Afterschool Adventure!

Operation: Lights, Camera, Action!

Learning to Tell Time and Count Money

Powered by a Ready To Learn Grant

This out-of-school resource was developed by Maryland Public Television.
Let's take it from the top! This week's adventure, Operation: Lights, Camera, Action!, takes children to a movie set where they work behind-the-scenes and explore different kinds of jobs such as production assistant (keeps track of the daily schedule), caterer (makes snacks for the crew) and accountant (manages the money). Each section of this weeklong adventure is introduced by a video clip or online game that encourages children to explore math concepts and skills related to telling time and counting money.

Math Overview
This unit focuses on time and money skills for 6-8-year-olds, such as ordering events by time of day and counting coins up to a dollar. Refer to More About Math to learn additional information about these math topics as they relate to the Operation: Lights, Camera, Action! learning activities.

Before You Begin
Create a free account on PBS Learning Media to access videos for this afterschool adventure. http://www.pbslearningmedia.org/

Print the Business Cards handout so that each child can receive the following cards:
- Production Assistant to the Stars
- Caterer to the Stars
- Business Manager to the Stars

Download the following mobile apps (if an iPhone is available):
- FETCH! with Ruff Ruffman: FETCH! Cal
- FETCH! with Ruff Ruffman: You’re Late!

Use the following materials to make a clock:
- Paper plate
- Construction paper to make an hour hand (long arrow) and a minute hand (short arrow)
- Metal paper fastener to attach and hold the hour and minute hands together in the center of the plate

Print the Time of Day poster for easy reference during the group activity.
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Handy Resource Guide

Get Ready! Your afterschool adventure includes videos, online games and mobile apps, hands-on activities and books. Use this resource chart to prepare ahead.

WATCH

PBS KIDS Videos

Part 3: Cyberchase: Time Travel (1:02)
Part 4: Cyberchase: From 2D to 3D (1:00)

EXPLORE

Hands-on Activities

Part 2: Staying on Schedule
• Post-it Notes
• Markers
• Time of Day poster
• Business Card handout (Production Assistant cards)

Part 3: Timing is Everything
• Model of a clock
  Or you can make a clock model with the following materials:
  • paper plate
  • construction paper (to make long and short paper arrows)
  • metal paper fastener
• Business Card handout (Caterer cards)

Part 4: Managing the Money
• Assorted office supply items
• Construction or printer paper
• Pens, pencils, crayons and markers
• Quarters, nickels and dimes (play money or real money)
• Coin purse or toy cash register (optional)
• Chart paper

Part 5: Staying on Budget
• Business Card handout (Business Manager cards)

PLAY

Online Games & Mobile Downloads

Part 2: FETCH! with Ruff Ruffman: FETCH! Cal
Part 2: FETCH! with Ruff Ruffman: You’re Late!
Part 4: Fizzy’s Lunch Lab: Customer Change
Part 5: Fizzy’s Lunch Lab: Buying Groceries
Part 5: Arthur: Buster’s Movie Maker
Part 5: Cartoon Studio

READ

Related Books

Part 1: Telling Time by Jules Older
Part 1: How Do You Know What Time It Is? by Robert E. Wells
Part 2: Rodeo Time by Stuart J. Murphy
Part 3: Just A Minute! by Teddy Slater
Part 4: A Dollar, a Penny, How Much and How Many? by Brian P. Cleary
Part 5: Alexander, Who Used to Be Rich Last Sunday by Judith Viorst
Part 1: Introduction (20 minutes)

WATCH

The Electric Company: Behind the Scenes: On the Set of A Fistful of Confetti (2:08)

Ashley Austin Morris and Carly Rose Sonenclar, who play Francine and Gilda on The Electric Company, describe how the show is made.

Begin by gathering the children at the computer or interactive whiteboard. Have the children sit or stand around the screen so they can all see.

Leader: It's time for PBS KIDS Afterschool Adventure! This week, we're going to learn a little bit about making movies and television during Operation: Lights, Camera, Action! Let's start by talking about your favorite movies and TV shows.

Ask children to raise their hands and share their favorite movies or television shows.

Leader: You've mentioned some great shows and movies that are really fun to watch. But have you ever thought about the kind of work that goes into making them—and how many people need to work to make it happen? Let's watch this video together to find out more.

