AASL Standards-Based Learning

Learning Centers
for School Libraries

Maura Madigan

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AASL American Association of School Librarians
TRANSFORMING LEARNING

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PREFACE

Creating Capable and Critical Minds

Whenever I read books, especially professional books, I'm always curious about the authors. Who are they, what's their background, and why should I trust them? When I present at conferences, participants often want to know about my school, my library, my schedule. This makes sense. They're trying to decide if my experience and ideas will work for them. So, here's some information about me. You may agree or disagree with my educational philosophy, but I hope you can find some common ground, enough to trust me and try learning centers for yourself.

I completed my fifth year as an elementary school librarian in 2020, but I have a total of twenty-five years in education. I've been a classroom teacher (preschool, kindergarten, second grade, sixth grade), a preschool director, a college instructor, and an educational advisor for an international school reform project. I've worked in public and private schools in several states and overseas. All these experiences have shaped the librarian I am today.

I endeavor to create a safe and inviting place so that a learner's first experience with the school library, books, and reading is a positive one. I think very carefully about my practices, constantly evaluating what I'm offering learners and what they need. I believe that elementary school librarians, because we regularly see every student in the school, have an incredible opportunity and a serious responsibility. We're able to roll out whole-school initiatives and help to even the playing field. I think about what essential skills are needed to be successful library patrons, researchers, and learners. Each year I've asked myself, "What can I provide that they aren't going to get from their classroom educator?" This question led me away from read-alouds. Yes, they are important, and fun, and yes, I do read books aloud in the school library, but most elementary classroom educators are already doing that.

During my first year as a school librarian, I was struggling with time management. I saw every class for thirty minutes a week. This thirty-minute class included checking out books and escorting learners to their next class. I had a really difficult time delivering meaningful lessons and making sure everyone was checked out, lined up, and ready to go on time. Larger classes often ended with one eye on the

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clock and the other frantically trying to zip through checkout. I was frazzled and disappointed that learners had such a rushed school library experience. I knew there had to be a better way.

I decided to experiment with learning centers in the school library. As a classroom educator, I'd used this structure with great success. I thought this approach just might solve my problems, and it did. I flipped the order and had learners check out books first. After checking out, they were free to choose a center. Learners could take as much time as they liked browsing the shelves and choosing books. I was free to help them find books and to make suggestions. As my schedule and class time changed, I adapted how and when I used learning centers.

It's not all learning centers all the time. They're just one part of my repertoire that also includes problem-based learning projects, Guided Inquiry Design projects, research lessons, book talks, and read-alouds. Mixing things up makes it fun for me and my learners. I'm always looking for ideas and activities, and each year I add a few new learning centers. I also rethink and phase out centers that were consistently less popular or not as educationally valuable. Reflection is as important for those creating the lessons as it is for those doing the learning.

The following quotation from Piaget sums up my educational philosophy and what I hope to encourage in all my learners. Although the gender term used is outdated, the sentiment endures. I've replaced the exclusive term *men* with the more inclusive *learners*.

> The principal goal of education is to create [learners] who are capable of doing new things, not simply of repeating what other generations have done—[learners] who are creative, inventive, and discoverers. The second goal of education is to form minds which can be critical, can verify, and not accept everything they are offered. (Piaget 1964, 5)

The world needs learners who can think for themselves and solve problems in creative ways, not blindly accept and regurgitate facts. A good school librarian and school library help learners develop these attributes.

REFERENCE

Piaget, Jean. 1964. "Development and Learning." In *Piaget Rediscovered,* edited by R. E. Ripple and V. N. Rockcastle. Ithaca, NY: Cornell University Press.

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INTRODUCTION

How to Use This Book

You've bought the book. Now what? Whether you're a learning center novice who wants step-by-step instructions or a seasoned pro looking for some new ideas, *Learning Centers for School Libraries* is here to help. The book is separated into two parts. Part I includes introductory material—the *what* and the *why*. Part II is the *how*, detailed descriptions of each learning center with handouts and worksheets that are easy to photocopy and will help you get started right away. This book is meant as a guide with as much of the prep work as possible included. Everything you need, all in one place.

