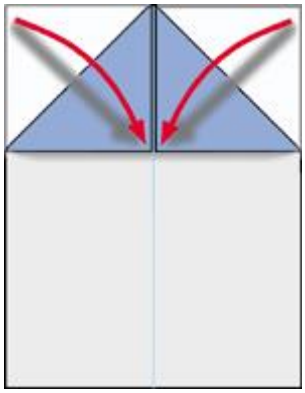
Directions from: www.amazingpaperairplanes.com

Basic Dart

Folding Instructions



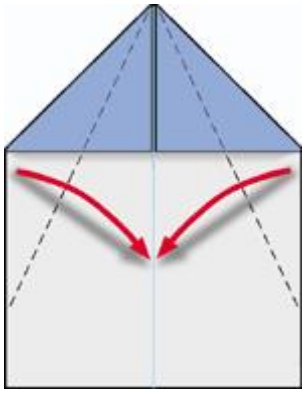
Step 1



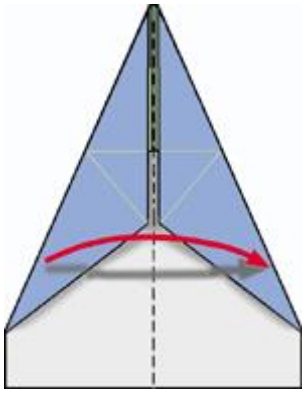
Step 2

Step 1.
Use a sheet of 81/2-by-11 inch paper. Fold the paper in half lengthwise and run thumbnail along the fold to crease it sharply. Now, unfold the paper.

Step 2
Fold down the top corners as indicated by the arrows.



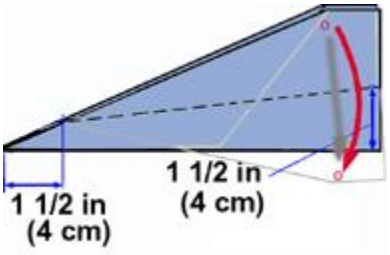
Step 3



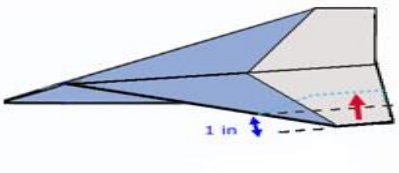
Step 4

Step 3
Fold the two edges toward the center line, as indicated.

Step 4.
Make a valley fold in half.
Turn the plane 90 degrees as shown in figure of Step 5.



Step 5



Step 6

Step 5
Create a wing crease that begins at the nose as shown.

Step 6.
Form 3-dimensional shape as shown in figure. The Basic Dart is complete.
Bend up the tailing edge of the wings for lift if it has a tendency to nose-dive.

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Invention of Air Bags
Focus:	Inventors and Inventions

Materials:

- Engine Power Timeline Template (found in Day 6 materials)
- Drawing/Writing paper and drawing/writing utensils

Opening

State the objective

- To practice our creative writing skills

Gain prior knowledge by asking students the following questions

- What is important about practicing writing skills?
- When would you use good writing skills in your life?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Engine Power

*K-2 Recreate the Engine Power Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Engine Power Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of Air Bags

- Air Bags where first invented in 1952 by an American man. His name was John Hetrick.
- It was updated in 1973, and by 1988, most US cars had air bags.
- Air bags are important features in car and have saved many lives.

Instructions for Creative Writing Assignment

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Say: We have learned many things about the inventions and creations in Engine Power. Review what students have learned about the bicycle, the automobile, motorcycle, Ford Motor Company and Air Bags.

Write the following writing prompt on the board.
"How do you think our lives would be different if these things had never been invented?"

Students Practice ("You do")

K-1: Give students drawing paper and crayons. Allow them to answer the question by drawing pictures of the items and writing words to describe them.

2-5: Give students writing paper and pencils. Allow time for students to write grade level appropriate responses.