Start the video. After watching, ask if the children can remember any of the jobs done by others to make the movie (camera operator, makeup, director). Ask what kinds of skills they might need to do their jobs. Then ask the children if they can think of any way that math could come in handy when making a movie or a TV show.

Leader: Over the next week, you're going to take on some different jobs to find out what it takes to make a movie or television show—and how math can help! First, you will have a chance to work as a production assistant and keep track of the daily schedule. Then you will work as a caterer to provide snacks for the crew. Finally, you will manage the money and keep track of a budget when you work as an accountant. Math skills are important for all of these jobs!

Keep Going! If you have more time, explore the following resources:

READ

Telling Time by Jules Older

For children without much experience telling time, start out by showing them this book on how to read a digital and analog clock.

How Do You Know What Time It Is? by Robert E. Wells

For more background on telling time, this book gives an overview of how different civilizations have measured time throughout history.
Part 2: Staying on Schedule (40 minutes)

EXPLORE

Daily Schedule (Based on Keeping Track of My Day)
Children will work within a schedule to organize events in a sequence and associate events with a time of day. These are important skills for learning to measure time.

Gather the children together in an area with a whiteboard, chalkboard, or flip chart.

Leader: Before you start your job as production assistants, let’s talk about your own daily schedule. When you do the same activity at the same time each day, this is called a schedule or routine. Tell me some of the activities that are part of your daily routine.

Encourage children to explain what they do each school day. Remind them to describe their activities before and after school. Write each example on a post-it note and then help children order the activities by morning/afternoon/evening or before/during/after school.

Leader: Making a movie is a really big job. To be successful, lots of little tasks need to happen on time and in the right order. Imagine that you’re on the set of a movie and you need to keep track of the daily schedule. How would you put all these tasks in the right order?

Show the children a selection of post-it notes, each with one task and time listed:

- Make costumes 10:00 AM
- Rehearse lines 1:00 PM
- Film movie 3:00 PM
- Break for lunch 12:00 PM
- Clean up set 6:00 PM

Start by reading each task and the associated time. Ask children if they can guess which of these tasks would come first in the day. Then ask them to place the rest of the tasks in order. If they need help, show them the Time of Day poster.

Use the poster to explain what the numbers on each side of the colon refer to, and the difference between AM and PM. Children may even use the poster as a number line, and attach the notes in order from left to right.

Once children have the hang of it, try it again, this time with some different tasks and times:

- Decorate set 11:00 AM
- Get hair styled 8:30 AM
- Have breakfast 8:00 AM
- Film movie 12:15 PM

Have the children read the times and tasks aloud. Make sure they understand that there are 60 minutes in an hour, 30 minutes in a half hour, and 15 minutes in a quarter of an hour. Remind them that 8:30 can also be called half past eight, and 12:15 can also be a quarter past twelve.

When the children are done, correct or confirm their work.
Part 2: (continued)

Leader: Now that you’ve gotten some practice with scheduling, it’s time for you to try your hand at being a production assistant. A production assistant is someone who keeps track of your appointments and makes sure you don’t forget anything on your schedule. In this game, you’ll be Ruff Ruffman’s production assistant.

PLAY

Mobile app: FETCH! with Ruff Ruffman: FETCH! Cal
Ruff’s schedule is all out of order! Arrange his meetings in order from earliest to latest.

Download the app and have the children play the game in pairs or individually. As they play, check in to make sure they understand the rules and how to advance through the game. When everyone has had a turn, gather the class together again.

Leader: Nice job today, everyone! You used your math skills to organize Ruff’s schedule and keep him on track. For that, you’ve earned the job title of Production Assistant to the Stars. Congratulations!

Present children with their own Production Assistant business cards to take home.

Keep Going! If you have more time, explore the following resources:

PLAY

Mobile app: FETCH! with Ruff Ruffman: You’re Late!
Ruff’s digital clock isn’t working. Use his good old-fashioned analog watch and compare it to the digital appointment times to tell him which appointment he needs to get to next.

READ

Rodeo Time by Stuart J. Murphy
There’s so much to see and do at the rodeo! Cameron and Kate need to write up a schedule and stick to it if they’re going to fit it all in.

EXPLORE

Favorite Movie
What is the most popular movie in your program? Have children poll the group and make a chart showing their favorite movie, television show, or actor. Discuss which answers got the most votes, and how the chart helps show this.
Part 3: Time is Everything (20 minutes)

PLAY

Cyberchase: Measuring Up (2:01)

In this Cyberchase video clip, Digit and Matt have misplaced the timer they use when they are cooking. They realize they can use the hands of a clock to measure time passing.

