Developed By:
NJSACC, NJ's Statewide Afterschool Network
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Expanding Learning AFTERSCHOOL

A Practical Guide for NJ's Afterschool Professional

Table of Contents

About this Guide

Afterschool programs can help expand the learning that happens during the school day. Afterschool programs that complement and coordinate -- but do not replicate -- school day learning can make a big impact on the kids they serve. This guide will provide:

1. An overview of the skills/practices in four subject areas of the NJ Core Curriculum Content Standards.
2. An activity planning template.
3. Sample activities, including activities submitted by afterschool professionals from around the great state of New Jersey!
4. Additional resources for finding and developing high quality activities.

According to the NJ Quality Standards for Afterschool, linking to the school is an important element of a high-quality afterschool program.

NJ QSA Category: Programming and Activities

Standard: The afterschool program is linked to the school day

1. Staff use formal procedures and/or information methods for communicating with the schools the youth attend. For example, the program administration may seek to develop a collaborative relationship with the school principal(s) or attend building team or instructional meetings at the school(s). These collaborations may vary depending on whether the program is sited at a school and whether it serves youth from one school or multiple schools.
2. Program staff are aware of the content and skills the youth are learning during the school day.
3. Activities complement the school day rather than repeat what youth do in the classroom.
4. Program links to the school day are informed by the needs of the individual youth.
5. The program takes steps to make the schools aware of the importance of the afterschool program and what it offers.

Visit http://www.njsacc.org/qualityStandards/index.php to learn more about the NJ Quality Standards for Afterschool.

This guide is meant to be illustrative and not exhaustive; we hope afterschool professionals will come away with an overview of current education standards and new ideas for how their afterschool programs can develop the skills and practices that youth need for success in college, career and life. And as always, NJSACC is here to help you! Please continue to visit our website and contact us if we can assist you in your work.

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Educational Standards in NJ

In 1996, NJ's State Board of Education adopted the New Jersey Core Curriculum Content Standards which describe what students should know and be able to do by the end of their public education. *The standards are not curriculum.* The standards have been revised over the years and cover nine subject areas. This guide will focus on four subject areas: **Science, Mathematics, Language Arts Literacy, 21st Century Life and Careers.**

The New Jersey Core Curriculum Content Standards are extremely detailed as to the skills students should master in each subject area at each grade level, with increasing complexity as students advance through their education. However, the standards are rooted in *practices* that all students, even at the youngest grade levels, must develop. It is this framework that is most helpful to afterschool programs that seek to build skills in the youth they serve.

Science

http://www.state.nj.us/education/aps/cccs/science/

The NGSS is rooted in eight practices of science and engineering that have been identified as essential for all students to learn:

- **Asking questions (for science) and defining problems (for engineering).** Students at any grade level should be able to ask questions of each other about the tests they ready, the feature of the phenomena they observe, and the conclusions they draw from their models or scientific investigations. For engineering, they should ask questions to define the problem to be solved and to elicit ideas that lead to the constraints and specifications for its solution.
- **Developing and using models.** Modeling can begin in the earliest grades with students' models progressing from concrete "pictures" and/or physical scale models (e.g. a toy car) to more abstract representations of relevant relationships in later grades, such as a diagram representing forces on a particular object in a system.
- **Planning and carrying out investigations.** Students should have opportunities to plan and carry out several different kinds of investigations during their K-12 years. At all levels, they should engage in investigations that range from those structured by the teacher… to those that emerge from students' own questions.
- **Analyzing and interpreting data.** Because raw data as such have little meaning, a major practice scientists is to organize and interpret data through tabulating, graphing, or statistical analysis. Engineers often analyze a design by creating a model or prototype and collecting extensive data on how it performs, including under extreme conditions.
- **Using mathematics and computational thinking.** Although there are differences in how math and computational thinking are applied in science and in engineering, mathematics often brings these two fields together by enabling engineers to apply the

mathematical form of scientific theories and by enabling scientists to use powerful information technology designed by engineers.

- **Constructing explanations (for science) and designing solutions (for engineering).** Asking students to demonstrate their own understanding of the implications of a scientific idea by developing their own explanations of phenomena, whether based on observations they have made or models they have developed, engages them in an essential part of the process by which conceptual change can occur.
- **Engaging in argument from evidence.** The study of science and engineering should produce a sense of the process of argument necessary for advancing and defending a new idea or an explanation of a phenomenon and the norms for conducting such arguments. In that spirit, students should argue for the explanations they construct, defend their interpretations of the associated data, and advocate for the designs they propose.
- **Obtaining, evaluating, and communicating information.** Any education in science and engineering needs to develop students' ability to read and produce domain-specific text. As such, every science or engineering lesson is in part a language lesson, particularly reading and producing the genres of texts that are intrinsic to science and engineering.

(Source: http://www.nextgenscience.org/next-generation-science-standards)

These practices grow in complexity and sophistication as students progress from grade to grade. They should also be viewed as overlapping and interconnected. You can learn more about the NGSS online: http://www.nextgenscience.org/

Mathematics

http://www.state.nj.us/education/aps/cccs/math/

The Common Core seeks to develop mathematically proficient students who can:

- **Make sense of problems and persevere in solving them.** Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution.
- **Reason abstractly and quantitatively.** Mathematically proficient students make sense of quantities and their relationships in problem situations.
- **Construct viable arguments and critique the reasoning of others.** Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments.
- **Model with mathematics.** Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace.

- **Use appropriate tools strategically.** Mathematically proficient students consider the available tools when solving a mathematical problem.
- **Attend to precision.** Mathematically proficient students try to communicate precisely to others.
- **Look for and make use of structure.** Mathematically proficient students look closely to discern a pattern or structure.
- **Look for and express regularity in repeated reasoning.** Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts.

(Source: Common Core State Standards Initiative,www.corestandards.org)

These practices grow in complexity and sophistication as students progress from grade to grade. They should also be viewed as overlapping and interconnected. You can learn more about the Common Core online: www.corestandards.org.