Students can share with a partner or the whole group when they have completed their assignment.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Four Step Debrief: This strategy has four steps, each one designed to help the student "connect the dots" between the activity, the learning, and how that learning may be used in their everyday life both immediately and in the future.

Step 1: Describe: Student(s) describe what they did during the activity.
Step 2: Interpret: Students answer one, some or all of the following questions:
What were your key learnings when you participated in this activity?
What skills did you need to utilize to participate in this activity?
How did you feel when participating in this activity?
Step 3: Generalize: How can you use the skills or your key learnings in your life?
Step 4: Apply: How can you use the skills or your key learnings at school?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Invention of Jet Airplanes
Focus:	Inventors and Inventions

Materials:

- Airplanes Timeline Template (found in Day 11 materials)
- Drawing/Writing paper and drawing/writing utensils

Opening
State the objective • To practice our creative writing skills
Gain prior knowledge by asking students the following questions • What is important about practicing writing skills? • When would you use good writing skills in your life?

Content (the "Meat")	
Instruction/Demonstration ("I do" – "We do") **Invention Timeline- Airplanes** *<u>K-2</u> Recreate the Airplanes Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *<u>3-5</u> Give each student a copy of the Airplanes Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss. **<u>Fun Facts: The Invention of Jet Airplanes</u>** • The idea for a jet airplane had been around for many years. In 1930, a man created the first jet engine. • It wasn't until 1952, that the jet airliner was available for flight. It was the first jet airliner, meaning that it carried passengers, in the world. • It carried passengers between London, England and Johannesburg, South Africa. **Instructions for Creative Writing Assignment** Say: We have learned many things about the inventions and creations in Engine Power.	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Review what students have learned about the bicycle, the automobile, motorcycle, Ford Motor Company and Air Bags.

Write the following writing prompt on the board.

"If you could take a trip to any place on an airplane, where would you go?"

Encourage students to use describing words (adjectives) to describe the plane ride, as well as the destination.

Students Practice ("You do")

K-1: Give students drawing paper and crayons. Allow them to answer the question by drawing pictures of the items and writing words to describe them.

2-5: Give students writing paper and pencils. Allow time for students to write grade level appropriate responses.

Students can share with a partner or the whole group when they have completed their assignment.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Four Step Debrief: This strategy has four steps, each one designed to help the student "connect the dots" between the activity, the learning, and how that learning may be used in their everyday life both immediately and in the future.

Step 1: Describe: Student(s) describe what they did during the activity.

Step 2: Interpret: Students answer one, some or all of the following questions:

What were your key learnings when you participated in this activity?

What skills did you need to utilize to participate in this activity?

How did you feel when participating in this activity?

Step 3: Generalize: How can you use the skills or your key learnings in your life?

Step 4: Apply: How can you use the skills or your key learnings at school?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Invention Convention-Cooking and Eating
Focus:	Inventions and Inventors

Materials:

- Airplanes Timeline Template (found in Day 11 materials)
- Junk Box items- cardboard tubes (paper towel rolls, toilet paper rolls, pipe cleaners, scratch paper, buttons, cotton balls, toothpicks, etc.. Whatever extra supplies you have lying around!!)
- Glue, tapes, scissors, etc

Opening

State the objective

- To experience what it feels like to be an inventor
- To invent a new creation

Gain prior knowledge by asking students the following questions

- Do you know how to cook? What are some of the things you can make? Do you know anyone who likes to cook?
- What are some of your favorite things to eat?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Airplanes

*K-2 Recreate the Airplanes Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Airplanes Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of Hot Air Balloon

- The hot air balloon had already been in invented, but in 1932, a man named August Piccard set a record.
- His balloon went 53,152 feet in the air. This was a very dangerous attempt.

Instructions for the Invention Convention

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Write the words cooking and eating on the board. Ask students to talk about what they currently like and dislike about cooking and eating.

Explain to students that inventions are often created because people want to solve a problem with the current way something is made. Ask students if they have any ideas about current problems with cooking and eating? How might they change or fix that?

Explain to students that inventions are also created by someone that has a new idea. Ask students if they have any new ideas about cooking and eating. What new school or education idea would they create?