WHAT TO EXPECT

Chapter 1, "Learning Centers," explains what learning centers are, why they're so valuable, and how you can integrate them into your current school library instruction. This chapter includes research supporting the importance of play, academic choice, and resiliency in education. It also discusses how learning centers address the *AASL Standards Framework for Learners* within the *National School Library Standards for Learners, School Librarians, and School Libraries*. You can use this section to justify the educational value of learning centers to administrators or colleagues. Included for easy reference is a Learning Centers and Standards table (table I.1), with short descriptions of each center, applicable AASL Standards, and aligned content-area standards.

Chapter 2, "Logistics," provides all the basics needed to get learning centers up and running smoothly. Topics include space, time, materials, cleaning and storage of materials, rules and routines, assessment, sharing and preservation of work, collaboration, and troubleshooting. This chapter also lists suggested materials for different budgets. You will probably want to refer to this chapter if you have general questions about managing your centers.

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Part II includes twenty-five learning centers, grouped according to their primary focus, in chapters 3–7. Many centers have elements that will allow them to fit in various categories. Appendix A contains suggestions for ten centers that require little explanation. Each chapter begins with an overview and touches on pertinent AASL Standards and commonalities among the centers. A common format throughout the centers in part II makes it easy to find important information.

Each learning center is a mini-chapter that begins with a brief description and points to consider. This introduction is followed by the objective, relevant AASL Standards, content areas addressed, lesson duration, materials, educator preparation, learner steps, modifications, and extensions. At the end of each mini-chapter you'll find learner directions along with all necessary worksheets (WS) and reproducible materials.

Many of the centers can easily be adapted for distance learning because they rely on materials often found at home. An asterisk (*) appears next to these titles in the Learning Centers and Standards table (table I.1). Suggestions for ways in which to adapt the centers appear in the Modifications section within the mini-chapters. Learners can share their work with the school librarian and other learners by posting pictures and images online.

Whether teaching online or in person, you can pick and choose which centers to use with learners. There's no need to work in order. It's often more interesting to have a variety of centers for learners to choose from. Consider selecting one or two centers from each chapter to introduce and offer at a time. Alternatively, offer only one type of learning center at a time and have learners cycle through them over a series of weeks. This approach works especially well with the maker and literacy centers.

AASL STANDARDS AND CONTENT-AREA STANDARDS

It can be overwhelming for any educator to be given a set of standards and expected to create lessons to teach them. This is one reason AASL has published the Shared Foundations Series and the AASL Standards-Based Learning Series. Both series provide school librarians with concrete and creative ways to address the AASL Standards.

Learning Centers for School Libraries, part of the AASL Standards-Based Learning Series, is no exception. This book shows how learning centers target each of the Shared Foundations and Domains in the *AASL Standards Framework for Learners*. Specific Learner Competencies are listed within each center mini-chapter. Content areas that align well for possible collaboration with other educators are also listed in each center, but the specific content-area standards are contained in the Learning Centers and Standards table (table I.1). You can use this table to quickly locate centers that target specific Learner Competencies in the AASL Standards and con-

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tent-area standards from other sets of national learning standards. This table can also be helpful when you are trying to build collaborative relationships with content-area educators.

The following national standards sets for content areas have been used:

- Art: National Core Arts Standards
- English/Language Arts (ELA): NCTE/IRA Standards for the English/Language Arts
- Mathematics: NCTM Principles and Standards for School Mathematics
- Science: Next Generation Science Standards (NGSS)
- Social Studies: C3 Framework for Social Studies Standards
- Technology: ISTE Standards for Students

SOME FINAL WORDS

It doesn't really matter how and when you introduce various learning centers. After a while you'll know which are the most popular with your learners. These might be ones you offer consistently. You might also be inspired to create some centers of your own or adapt some presented here. Learning centers are doable, worthwhile, and, above all, fun. I hope the learners in your school library enjoy learning centers as much as mine do.

TABLE I.1

Learning Centers and Standards

This table provides a short description of each learning center and links applicable AASL and content-area standards. This list is not meant to be exhaustive. Only the most pertinent standards appear.

The following national standards sets for content areas have been used:

- Art: National Core Arts Standards
- English/Language Arts (ELA): NCTE/IRA Standards for the English Language Arts
- Mathematics: NCTM Principles and Standards for School Mathematics
- Science: Next Generation Science Standards (NGSS)
- Social Studies: C3 Framework for Social Studies Standards
- Technology: ISTE Standards for Students

Centers that can be modified for use during distance or online learning are marked with an asterisk (*). These centers use materials that most learners have at home.