Language Arts Literacy

http://www.state.nj.us/education/aps/cccs/lal/

The Common Core English Language Arts standards develop students reading, writing, speaking, listening, and language abilities. The Common Core English Language Arts helps students develop following capacities:

- **They demonstrate independence.** *Students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information.*
- **They build strong content knowledge.** *Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance.*
- **They respond to the varying demands of audience, task, purpose, and discipline.** *Students adapt their communication in relation to audience, task, purpose, and discipline.*
- **They comprehend as well as critique.** *Students are engaged and open-minded—but discerning—readers and listeners.*
- **They value evidence.** *Students cite specific evidence when offering an oral or written interpretation of a text.*
- **They use technology and digital media strategically and capably.** *Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use.*
- **They come to understand other perspectives and cultures.** *Students appreciate that the twenty-first-century classroom and workplace are settings in which people from often widely divergent cultures and who represent diverse experiences and perspectives must learn and work together.*

(Source: Common Core State Standards Initiative,www.corestandards.org)

These capacities grow in complexity and sophistication as students progress from grade to grade. They should also be viewed as overlapping and interconnected. You can learn more about the Common Core online at: www.corestandards.org.

21st Century Life and Careers

http://www.state.nj.us/education/aps/cccs/career/

Developed by the NJ Department of Education as part of the Standards for 21st Century Life and Careers, the 12 Career Ready Practices describe a set of practices that have been linked to increased success in college, career and life. These standards should be woven into the content of all other subject areas, including Math, Science and Language Arts Literacy.

- **Act as a responsible and contributing citizen and employee.** Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others.
- **Apply appropriate academic and technical skills.** Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive.
- **Attend to personal health and financial well-being.** Career-ready individuals understand the relationship between personal wealth, workplace performance and personal well-being; they act on that understanding to regularly practice health diet, exercise and mental health activities.
- **Communicate clearly and effectively and with reason.** Career-ready individuals communicate thoughts, ideas and action plans with clarity, whether using written, verbal and/or visual methods.
- **Consider the environmental, social and economic impacts of decisions.** Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization and the environment.
- **Demonstrate creativity and innovation.** Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization.
- **Employ valid and reliable research strategies.** Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies.
- **Utilize critical thinking to make sense of problems and persevere in solving them.** Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem.

- **Model integrity, ethical leadership and effective management.** Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence other in the workplace.
- **Plan education and career paths aligned to personal goals.** Career-ready individuals take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals.
- **Use technology to enhance productivity.** Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems.
- **Work productively in teams while using cultural global competence.** Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction.

(Source: NJ Department of Education website, http://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf)

Activity Template

Adapted from: SEDL Lesson Planning Template

Grade Level/s:	***Duration:***	***Materials Needed:***
Learning Practices (Science, Math, and/or LAL):	***Career Practices:***	***Preparation:***

Activity Step-by-Step:

1. _____

   _____

   _____

2. _____

   _____

   _____

3. _____

   _____

   _____

4. _____

   _____

   _____

Evaluation (after the activity):

_____

Activity Template Instructions

Grade Levels: *What grade level is this activity designed for?*

Duration: *How much time does the activity take? Can it be completed in one program day or over multiple days?*

Materials Needed: *What materials are needed to complete the activity?*

Learning Practices (Science, Math, and/or LAL): *Which learning practices are developed by completing this activity? Remember, activities may be cross-cutting and support learning practices in more than one subject area.*

Career Practices: *Which career practices are developed by completing this activity?*

Preparation: *What do staff need to prepare in advance?*

Activity Step-by-Step: *A clear outline of the progression of the activity from start to finish.*

Evaluation (after the activity): *After the activity, it is helpful to evaluate what happened. What worked well? What didn't work well? Are there changes you might make if you offer this activity in the future?*

Activity: Bird Watching the Bird Feeder

Grade Level: *K-2*	***Duration:*** *Setting up the feeder takes roughly 20 minutes. Observations are ongoing.*	***Materials Needed:*** ● *Day old bagels or pinecones* ● *vegetable shortening* ● *craft sticks* ● *yarn/string* ● *bird seed* ● *A bird field guide* ● *Paper or journal* ● *Pens/markers* ● *Poster board*
Science Learning Practices: ● *Asking questions* ● *Planning and carrying out investigations.* ● *Constructing explanations*	***Career Practices:*** ● *Consider the environmental, social and economic impacts of decisions.*	***Preparation:*** ● *Be sure to check bird seed for nuts and other allergens before using with youth!*

1. Give each child a bagel or pinecone and tie yarn in a large loop.
2. Using craft sticks, spread the vegetable shortening generously on the bagel or pinecone.
3. Roll in bird seed.
4. Hang bird feeder.
5. Over a period of several days or weeks, observe the bird feeders. Have the children note their observations on paper or in a journal. Key questions:
    - How many birds do we see?
    - What types of birds do we see?
        - Use the field guide to help identify!
    - Is there evidence of other animals eating from our bird feeders?
6. Using poster board, make a poster that summarizes the experience!

S.T.E.A.M. Mosaics

Submitted by: Joan Dillon, Glassboro Child Development Centers

Grade Level: *Middle*	***Duration:*** *Ongoing*	***Materials Needed:*** ● *garden supplies: starter plants, seeds, tools* ● *mosaic supplies (this can vary according to ability): mosaic squares, craft glue, frames or trivets, nippers, ceramic plates, various sequins, mirror squares, buttons, etc*
Science Learning Practices: ● *Asking questions* ● *Planning and carrying out investigations* ● *Obtaining, evaluating, and communicating information*	***Career Practices:*** ● *Demonstrate creativity and innovation.*	***Preparation:*** ● *Assemble materials* ● *Research on garden care (such as kidsgardening.org)*

1. Plan and design a space for a vegetable garden (preferable in spring), such as an outdoor sandbox. Talk about about the different vegetables, seedlings, and how to care for the plants. Give children tools to measure and sketch out where and how big the garden should be.
2. Build the garden according to your plan.
3. At harvest time, hold a tasting event! Children eat more vegetables because they GREW them!
4. In the Fall we made mosaic trivets and photo frames depicting the things we saw in nature while raising the vegetables. We gave them as gifts during the holidays in December.