Before playing the video, set aside a clock model, or make one yourself using a paper plate as the clock face and construction paper to create a minute hand (long arrow) and an hour hand (small arrow). Attach the arrows (hour and minute hands) to the center of the plate with a small metal paper fastener. Make sure each hand moves easily around the clock face. Remember to add numbers for each hour and lines for each minute on the clock so children can practice telling time.

Gather the children at your computer or interactive whiteboard. Have the children sit or stand around the screen so they can all see.

Leader: Last time we were together, you used your math skills to work as production assistants. That is a really important job on a movie set. Today, you’ll have the opportunity to learn new math skills—and try a different position. Does anyone know what a caterer is?

Explain to the children that on a production set, caterers bring meals and snacks for the cast and crew. Let the children know they will be solving cooking and baking problems using some fun math skills.

Now show the children the clock model. Ask, How can clocks help with cooking and baking? Call on a few children to share ideas, but don’t give away the answer yet. Ask them to think about your question as you play the video clip.

Push play and watch the video together. Ask if children have anything to add to their discussion about clocks and baking. Then play the video again, pausing at 0:54. Ask the children where the minute hand (big hand) will be when it is 9:19.

Review the concept of counting on by demonstrating how to move the big hand on your clock model from 9:14 to 9:15. Explain that it is actually 5 spaces that are counting—not 5 lines.

Afterward, give children more opportunities to practice this skill. Set the time on your clock model and then ask children to move the hands of the clock to show elapsed time.

• It’s 5:00 AM. You’re baking oatmeal for the crew’s breakfast. The oatmeal has to cool off for one hour. What time will it be ready?

• It’s 2:30 PM. You’ve just brewed some hot tea, and now it has to chill for 30 minutes before it is served. What time will it be ready?

• It’s the camera operator’s birthday! You’re making a batch of cupcakes and they have to bake for 20 minutes. If you put them in the oven at 5:30 PM, what time will they be done?

• Why did they need to split one comic book in half? (so that there were an equal number of comic books on each side)

Leader: Nice job today, everyone! You used your math skills to keep track of time for cooking and baking. You’ve earned the job title of “Caterer to the Stars.” Congratulations!

Present children with their own Caterer to the Stars business cards to take home.
Keep Going! If you have more time, explore the following resources:

**EXPLORE**

**How Long?**
What can you do while you’re waiting for your cakes and cookies to bake? Set a timer and have children do as many jumping jacks as they can in one minute. Now ask them to estimate how many jumping jacks they can do in three minutes and five minutes. Set the timer again for three minutes and have them see how close they come to their predictions!

**READ**

**Just A Minute! by Teddy Slater**
How long is a minute? In this fun book, a young boy learns just how long a minute really is using easily understandable real-life examples.
Part 4: Manage the Money (20 minutes)

EXPLORE

Corner Store (based on Fizzy’s Lab Lunch Counter)

Using items from your own classroom, help the children create a simple store where they can learn about dollars and cents.

Gather the children and tell them about their next role.

Leader: Last time we were together, you learned how to keep track of time so you could be a caterer and make delicious snacks on a movie set. Today, we’re going to practice a new math skill – counting money. That’s an important thing to know when you’re a business manager. That’s the person who keeps track of the money spent on the movie set.

Tell the children they’re going to start by setting up a store for the production crew.

Show children the supplies you’ve collected:
• Assorted items for the store (paperclips, envelopes, safety pins, etc.)
• Construction or printer paper
• Pens, pencils, crayons and markers
• Quarters, nickels and dimes (play money or real money)
• Coin purse or toy cash register (optional)
• Chart paper

Now divide children into two groups; Store Manager and Customers.

Store Managers: Invite the children in this group to choose a name for their store and work together to make a sign. Children can choose a few items to sell in the store. They should create a price list with a picture of each item and its price. Prices should be in multiples of five or ten, such as 25 or 30 cents, up to a dollar. (Each child can create a price list.)

Customers: Children in this group play the role of customers. Give each customer an assortment of change—quarters, nickels and dimes—adding up to one dollar. Then, enjoy playing pretend together! Invite customers into the store one at a time and give them an assignment to complete (i.e., The lead actor ripped his costume! The customer needs to get to the store to buy a safety pin right away!)

Store Managers: Tell the customers what each item costs.