Students Practice ("You do")

Place students in small groups.
Allow groups to choose items from the Junk Box to create new inventions regarding cooking and eating.
Allow groups time to complete their model inventions.
Allow groups to share their inventions with the other groups.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three "what" questions:

- What did you enjoy most about this activity?
- What was the biggest challenge with this activity?
- What did you learn from the group?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Inventor Skits 3
Focus:	Inventions and Inventors

Materials:

- Internet Timeline Template (found in Day 16 materials)
- Inventor Information Cards Handout
- Junk Box items- cardboard tubes (paper towel rolls, toilet paper rolls, pipe cleaners, scratch paper, buttons, cotton balls, toothpicks, etc.. Whatever extra supplies you have lying around!!)
- Glue, tapes, scissors, etc

Opening

State the objective

- To experience what it feels like to be an inventor
- To learn about an inventor and their invention

Gain prior knowledge by asking students the following questions

- What is a skit?
- What is an inventor?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Internet

*K-2 Recreate the Internet Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Internet Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of the Yahoo!

- Yahoo!- a search engine- was created in 1994. David Filo and Jerry Young, two students at Stanford University are credited with the creation.
- A search engine allows you to put in a topic; the search engine will search for websites

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

that relate to your topic.

- Since 1994, many other search engines have been created.

Instructions for the Inventor Skits

- Split students into groups. Give each group an Inventor Information Card.
- Allow students time to read their cards.
- Explain to students that they will have time to create a model of the invention that their Inventor created. They will share out their model invention and the information about their inventor. During their group time, they should build the model and prepare their presentation.

Students Practice ("You do")

Group Time:

Allow students time to build their models with materials from the Junk Box. Remind students to prepare their presentations of the model and inventor information.

Allow time for each group to perform their Inventor's Skit, sharing their model and the information about the inventor.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

WHI?

Ask the following three question:

- What were some of the questions that came up in your group?
- How did you go about including everyone?
- If you were to try this again, what might you do differently?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Inventors' Cards

Tennis For Two • Tennis for Two is the name of the first computer game. • It was invented by William A. Higinbothom who worked in a laboratory in New York. • He created the game to help pass the time for people who visited the laboratory.	**Nintendo Game Boy** • Invented in 1989 • The Game Boy was the first video game to be hand held.
Battlezone • The first 3-D game was made in 1980. • Battlezone was so popular and such a breakthrough in technology, the US government used it to train their troops	**Playstation 2** • The first Playstation was made in 1994, but only released in Japan. It was released worldwide in 1995. • In 2000, the Playstation 2 came out. It sold out all over the world within just a few days.

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-2
Lesson Title:	Glittery Fireworks
Focus:	Inventions and Inventors

Materials:

- Engine Power Timeline Template (found in Day 6 materials)
- Black construction paper
- Glue bottles
- Glitter, in a variety of colors

Opening
State the objective • To learn about how glitter was invented • To use glitter to make art
Gain prior knowledge by asking students the following questions • How do you use glitter? • How do you think glitter is made?

Content (the "Meat")	
Instruction/Demonstration ("I do" – "We do") **Invention Timeline- Engine Power** *<u>K-2</u> Recreate the Engine Power Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *<u>3-5</u> Give each student a copy of the Engine Power Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss. **<u>Fun Facts: The Invention of the Seat Belt</u>** • Seal belts were invented by a man named Nils Bohlin in 1959. • He created them to strap people into the car. • They prevent millions of injuries! Always wear your seat belt! These days, it is against the law in many places to ride in a car without one.	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Instructions

Share this information about glitter with students:

- Glitter is made from sheets of colored plastic and foil that are cut into millions and millions of very tiny pieces.
- The machine that cuts the plastic into glitter was created by Henry Ruschmann in 1934, almost 60 years ago. He raised cattle in New Jersey.
- Today, the glitter company that he started, called Meadowbrook Inventions, makes the most glitter in the world.