Activity: Weather Tracking

Grade Level: *K-5*	***Duration:*** *30 minutes to make the Weather Tracker, a few minutes each day to observe the weather and update Weather Tracker*	***Materials Needed:*** ● *Daily newspaper or computer with internet access* ● *Large piece of paper* ● *Markers/pens*
Science Learning Practices: ● *Asking questions.* ● *Planning and carrying out investigations.* ● *Constructing explanations.* ***Math Learning Practices:*** ● *Model with mathematics.*	***Career Practices:*** ● *Employ valid and reliable research strategies.*	***Preparation:*** ● *Assemble materials* ● *Make a calendar grid on the piece of paper* ● *Draw a horizontal line to divide each day's box into two sections*

1. As a group, either review the weather report for the NEXT DAY in the daily newspaper or look up the weather report online.
2. Enter the prediction for the next day's weather above the line drawn on that date in the calendar.
3. Below the line, enter the actual weather for that date.
4. At the end of the month, count up how many days the prediction was correct versus how many days it was incorrect. Represent this information as a percent and as a fraction. Discuss the findings with youth.
5. This project can be continued throughout the year. Ask youth to make predictions about the weather for the upcoming month.

Magical Garden from Recycle Containers

Submitted by: Andrea Bracco, Minds in Motion - Clifton School #12, 21st CCLC Program

<table>
<tr>
<td>Grade Level: Can be adapted for many grade levels.</td>
<td>Duration: 10 sessions</td>
<td>Materials Needed:
plastic bottles (all shapes and sizes)
large plastic containers
wire hangers
scissors
pliers
wire cutters
spray paint
awls
potting soil
rocks
seedlings</td>
</tr>
<tr>
<td>Science Learning Practices:
Asking questions
Planning and carrying out investigations
Obtaining, evaluating, and communicating information
LAL Learning Practices:
They demonstrate independence.
They build strong content knowledge.</td>
<td>Career Practices:
Demonstrate creativity and innovation.</td>
<td>Preparation:
Send home letters to families requesting recyclable materials such as bottles and large plastic containers (1-2 weeks prior to start of project).
Research similar projects online, make samples, print out pictures.
Secure an outdoor area in which to build your garden.</td>
</tr>
</table>

1. Youth will create a unique garden using recycled containers to make planters and decorations. Show youth samples and pictures of similar projects (search online). Discuss creating art pieces that have a function.
2. First, each youth will design their container using plastic bottles. They will research, design and then create!
3. Second, each youth will select a plant they wish to grow. Youth research all about their chosen plant, including the the structure of the plant, the conditions it needs to grow, and how to care for it.
4. Youth will care and observe the changes in their plants.

Incredible, Edible Plants

Submitted by: Joanne Flynn, Phillipsburg REACH Program

Grade Level: *Middle*	***Duration:*** *Approximately 1.5 hours*	***Materials Needed:*** ● *Blank diagram of plant parts (for students to label)* ● *Plant part recording chart* ● *A sample of several kinds of edible plants representing each of the plant parts (root, stem, flower, seed, leaf, fruit).* ● *Plates*
Science Learning Practices: ● *Asking questions* ● *Planning and carrying out investigations* ● *Analyzing and interpreting data*	***Career Practices:*** ● *Demonstrate creativity and innovation.*	***Preparation:*** ● *Obtain 20-30 different edible plants (or parts of the plant). We often do this activity in the summer when several plants are readily available from our gardens. Otherwise, all can be purchased or brought from home.*

1. Students brainstorm about the different parts plants they eat. For middle school, a blank diagram is given and students label the parts of the plant. For younger students, this could be more of an involved lesson.
2. Students have a number sheet. Students need to look at each plant or plant part. They can touch it and smell it to try to determine what plant the food is from and from which part. If it's a small enough group, the plant could be cut up in small pieces for tasting (check for known allergies first).
3. After all students get to see all of the plants, there is a group discussion to go over each plant. We try to have a mix of obvious ones (lettuce, carrots) and more challenging ones (saffron, ginger).

Activity: Make Your Own T Shirts!

Grade Level: *Middle*	***Duration:*** *2 program days*	***Materials Needed:*** ● *Scanner/Printer* ● *Iron-on Transfers* ● *Sheet of Printer Paper* ● *Computer with the program "Paint"* ● *T-Shirt* ● *Iron* ● *Hard Surface to iron on* ● *Glue* ● *Magazines, Photographs, etc.* ● *Scissors*
LAL Learning Practices: ● *They use technology and digital media strategically and capably.*	***Career Practices:*** ● *Demonstrate creativity and innovation.* ● *Apply appropriate academic and technical skills.*	***Preparation:*** ● *Assemble materials* ● *Ask families to send in old magazines or photographs that can be cut up for this project.*

1. Day One: Have youth make collages using the magazines and photos. Youth should cut out images they like and glue them onto the page of printer paper.
2. Day Two: Have youth scan their creations and open in the program "Paint". The image will be reversed by Right Clicking and choosing "Flip Horizontally".
3. When ready, print onto iron-on transfer paper.
4. Iron image on to T shirt. Allow to cool and wear with pride!

Activity: Fall Leaves!

Grade Level: *K-5*	***Duration:*** *15 minutes to collect leaves*	***Materials Needed:*** ● *Leaves to be collected outside* ● *Paper* ● *Crayons* ● *Rulers* ● *Graph paper* ● *Field guide or access to the internet*
Science Learning practices: ● *Asking questions* ● *Developing and using models* ● *Planning and carrying out investigations* ● *Analyzing and interpreting data*	***Career Practices:*** ● *Apply appropriate academic and technical skills.*	***Preparation:*** ● *Assemble materials*

1. Take youth outside to collect a variety of fallen leaves.
2. Lay paper on top of leaves and rub crayons all over. Identity the parts of the leaf (stem, veins). Identify the shape of the leaf.
3. Have the children compare and contrast the different shapes of the leaves.
4. Using graph paper, have the children graph the leaves by color (such as green, red, yellow, brown).
5. Using rulers, have the children measure their leaves. Which leaves are the longest? Shortest?