Customers: Count and hand over the correct payment amount.

Then have them switch roles.

If you have more time, create prices that end in fives, such as 25 or 45 cents. Give the customer only dimes. Give the store manager only nickels so they can practice giving change. You can even add pennies to the game and move beyond multiples of five. Try prices like 32 or 97 cents.

When you are done, let the children switch roles so that everyone has a turn.

Leader: Nice job today, everyone! You used your math skills to count out the correct amount of money to buy different items that were needed on your movie set. Now as a Business Manager, you will learn how to work within a budget so that you can be a “Business Manager to the Stars!”
Keep Going! If you have more time, explore the following resources:

**READ**

*A Dollar, a Penny, How Much and How Many?* by Brian P. Cleary
This book serves as a primer on how to count and combine common coins and bills.

**PLAY**

*Fizzy’s Lunch Lab: Customer Change*
Robo-Fizz needs help at the cash register. Help determine the correct amount of change needed for each customer making a purchase.
**Part 5: Staying on Budget (40 minutes)**

**WATCH**

**Cyberchase: Film Shoot Day 2**

In this video segment from Cyberchase, the CyberSquad is shooting a film. They have a limited amount of money to spend on food, film stock and the crew. As they work, they make a budget for each day of filming. At the end of the second day, they compare their actual costs to the amount they had budgeted for that particular day of filming.

Begin by gathering the children at your computer or interactive whiteboard. Have the children sit or stand around the screen so they can all see.

**Leader:** Last time we were together, you learned how to count money so you could buy the items you needed to help make a movie. But it’s not enough just to know how to count money. You also have to be sure you’re not spending more than you have! That’s called staying on budget. We’re going to try it out so you get the hang of it.

Press play and watch the clip with the children.

Pause at :24 and ask, What is a snelfu? (Cyberchase money). Remind the children that here in the U.S. we use dollars and cents to count money. In other countries, there are different names for money (such as pesos, Euros and pounds). Continue to play the video.

After the video discuss why the Cybersquad was so excited (they stayed under budget). Discuss any unfamiliar vocabulary, such as budget (the amount of money you have to spend on an item or items) and cost (the actual amount paid for an item). When the cost is less than the budget, that is a good thing!

Confirm the children’s understanding by asking a few questions:

- If you set aside $10 for some new movie star sunglasses and found out they cost $9, would you be under or over budget?
- If you saved $100 for a limousine ride to an awards ceremony and found out it actually cost $150, would you be over or under budget?
- If you had $50 to spend on lunch for the crew, and it cost $25 for sandwiches and $10 for drinks, would you be over or under budget?

**PLAY**

**Fizzy’s Lunch Lab: Buying Groceries**

You’ve been asked to go to the grocery store to pick up a few items for lunch. Your success depends on getting the most for your money without going over budget.

Tell the children now that they have the general idea of a budget down, they’re going to get the opportunity to practice. Review skip counting before the children begin. You can practice skip counting by 5, 10, and 25. Remind children that 100 cents is the same as 1 dollar.

Then have them play the game in pairs or individually. As children play, - make sure they understand the rules and how to select and pay for items. If necessary, model how to solve problems. For example, if children need to count to 60, point out the following options:

- Counting by twenties—like 20, 40, 60—is like skip counting by twos (2, 4, 6).
- Counting by thirties—like 30, 60—is like skip counting by threes (3, 6).
- What is half of 30? 15, right? So how many 15s would it take to equal 60?
When everyone has had a turn, gather the class together again.

**Leader:** Great job today, kids! You used your math skills to stay on budget, and spend only the money that you planned. You’ve earned the job title of Business Manager to the Stars. Congratulations!

Present children with their own **Business Manager business cards** to take home.

**Keep Going!** If you have more time, explore the following resources:

**PLAY**

**Arthur: Buster’s Movie Maker**

Now it’s your turn to help make a movie! In this game, children will see a short movie clip, and then have the opportunity to change the music, sound effects, characters, and props.

**PLAY**

**Cartoon Studio**

If you have more time, have children make an animated movie, either individually or in groups, with the Cartoon Studio tool. Encourage them to create a story that shows what they’ve learned about time and money.

**READ**

**Alexander, Who Used to Be Rich Last Sunday** by Judith Viorst

When you don’t have a plan for how to spend your money, it can slip away quickly! Read this book aloud and discuss where Alexander’s money went.