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TABLE I.1

Learning Centers and Standards

Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Maker Challenge* Learners use recycled materials to build something described on a challenge card using only string or yarn to hold it together. Page 21	V.B.2. (Explore/Create): Learners construct new knowledge by persisting through self-directed pursuits by tinkering and making. V.D. (Explore/Grow): Learners develop through experience and reflection by: 1. Iteratively responding to challenges. 2. Recognizing capabilities and skills that can be developed, improved, and expanded.	Art: Anchor Standard 1. Generate and conceptualize artistic ideas and work. ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. Science: Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2) Technology: Innovative Designer 4d. Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.
Innovation Station* Learners mentally dismantle the objects pictured on cards and invent or innovate a product using materials from two or more of the objects. Page 27	I.A.2. (Inquire/Think): Learners display curiosity and initiative by recalling prior and background knowledge as context for new meaning. III.C.1. (Collaborate/Share): Learners work productively with others to solve problems by soliciting and responding to feedback from others. V.B.1. (Explore/Create): Learners construct new knowledge by problem-solving through cycles of design, implementation, and reflection. V.C.3. (Explore/Share): Learners engage with the learning community by collaboratively identifying innovative solutions to a challenge or problem.	Art: Anchor Standard 10. Synthesize and relate knowledge and personal experiences to make art. ELA: 4. Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. Science: Define a simple problem that can be solved through the development of a new or improved object or tool. (3-PS2-4) Technology: Innovative Designer 4d. Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

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Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Simple Machines* Learners use recycled materials to build pieces of playground equipment that feature simple machines (pulley, screw, wheel and axle, wedge, lever, and inclined plane). Page 37	V.B. (Explore/Create): Learners construct new knowledge by: 1. Problem solving through cycles of design, implementation, and reflection. 2. Persisting through self-directed pursuits by tinkering and making. V.C.3. (Explore/Share): Learners engage with the learning community by collaboratively identifying innovative solutions to a challenge or problem.	ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. Science: Develop a model using an analogy, example, or abstract representation to describe a scientific principle. (4-PS4-1) Define a simple problem that can be solved through the development of a new or improved object or tool. (3-PS2-4) Technology: Innovative Designer 4d. Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.
Matchbox Car Engineering Learners use Matchbox-style tracks and cars to test scientific concepts such as gravity and speed. Page 49	I.C. (Inquire/Share): Learners adapt, communicate, and exchange learning products with others in a cycle that includes: 2. Providing constructive feedback. 3. Acting on feedback to improve. II.C. (Include/Share): Learners exhibit empathy with and tolerance for diverse ideas by: 1. Engaging in informed conversation and active debate. 2. Contributing to discussions in which multiple viewpoints on a topic are expressed. III.D. (Collaborate/Grow): Learners actively participate with others in learning situations by: 1. Actively contributing to group discussions. 2. Recognizing learning as a social responsibility. V.C.3. (Explore/Share): Learners engage with the learning community by collaboratively identifying innovative solutions to a challenge or problem.	Math: Measurement: Apply appropriate techniques, tools, and formulas to determine measurements. Connections: Recognize and apply mathematics in contexts outside of mathematics. Science: Measure and graph quantities such as weight to address scientific and engineering questions and problems. (5-PS1-2) Develop a model using an example to describe a scientific principle. (5-ESS2-1) Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution. (3-PS2-2, 4-PS3-2, 4-ESS2-1, 5-PS1-3)

(cont'd)

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TABLE I.1

Learning Centers and Standards (cont'd)

Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Construction Learners explore their creativity while working on fine motor skills with a variety of materials. Page 56	V.B.2. (Explore/Create): Learners construct new knowledge by persisting through self-directed pursuits by tinkering and making. V.D.1. (Explore/Grow): Learners develop through experience and reflection by iteratively responding to challenges.	Art: Anchor Standard 1. Generate and conceptualize artistic ideas and work. ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. Science: Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2) Technology: Innovative Designer 4d. Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.
Fairy-Tale Challenge* Learners read a familiar fairy tale, identify the problem, and formulate possible solutions. Then they use recycled materials to complete a challenge based on the story. Page 60	V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes. V.B. (Explore/Create): Learners construct new knowledge by: 1. Problem solving through cycles of design, implementation, and reflection. 2. Persisting through self-directed pursuits by tinkering and making.	ELA: 3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics). ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. Science: Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2)