Activity: Build a Terrarium

Grade Level: *K-2*	***Duration:*** *Creating the terrarium takes roughly 30-45 minutes. Maintenance is ongoing.*	***Materials Needed:*** ● *A jar with an opening large enough to reach into* ● *Potting Soil* ● *A clean sponge* ● *Access to a natural area where children can collect rocks, moss, twigs OR collect these yourself and bring to program.*
Science Learning Practices: ● *Asking questions (for science)*	***Career Practices:*** ● *Apply appropriate academic and technical skills.*	***Preparation:*** ● *Assemble materials*

1. Have youth collect items to be be planted in the terrarium (mosses, smalls shoots with roots or seeds). Discuss which items are *LIVING* versus *NON-LIVING.*
2. Laying the jar on its side, add small rocks. Create at least two layers of rocks.
3. On top of the rocks, place some potting soil. Be sure sure to create some hills and bumps!
4. Have youth arrange the collected plant materials in the terrarium. Poke small holes and insert plant shoots or seeds.
5. Wet the sponge slightly and squeeze into terrarium. Add the cover and put in a shady spot for 3 days.
6. After 3 days, move terrarium to indirect sunlight.
7. Keep the terrirum moist, but not yet. Do not overwater!
8. Have youth take turns maintaining the terrarium by watering, weeding and adding new elements.
9. As a group, make observations about the changes that occur in the terrarium.

Activity: All About New Jersey!

Adapted from: United States Census Bureau

Grade Level: *3-5*	***Duration:*** *30 minutes*	***Materials Needed:*** ● *Computers with access to the internet* ● *Pencils/pens*
Math Learning Practices: ● *Model with mathematics.* ● *Use appropriate tools strategically.* ***LAL Learning Practices:*** ● *They value evidence.* ● *They use technology and digital media strategically and capably.*	***Career Practices:*** ● *Employ valid and reliable research strategies.*	***Preparation*** ● *Print the below questions out on worksheets* ● *Visit this website: http://www.census.gov/schools/facts/new_jersey.html*

1. Divide the students into small groups, depending on how many computers you have access to.
2. Open an internet browser and visit the US Census Bureau "Statistics in Schools" website: http://www.census.gov/schools/facts/new_jersey.html
3. Have each group work together to answer the following questions.

Questions for Youth

- My state is _____ and is the is the ____ largest state in the United States.
- The population of my state is (*in numerals*)_____
- The population of my state is (*in words*)_____
- Between 2010 and 2012 my state gained/lost (*circle one*) _____ people.
- There are _____ children my age in my state.
- The average family size in my state is ____ .
- Between 2010 and 2012 the change in number of boys and girls my age in my state was: (Use + or - sign.) _____ boys _____girls
- Between 2010 and 2012 the number of amusement parks in my state increased/decreased/stayed the same (*circle one*).
- Between 2010 and 2012 the number of ice cream and frozen dessert makers in my state increased/decreased/stayed the same (*circle one*). Why?_____

- Write a statement telling how people in your state get to work.
- Give an example of how one of your state symbols is used.
- The largest city in my state is _____.

How Many People Walk to Work?

Adapted from: United States Census Bureau

Grade Level: *Middle*	***Duration:*** *30 minutes*	***Materials Needed:*** ● *Computers with internet access* ● *Pencils/pens*
Math Learning Practices: ● *Use appropriate tools strategically.* ● *Model with mathematics.* ***LAL Learning Practices:*** ● *They value evidence.* ● *They use technology and digital media strategically and capably.*	***Career Practices:*** ● *Consider the environmental, social and economic impacts of decisions.* ● *Employ valid and reliable research strategies.*	***Preparation*** ● *Print the below 'Questions for Youth' out on paper* ● *Visit this website:* http://1.usa.gov/1S4LlRu

1. Have youth work in small groups, depending on how many computers you have access to.
2. Have youth visit the US Census Bureau website: http://1.usa.gov/1S4LlRu
3. Have youth work together to answer the below questions.
4. Have youth share their findings.
5. Ask youth to think about their own families. Do people in our community walk to work or school?

Questions for Youth

1. Estimate the average number of people who walk to work in the United States by calculating the mean of the randomly selected states in Table A.
2. What is the median of the data set in Table A? What is the mode of the data set in Table A?
3. Estimate the average number of people who walk to work in the United States by calculating the mean of the randomly selected states in Table B.
4. What is the median of the data set in Table B? What is the mode of the data set in Table B?
5. Compare the mean from Table A and the mean from Table B. Do you think those calculations are an accurate representation of the average number of people who walk to work in the United States? Why or why not?

Activity: Do You Like to Spend or Save?

Adapted from: United States Mint Educator Resources

Grade Level: *K-2*	***Duration:*** *20 minutes*	***Materials Needed:*** ● *Paper* ● *Chart paper* ● *Markers* ● *A few coins (quarters, dimes, nickels, pennies)*
Math Learning Practices: ● *Use appropriate tools strategically.* ● *Model with mathematics.* ***LAL Learning Practices:*** ● *They value evidence.* ● *They use technology and digital media strategically and capably.*	***Career Practices:*** ● *Attend to personal health and financial well-being.*	***Preparation:*** ● *Cut out a small paper square for each student in the class* ● *Use chart paper to create a classroom graph with two areas: Spend and Save.*

1. Cut out a small paper square for each student in the class, and use chart paper to create a classroom graph with two areas: Spend and Save.
2. As a class, discuss coins and the different places people keep their money—wallets, coin purses, piggy banks, jars, banks, etc.
3. Give each student a paper square and crayons. Have them draw a piggy bank to represent their own money. Have the students draw a few coins using the actual coins as a guide.
4. Ask the students whether they like to spend or save. To answer the question, have each student come to the front of the room and glue his or her bank under Spend or Save on the graph.
5. As a class, analyze the results. Ask questions such as: How many students in our class like to save their money? How many like to spend their money? How many more people in our class like to do one more than the other?