Demonstration

Follow the below instructions for Glittery Fireworks and demonstrate how to create them for students.

1. Place a black piece of construction paper in front of you.
2. Use the glue to create a firework. Place a small dab (about the size of a dime) on the paper. Use the tip of the glue bottle, place in the center of the dab of glue and pull straight out. This should create a line. Continue many times; circle the dab of glue, until you have a shape resembling a firework.
3. Over a paper plate, sprinkle glitter over the firework, letting excess glitter fall off onto the paper plate.
4. Repeat to make more fireworks on your paper!

Students Practice ("You do")

Give each student access to materials. Allow students to create their Glittery Fireworks and share with others, if time allows.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three "what" questions:

1. What did you enjoy most about this activity?
2. What was the biggest challenge with this activity?
3. What did you learn from the group?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Invention Convention-Entertainment
Focus:	Inventions and Inventors

Materials:

- Internet Timeline Template (found in Day 16 materials)
- Junk Box items- cardboard tubes (paper towel rolls, toilet paper rolls, pipe cleaners, scratch paper, buttons, cotton balls, toothpicks, etc.. Whatever extra supplies you have lying around!!)
- Glue, tapes, scissors, etc

Opening

State the objective

- To experience what it feels like to be an inventor.
- To invent a new creation.

Gain prior knowledge by asking students the following questions

- What is entertainment? What are some forms of entertainment you enjoy?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Internet

*K-2 Recreate the Internet Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Internet Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of Emoticons

- In 1979, people began to add emoticons to their emails. Emoticons are typed symbols that represent feelings. By the 1980's, many people are using :-) and :-(

Instructions for the Invention Convention

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Write the word entertainment on the board. Ask students to talk about what they currently like and dislike about entertainment.

Explain to students that inventions are often created because people want to solve a problem with the current way something is made. Ask students if they have any ideas about current problems with entertainment? How might they change or fix that?

Explain to students that inventions are also created by someone that has a new idea. Ask students if they have any new ideas about entertainment. What new school or education idea would they create?

Students Practice ("You do")

Place students in small groups.

Allow groups to choose items from the Junk Box to create new inventions regarding entertainment.

Allow groups time to complete their model inventions.

Allow groups to share their inventions with the other groups.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three "what" questions:

- What did you enjoy most about this activity?
- What was the biggest challenge with this activity?
- What did you learn from the group?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Inventions and Inventors Memory
Focus:	Inventions and Inventors

Materials:

- Engine Power Timeline Template (found in Day 1 materials)
- Invention Memory Set #1 (1 set per every pair or small group of students)
- Invention Memory Set #2 (1 set per every pair or small group of students)

Opening
State the objective • To play a game to review things we have learned about Inventors and Inventions.
Gain prior knowledge by asking students the following questions • Have you ever played Memory? How do you play? What are the rules?

Content (the "Meat")	
Instruction/Demonstration ("I do" – "We do") **Invention Timeline- Engine Power** *<u>K-2</u> Recreate the Engine Power Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *<u>3-5</u> Give each student a copy of the Engine Power Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts. *If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss. **<u>Fun Facts: The Invention of the Automobile and Motorcycle</u>** • Both the automobile (car) and motorcycle were invented in 1885. • The automobile was created in Germany by Karl Benz (hence Mercedes-Benz!). This first car had three wheels and went only 8 miles per hour! • The motorcycle was invented Gottlieb Daimler and Wilhelm Maybach, in Germany. **Instructions for Invention Memory- Review with Students!** Each game set consists of picture cards (Set #1) and fact cards (Set #2). Group students into	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

groups of 2-4 players. Each group will cut out all cards in the game set. To play:

1. Turn all cards face down in a 5 x 4 grid.
2. One at a time, players will choose two cards to turn face up so that all players can see.
3. A player gets a match if the picture card matches the fact card. They keep the match and turn over two new cards.
4. If a player doesn't get a match, it is the next players turn.
5. Continue until all cards have been matched. Player with the most matches wins.