Activity: The Statistics of Coins

Adapted from: United States Mint Educator Resources

Grade Level: *Middle*	***Duration:*** *20 minutes*	***Materials Needed:*** ● *Pennies (10 per group)* ● *Lined paper* ● *Graph paper* ● *Calculators (if necessary)*
Math Learning Practices: ● *Model with mathematics.* ● *Use appropriate tools strategically* ● *Attend to precision.*	***Career practices:*** ● *Apply appropriate academic and technical skills.*	***Preparation:*** ● *Assemble materials*

1. Divide the students into small groups and give each group 10 pennies.
2. Have the students record the years marked on each coin.
3. Distribute graph paper and have each pair of students create a bar graph showing the number of coins represented by each year.
4. Have the students use the data in their own graph to determine the mode's percentage of the total (that is, what percentage of the coins are in the year that occurs most frequently). Model this activity for the students.
5. Have the students use their own data to calculate the percentages of the total coins represented by all the years recorded.
6. Ask the students to speculate whether they believe their percentages would be close to those represented by the class as a whole.
7. Collect the class data, including the number of groups participating and the number of coins represented by each year.
8. Have each student create a graph showing the class' data, then compare the mode on the class graph with the mode on their own graph. Are they the same?
9. Looking at just the class graph, have the students calculate the mode's percentage of the total.
10. Using the class data, ask the students to calculate the percentages for each year recorded.
11. As a class, discuss how the information they discovered compared with what they expected.

Activity: Community Mapping

Adapted from: Jane Goodall's Roots & Shoots

Grade Level: Middle	***Duration:*** *Varies -- this activity can be done in one hour or over the course of several program days.*	***Materials Needed:*** ● *Colored pencils, markers, crayons, stickers, etc.* ● *Pen/pencil* ● *Large sheets of white paper* ● *Glue/tape* ● *Map*
Science Learning Practices: ● *Planning and carrying out investigations.* ● *Obtaining, evaluating, and communicating information.* ***ELA capacity:*** ● *They value evidence.*	***Career Practices:*** ● *Consider the environmental, social and economic impacts of decisions.* ● *Communicate clearly and effectively and with reason.* ● *Act as a responsible and contributing citizen and employee.*	***Preparation:*** ● *Prepare map for students -- either purchase or print from Google maps*

1. Ask youth to take a close look at their community as they travel back and forth to school.
2. Have youth work in small groups to mark up their maps:
    - Human characteristics and resources such as schools, hospitals, grocery stores, places of worship, homeless shelters, fire and police stations, libraries, pools, parks – blue stickers or blue marker
    - Animal characteristics and resources such as animal shelters, hospitals, parks with areas specifically for animals (such as a dog park), animal habitats (such a pond, river or wooded areas)– red stickers or red marker
    - Environmental characteristics and resources such as bodies of water, woods, recycling center– green stickers or green marker
3. Ask youth to share their maps. Prompt a discussion with the following questions:
    - Identify the things you like about your community:
        - One quality about your community that makes it a great habitat for people.
        - One quality about your community that makes it a great habitat for animals.
        - One quality about your community that makes it a great environmental habitat.
    - Identify areas of improvement for your community:

- One quality your community could improve to make it a better habitat?

Activity: Poetry in Music

Grade Level: *Middle*	***Duration:*** *30 minutes*	***Materials Needed:*** ● *CD player/MP3 player* ● *Song* ● *Song lyrics (print out)* ● *Paper* ● *Pencil*
LAL Learning Practices: ● *Independence* ● *Strong content knowledge*	***Career Practices:*** ● *Demonstrate creativity and innovation.* ● *Communicate clearly and effectively and with reason.*	***Preparation:*** ● *Song selection. Be sure to pre-screen the song for appropriate language and themes.*

1. Have the students work in small groups. Play the song several times for the youth. Have them write down the lyrics as best they can.
2. Next, compare the printed lyrics with with what the youth heard.
3. Have the youth identify any patterns or rhyming words in the song as well as any poetic devices used. For example:
    a. simile (a figure of speech involving the comparison of one thing with another thing of a different kind, such as: *as brave as a lion*, *crazy like a fox*)
    b. metaphor (a figure of speech that identifies something as being the same as some unrelated thing for rhetorical effect, such as: *all the world's a stage*).
    c. onomatopoeia (the formation of a word from a sound associated with what is named, such as *sizzle, boom, or moo!*)
4. Now it's time to get writing! Have the youth write and share their own songs!

Activity: The Wonderful Picnic

Adapted from: NJ Audubon

Grade Levels: *K-2*	***Duration:*** *30 minutes*	***Materials Needed:*** ● *Crumbs from snack* ● *Napkins or paper towel*
Science Learning Practices: ● *Asking questions* ● *Developing and using models* ● *Planning and carrying out investigations* ● *Analyzing and interpreting data*	***Career Practices:*** ● *Consider the environmental, social and economic impacts of decisions.*	***Preparation:*** ● *Identify an area outside where you can leave crumbs and they will likely go undisturbed by humans!*

1. Ask youth to save a few crumbs from snacktime. Crumbs can be wrapped up in a napkin or paper towel to transport outside.
2. Take a walk outside. Have children select spots and unwrap their napkin or paper towel and leave crumbs on the ground.
3. Leave the crumbs for 24 hours.
4. Back inside, make predictions about what kinds of animals or insects might eat the crumbs.
5. The next day, go back outside and examine whatever activity can be observed.

Activity: Start a Kids Book Club!

Grade Level: *Middle*	***Duration:*** *Varies*	***Materials Needed:*** ● *Books* ● *Computer with web access (optional)*
ELA capacity: ● *Comprehend and critique* ● *Value evidence* ● *Use technology and digital media* ● *Understand other perspectives and cultures* ● *Respond to the varying demands of audience, task, purpose, and discipline.*	***Career practices:*** ● *Communicate clearly and effectively and with reason.* ● *Act as a responsible and contributing citizen and employee.* ● *Utilize critical thinking to make sense of problems and persevere in solving them.*	***Preparation:*** ● *Book selection. Be sure to pre-screen all books for appropriate language, themes and reading level. Work with the youth to identify what types of books will interest them.* ● *Get copies of the book. Secondhand books are inexpensive and often available online. Many public libraries offer kid book clubs as well!*

1. Work with youth to set the goals and ground rules of the book club. How often will the group meet? How will the group choose books?
2. At book club meetings, help facilitate dialogue by asking youth questions. Who was their favorite character and why? Why did the author choose the book's title? How do you think a certain character felt when something happened? Encourage youth to find evidence in the text when they give an answer.
3. Take it deeper: utilize the vast resources online to enhance their learning experience. For example, if the book is set in a foreign country, have youth research that country's culture, including music, dance or fashion. If the book has a science-theme, investigate the relevant scientific concepts.

Activity: Write a Letter to Your Future Self

Grade Level: *Any grade, though younger grades will need more assistance.*	***Duration:*** *Roughly 30 minutes. Do this activity early in the program year. Open and reread the letters at the end of the year!*	***Materials Needed:*** ● *Paper and pencil OR computer and printer, if typing the letter* ● *Envelopes*
ELA capacity: ● *They respond to the varying demands of audience, task, purpose, and discipline.*	***Career Practices:*** ● *Plan education and career paths aligned to personal goals.*	***Preparation:*** ● *Assemble materials*

1. Before you begin, help youth brainstorm what they will write about. Ask questions such as: What are your current academic and social goals? What activities and people are important in your life? What are your current likes and dislikes? Where do you see yourself in 5 years, and what do you think you will be doing?
2. Have youth compose the letter as if they are writing to themselves in 5 years. They can add a little something extra by embellishing the letter with pictures or sketches, or simply adding these extras into the envelope.
3. Have youth read, revise and finalize their letters.
4. Put the letter away until the end of the year. Read the letters at the end of the year and see what has changed over the course of the year.

Activity: Shark Tank

Submitted by: Katie Sementa, REACH Egg Harbor City Community School, 21st CCLC

Grade Level: *Middle*	***Duration:*** *Twice per week over 8 weeks, but can easily be adapted to fit program needs*	***Materials Needed:*** ● *Computer with internet access* ● *Material needs will vary* ● *Prize*
Science Learning Practices: ● *Defining problems* ● *Developing and using models.* ● *Planning and carrying out investigations.* ***LAL Learning Practices:*** ● *Comprehend and critique* ● *Value evidence* ● *Use technology and digital media* ● *Respond to the varying demands of audience, task, purpose, and discipline.*	***Career Practices:*** ● *Communicate clearly and effectively and with reason.* ● *Demonstrate creativity and innovation.* ● *Utilize critical thinking to make sense of problems and persevere in solving them.*	***Preparation:*** ● *Assemble materials* ● *Let families know about this project -- they may be asked to donate materials later!*

1. Many young people are familiar with the Show Shark tank, but if not, have youth go online to view the show's website and watch short clips. The basic premise is that a panel of potential investors, called "sharks", consider offers from aspiring entrepreneurs seeking investments for their business or product.
2. Divide youth into teams and give the teams time to brainstorm their invention. It may be helpful for youth to do research online, but this is not necessary. Team members should brainstorm materials needed.
3. Once materials are assembled, give teams time to make their inventions.
4. Once the invention is finished, youth will make a poster and write a summary on their invention. Once all of the students inventions are made, they are to be displayed in the cafeteria for their peers to vote on which invention they like best.
5. The top three inventions then make it to the finals, where they will go in front of the panel of "Sharks" (such as the school's Business Administrator, Principal, Supervisor of Special Projects, Superintendent or other Community partner). Once they presented their invention, the sharks decide on a winner of the competition and the winning team is receives a prize.

Tip: Reach out to your local media and invite them to attend the finals!

Activity: Tell Your Story

Submitted by: Francine Luce, Ezra Nolan Middle School, 21st CCLC Program

Grade Level/s: *Middle*	***Duration:*** *Approximately one month, but can vary.*	***Materials Needed:*** ● *Computers with internet access* ● *Ipads with iMovie* ● *An assortment of articles, book reviews, editorials* ● *Notebooks* ● *Pens & pencils*
ELA capacity: ● *Comprehend and critique* ● *Value evidence* ● *Use technology and digital media* ● *Respond to the varying demands of audience, task, purpose, and discipline.*	***Career Practices:*** ● *Demonstrate creativity and innovation.* ● *Communicate clearly and effectively and with reason.* ● *Plan education and career paths aligned to personal goals.*	***Preparation:*** ● *Assemble materials* ● *Ask families to help provide old magazines, books, etc.*

1. At the beginning of the program, students were introduced to the topic, "Time to Tell Your Story" through group discussion concerning different types of writing and why writing is important. Also, a detailed discussion concerning how writing could be a profitable and exciting career.
2. Next, students were immersed with several different types of news articles, ranging from editorials to book reviews. Students were then asked to write their own articles, from movie reviews to biographies and home life.
3. Ultimately, students wrote many articles and published a newsletter.
4. A newscast was then scripted and filmed to compliment the newsletter.
5. Students presented the activity and imovie and the Showcase Presentation held at Saint Peter's University.

The newsletter produced from this activity was distributed throughout the school and community as the M.S. #40 newsletter.

Additional resources

You for Youth
https://www.y4y.ed.gov/
Online Professional Learning and Technical Assistance for 21st CCLCs developed by the US Department of Education.

Edutopia.org
A comprehensive website and online community that increases knowledge, sharing, and adoption of what works in K-12 education. We emphasize core strategies: project-based learning, comprehensive assessment, integrated studies, social and emotional learning, educational leadership and teacher development, and technology integration.

Service-Learning:

Service learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.

There are many ways to do service-learning in afterschool

- It can be short-term or long-term.
- It can be undertaken by an individual youth or the whole group.
- It can be great for youth in elementary school all the way through high school.