Demonstration

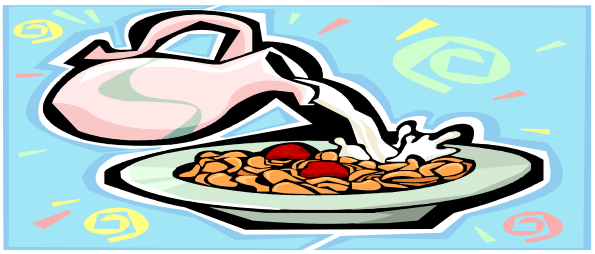
Choose a student to come to the front with you. Show students how to lay out cards and how to play. Play a few rounds with your volunteer so students can see how the game is played.

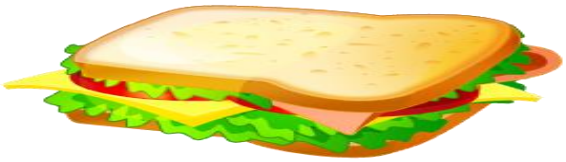
Students Practice ("You do")

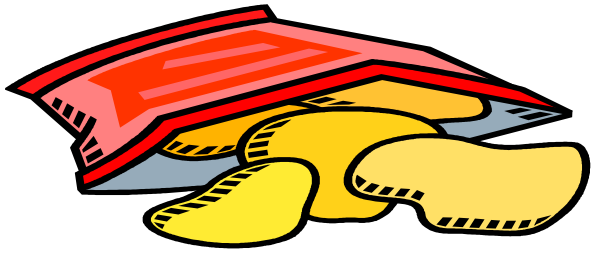
Students can play multiple times, as time allows.

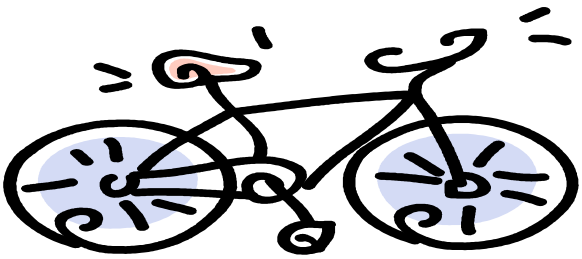
Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Liked Best, Next Time (LBNT):** In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.
Reflection (Confirm, Tweak, Aha!) • Ask students to think about what they did today.. • Ask them to comment on what they did today was something they already knew how to do. (Confirmation) • Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak) • Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans









Consult 4 Kids Lesson Plans

 Cornflakes Invented 1894	 Coca Cola Invented 1886
 Sandwich Invented 1762	 Potato Chips Invented 1853
 Bicycle Invented 1838	 Chocolate Chip Cookies Invented 1930
  Automobile and Motorcycles Invented 1885	 Assembly Line Invented 1913
 Air Bags Invented 1952	 Seat Belts Invented 1959

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Inventions and Inventors Memory 2
Focus:	Inventions and Inventors

Materials:

- Internet Timeline Template (found in Day 16 materials)
- Invention Memory Set #1 (1 set per every pair or small group of students)
- Invention Memory Set #2 (1 set per every pair or small group of students)

Opening

State the objective

- To play a game to review things we have learned about Inventors and Inventions.

Gain prior knowledge by asking students the following questions

- Have you ever played Memory? How do you play? What are the rules?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Internet

*K-2 Recreate the Internet Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Internet Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of the Internet

- The Internet was created by Vent Cerf and Bob Kahn. It began as a network of computers and cables. It was only available for a small number of people and for business purposes only.

Instructions for Invention Memory- Review with Students!

Each game set consists of picture cards (Set #1) and fact cards (Set #2). Group students into groups of 2-4 players. Each group will cut out all cards in the game set. To play:

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

1. Turn all cards face down in a 5 x 4 grid.
2. One at a time, players will choose two cards to turn face up so that all players can see.
3. A player gets a match if the picture card matches the fact card. They keep the match and turn over two new cards.
4. If a player doesn't get a match, it is the next players turn.
5. Continue until all cards have been matched. Player with the most matches wins.