6 Key Elements of High-Quality Service-Learning:

- Investigation
- Planning
- Action
- Reflection
- Demonstration/celebration
- Sustainability

Find Service-Learning Activities:
https://gsn.nylc.org/home

www.waterplanetchallenge.org/wpc/index.cfm/service-learning/action-guides
www.hrea.org/pubs/AIUSA-HREA-ServiceLearning.pdf

Activities to Develop Future Service-Learning Projects:

- Exploring Your Community's Strengths and Hopes: A Step-by-Step Guide for Youth-Led Community Listening Projects
  www.inspiredtoserve.org/sites/default/files/CommunityListening-InspiredToServe.pdf
  "The community listening project involves interfaith teams of youth and adults interviewing community leaders (key informants) about their sense of the community's strengths, the opportunities for partnership, and their hopes for the future. It is designed to provide a foundation for building relationships in the community and for planning future service-learning projects."

Service-Learning Reflection Activities:
Connecting Thinking and Action: Ideas for Service-Learning Reflection
www.servicelearning.org/filemanager/download/132/Reflection%20Guide%20Internet1.pdf

STEM (Science, Technology, Engineering, and Math):

More and more, STEM is an important part of the afterschool world. You don't have to be an expert to bring great STEM programming to your youth!

Check out these high-quality, free resources and lesson plans:

- SEDL National Center for Quality Afterschool: Afterschool Training Toolkit
  www.sedl.org/afterschool/toolkits
  Look for sections on math, science, and technology for guidance and sample high-quality lessons (lessons available for all ages within K-12)

- New Jersey 21st Century Community Learning Centers Afterschool Science Project (CASP)
  www.state.nj.us/education/21cclc/casp
  - Free resource developed by the NJ Department of Education, Liberty Science Center, and NJSACC
  - 21 lessons designed for afterschool youth in grades 4-8
  - Organized into two units: Properties of Water and The World of Water Aquatic Ecosystems
  - Student journals modeled after a scientist's field journal, providing space to record observations, questions, predictions, diagrams, etc.
  - 16 "Science at Home" activities for youth to do with their families and 13 "Family Science Night" activity ideas
  - Facilitators' Guide to Incorporating Science in Afterschool: provides information about the CASP curriculum and guidance for using it

- Evidence-based chemistry curriculum that's free and adaptable to afterschool: www.gwu.edu/~scale-up/documents/CTA.pdf
    - Developed by the Michigan Department of Education for 8-10th grade
    - Uses principles of experiential learning, interdisciplinary learning, and learning that's useful outside of school
    - The Institute of Education Sciences "What Works Clearinghouse" (ies.ed.gov/ncee/wwc) identified a rigorous research study showing this curriculum leading to increased general science achievement among middle school youth

- A Guide to STEM Funding for Afterschool www.afterschoolalliance.org/STEM-Funding-Brief-10182012.pdf

See the "Nature Programming" section for more resources related to STEM programming and activities.

<u>Nature Programming:</u>

Nature-related activities provide a great opportunity for interdisciplinary learning. The activities in the resources below incorporate science, math, art, literacy, physical activity, nutrition, and community service.

Original NJSACC resources:

- Celebrate Afterschool! Outdoors in the Garden State: Activities and Resource Guide www.njsacc.org/pdfs/activities-color.pdf
    - Dozens of activity ideas organized around the topics of animals, trees and leaves, outside play adventures, gardening, weather exploration, nature art, and being green
    - Ideas for field trips and for community/family events

- Schoolyard Ecology: Creating a Butterfly Garden for NJ Schools and Afterschool Programs
  www.njsacc.org/celebrateafterschool/butterflyGarden.pdf
    - A comprehensive guide to a project-based learning activity: creating a garden that will attract and help sustain your local butterfly population
    - Lesson plans and ideas

Other resources to check out:

Find Activities:

- National Wildlife Federation: dozens of free lesson plans for K-12:
  www.nwf.org/Get-Outside/Be-Out-There/Educators/Lesson-Plans.aspx

- Kids Gardening: free lesson, activity, and project ideas around gardening with kids:
  www.kidsgardening.org

- Children and Nature Network:
  http://www.childrenandnature.org/

- Schoolyard Ecology Explorations (SEE) Curriculum Guide
  http://monarchlab.org/education-and-gardening/curricula
  "The lessons in this science inquiry-based curriculum are designed to increase the student's connection to nature through observation and experimentation. Many of the lessons can be implemented on any school grounds, including urban schoolyards where access to nature may be limited. Furthermore, many lessons can be adapted to suit grades K-12 because of their experimental nature." (Fee-based)

- NJ Audubon's Bridges to the Natural World
  www.njaudubon.org/SectionEducation/BridgestotheNaturalWorld.aspx
    - A natural history guide for educators (K-6; fee-based)
    - Free sample lessons available

- University of California Botanical Garden curricula:
  http://botanicalgarden.berkeley.edu/education/curriculum/
    - "Math in the Garden" (Fee-based; developed with input from afterschool programs)
    - "Botany on your plate" (Fee-based; K-4; activities are based in experiential, interdisciplinary learning and highly adaptable to afterschool)
    - Free sample activities:
      botanicalgarden.berkeley.edu/education/images/k12/boyp/BOYP%20Sample.pdf

- Project Learning Tree:
  www.plt.org/get-project-learning-tree-teacher-training
  Free activity kits and sample activities, activity kits for purchase, and professional development around environmental education

Professional Development:

- DEP Enrichment and Training Opportunities
  www.state.nj.us/dep/seeds/sect5.htm
  Includes Project Learning Tree, Project WILD and Aquatic WILD, and Project WET trainings with matching curricula

Nature Activity Family Tool-Kits:

These are free guides with nature activity ideas and tips for families. You can adapt them for your program or share them with program families:

- A Parent's Guide to Nature Play
  www.greenheartsinc.org/uploads/A_Parents__Guide_to_Nature_Play.pdf

The Arts:

The arts can include a wide variety of visual arts, as well as music, dance, theater, and writing. If you want to take your arts programming to the next level, check out these resources for ideas:

Resources and Ideas:

- Contact local museums to see what programming they might provide.
- Contact your local arts council to see if they have any programming or grant opportunities you could take advantage of. You can do an internet search for "arts council" and your city or county.
- Contact Premiere Stages at Kean University to see what programming you could take advantage of. Part of this organization's mission is to provide arts education around playwriting and performance.
  www.kean.edu/premierestages
- Contact the NJ Council on the Arts to find out about grant opportunities.
- Young Audiences: Arts for Learning: professional development workshops
  www.yanj-yaep.org/program-type/professional-development
  - Trainings for your staff on developing high-quality arts programming
  - Generally offered as 1-day workshops for $725 or 2-day for $790

Activities and Curricula:

- SEDL National Center for Quality Afterschool: Afterschool Training Toolkit
  www.sedl.org/afterschool/toolkits
  Look for section on the arts for guidance and sample high-quality lessons
  (free lessons available for all ages within K-12)

- Creative Minds: An afterschool arts curriculum:
  http://www.davisart.com/Promotions/After-School/After-School.aspx
  "Creative Minds Out of School is an exciting, new arts education program designed by

the Massachusetts Afterschool Partnership (MAP) in partnership with the Massachusetts Cultural Council (MCC), the state's art and culture agency, and Davis Publications, the nation's leading publisher of arts education materials. The goal of the *Creative Minds* curriculum is to engage children grades K-5 in high-quality art exploration and art-making in afterschool and out-of-school time settings."
($50 for the Educator's Edition)

- Center for Educational Pathways: interdisciplinary, project-based arts programs:

    - The Comic Book Project:
      comicbookproject.org
      Youth develop their own comic books: "The Comic Book Project engages children in a creative process leading to literacy reinforcement, social awareness, and character development, then publishes and distributes their work for other children in the community to use as learning and motivational tools."
        - Fee-based

- Young Audiences: Arts for Learning: workshops for youth
  www.yanj-yaep.org/program-type/workshops-residencies
    - includes music, dance, theater, writing, and a variety of visual arts
    - for youth K-12
    - Fee-based

Global Learning:

The end goal of global learning is to develop "globally competent" youth.
According to the Asia Society, globally competent youth are those who:

- investigate their world, including their immediate environment and beyond
- recognize their own and others' perspectives
- communicate and collaborate with diverse audiences
- and translate their ideas and findings into appropriate actions to improve conditions.

Activities:

- Afterschool global learning activity types and ideas:
  http://asiasociety.org/global-learning-beyond-school

Health Promotion Programming: Exercise and Nutrition

The afterschool world has become a leader in the field of youth health -- especially youth nutrition and physical activity habits. The resources below offer many programming ideas to help boost your impact and youth engagement in this area.

Physical Activity and Nutrition:

- Get Active/Be Healthy Afterschool ToolKit
  afterschoolalliance.org/documents/QuakerGetActiveToolKit.pdf
  Free activity ideas and additional resources

- CANFit (Communities, Adolescents, Nutrition, Fitness)
  canfit.org/downloads
    - Focus on low-income youth and youth of color; strong afterschool focus
    - Numerous free guides for incorporating physical activity and nutrition into your afterschool programming and environment

- USDA's Team Nutrition free resources:
    - Empowering Youth with Nutrition and Physical Activity:
      For afterschool programs serving youth age 11-18
      http://www.fns.usda.gov/tn/team-nutrition

- CATCH (Coordinated Approach to Child Health)
  http://catchinfo.org/programs/after-school/
    - An evidence-based program/curriculum
    - Fee-based

Physical Activity:

- "Hurry Up and Wait" Activity Guide:
    - An NJSACC original resource
    - Quick activities to do during group transitions or on the bus
    - $10 for the guide includes activity materials

- SPARK (Sports, Play, and Active Recreation for Kids)
  www.sparkpe.org/after-school
    - An evidence-based program/curriculum
    - K-12
    - Fee-based

- CANFit's P.H.A.T Package (Promoting Healthy Activities Together)
  www.canfit.org/phat
    - "multi-media package to encourage community-based organizations to use hip-hop to keep youth active and to educate them about the importance of healthy eating and physical activity"
    - designed for youth ages 10-14
    - Fee-based

- Go Far Club

www.gofarclub.org
    - co-sponsored by the National Afterschool Association (NAA)
    - 8-10 week program/curriculum that afterschool programs can use
    - end-goal is to safely complete a 5k run or walk-run
    - teaches character education, goal-setting, and healthy eating
    - Fee-based

Nutrition:

- USDA's Serving Up MyPlate: A Yummy Curriculum:
  www.fns.usda.gov/tn/Resources/servingupmyplate.htm#guides
  Free lesson plans around the USDA MyPlate nutrition guidelines (gr 1-6)

Cooking Programming:

Cooking activities provide a great opportunity for interdisciplinary learning. The activities in the resources below incorporate science, math, nutrition, multicultural learning, social justice and change, collaborative problem-solving, and financial management.

All of these activities are great for an afterschool environment with a basic kitchen. Some of these activities work even if you don't have access to a kitchen. Check them out:

- Cooking Matters (part of Share Our Strength/No Kid Hungry)
  Free resources (English and Spanish):
  http://cookingmatters.org/node/2216

- Cooking with Kids
    - Curricula for purchase: cookingwithkids.net/store/curriculum
    - Free sample lesson for gr 2-3:
      cookingwithkids.net/wp-content/uploads/2011/06/2-3-FriedRice.pdf
    - Free fruit/veggie "tasting" lesson plans:
      http://cookingwithkids.org/free-tasting-lessons/
      (K-6; English and Spanish)

- Kids Cooking Activities
    - Free lessons and resources:
      www.kids-cooking-activities.com/kids-cooking-lessons.html
    - Themed cooking activity and recipe books ($6-8 each):
      www.kids-cooking-activities.com/kids-cooking-camp.html

- Family Cook Productions
  www.familycookproductions.com/
    - Free sample lesson for K-6:

www.familycookproductions.com/LWC%20sample-%20Lesson%202.pdf

- What's Cooking with Kids
  Two afterschool cooking curricula for purchase; contact for more info:
  whatscookingwithkids.com/consulting/staff-development/

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