Demonstration
Choose a student to come to the front with you. Show students how to lay out cards and how to play. Play a few rounds with your volunteer so students can see how the game is played.

Students Practice ("You do")
Students can play multiple times, as time allows.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Liked Best, Next Time (LBNT):** In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today..
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)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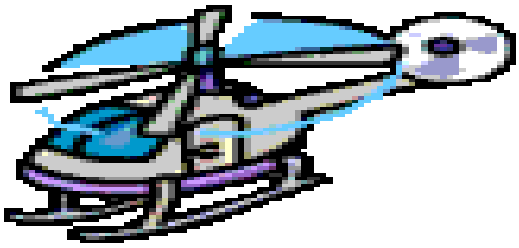	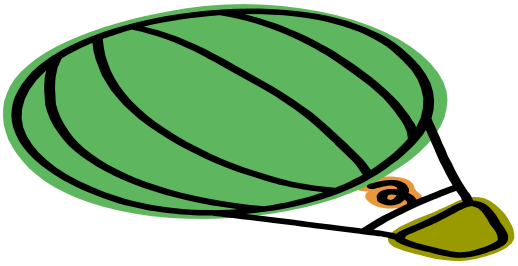
	

Consult 4 Kids Lesson Plans

 Email Invented in 1971	 Internet Invented in 1973-74
 Internet for Everyone Invented in 1983	:-(:-) Emoticons Invented in 1979
Yahoo! Yahoo Invented in 1994	 First Flight Around the World Occurred in 1986
 Helicopter Invented in 1994	 Highest Hot Air Balloon Invented in 1932
 Jet Airliner Invented in 1952	 First Flight Occurred in 1903

Consult 4 Kids Lesson Plans

Component	Theme
Grade Level:	K-5
Lesson Title:	Inventions and Inventors BINGO
Focus:	Inventions and Inventors

Materials:

- Airplanes Timeline Template (found in Day 11 materials)
- BINGO Card (1 per student)
- BINGO markers (beans, buttons, etc)

Opening

State the objective

- To play a game to review things we have learned about Inventors and Inventions

Gain prior knowledge by asking students the following questions

- Have you ever played BINGO? How do you play? What are the rules?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Invention Timeline- Airplanes

*K-2 Recreate the Airplanes Timeline on a large chart paper. As you introduce a new invention each day, add it to the class timeline, writing or drawing important information from the Fun Facts listed. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*3-5 Give each student a copy of the Airplanes Timeline Handout. As you move through the week, read the Fun Facts for the day to students and allow them to draw or write facts they find interesting. The line above the date is meant for the name of the invention, while the box above the line is meant for drawings or facts.

*If you are not using the lesson plans daily, for any grade level, just read the Fun Facts to students and discuss.

Fun Facts: The Invention of the Helicopter

- A French mechanic named Paul Cornu was the first person to build and fly a helicopter.
- He did this in 1907. It hovered off of the ground for only 20 seconds and didn't go very high.
- The flight ended in a crash landing.

Instructions for BINGO

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Write the following word list on the board: chips, sandwich, cornflakes, coca-cola, cookies, ketchup, airplane, weight, lift, thrust, drag, bicycle, automobile, motorcycle, assembly line, Henry Ford, air bag, seat belt, telephone, stamp, direct dial, Alexander Graham Bell, cell phone, text message Instruct students to choose one word to write in each square of their BINGO card.	
Students Practice ("You do") Play BINGO with students by choosing a word from the word list and calling it out. The first student to get 5 in a row, diagonally, horizontally, or vertically is the BINGO winner!	

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Liked Best, Next Time (LBNT):** In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.
Reflection (Confirm, Tweak, Aha!) • Ask students to think about what they did today.. • Ask them to comment on what they did today was something they already knew how to do. (Confirmation) • Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak) • Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Modification:
For younger students, you may want to write the words in the squares before students arrive.

Inventions and Inventors BINGO

B	I	N	G	O