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Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Mini Green Screen Learners use a tablet, pizza box, and a green screen app to create movies. Page 69	I.B.3. (Inquire/Create): Learners engage with new knowledge by following a process that includes generating products that illustrate learning. II.D.2. (Include/Grow): Learners demonstrate empathy and equity in knowledge building within the global learning community by demonstrating interest in other perspectives during learning activities. III.B.1. (Collaborate/Create): Learners participate in personal, social, and intellectual networks by using a variety of communication tools and resources. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes.	Art: Anchor Standard 6. Convey meaning through the presentation of artistic work. Anchor Standard 10. Synthesize and relate knowledge and personal experiences to make art. ELA: 4. Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. ELA: 8. Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge. Technology: Creative Communicator 6b. Students create original works or responsibly repurpose or remix digital resources into new creations. Creative Communicator 6d. Students publish or present content that customizes the message and medium for their intended audiences.

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TABLE I.1

Learning Centers and Standards (cont'd)

Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Video Book Review* Learners write and film short book reviews. Page 79	I.A.2. (Inquire/Think): Learners display curiosity and initiative by recalling prior and background knowledge as context for new meaning. I.B.3. (Inquire/Create): Learners engage with new knowledge by following a process that includes generating products that illustrate learning. I.C. (Inquire/Share): Learners adapt, communicate, and exchange learning products with others in a cycle that includes: 1. Interacting with content presented by others. 4. Sharing products with an authentic audience. III.B.1. (Collaborate/Create): Learners participate in personal, social, and intellectual networks by using a variety of communication tools and resources. IV.A.3. (Curate/Think): Learners act on an information need by making critical choices about information sources to use. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes. VI.D.1. (Engage/Grow): Learners engage with information to extend personal learning by personalizing their use of information and information technologies.	ELA: 4. Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. ELA: 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts. ELA: 8. Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge. Technology: Creative Communicator 6b. Students create original works or responsibly repurpose or remix digital resources into new creations. Creative Communicator 6d. Students publish or present content that customizes the message and medium for their intended audiences.

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Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Book Trailer Learners create video book trailers using iMovie or similar apps. Page 84	I.B.3. (Inquire/Create): Learners engage with new knowledge by following a process that includes generating products that illustrate learning. I.C.4. (Inquire/Share): Learners adapt, communicate, and exchange learning products with others in a cycle that includes sharing products with an authentic audience. IV.C.2. (Curate/Share): Learners exchange information resources within and beyond their learning community by contributing to collaboratively constructed information sites by ethically using and reproducing others' work. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes. VI.C. (Engage/Share): Learners responsibly, ethically, and legally share new information with a global community by: 1. Sharing information resources in accordance with modification, reuse, and remix policies. 2. Disseminating new knowledge through means appropriate for the intended audience. VI.D.1. (Engage/Grow): Learners engage with information to extend personal learning by personalizing their use of information and information technologies.	ELA: 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts. ELA: 8. Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge. ELA: 12. Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information). Technology: Digital Citizen 2c. Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property. Creative Communicator 6b. Students create original works or responsibly repurpose or remix digital resources into new creations. Creative Communicator 6d. Students publish or present content that customizes the message and medium for their intended audiences.

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TABLE I.1

Learning Centers and Standards (cont'd)

Learning Center	AASL Standards Framework for Learners	Content-Area Standards
LEGO Story Learners create story scenes using LEGOs and then film and narrate the story. Page 90	I.B.3. (Inquire/Create): Learners engage with new knowledge by following a process that includes generating products that illustrate learning. 1.C.4. (Inquire/Share): Learners adapt, communicate, and exchange learning products with others in a cycle that includes sharing products with an authentic audience. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes. V.B.2. (Explore/Create): Learners construct new knowledge by persisting through self-directed pursuits by tinkering and making.	Art: Anchor Standard 1. Generate and conceptualize artistic ideas and work. Anchor Standard 6. Convey meaning through the presentation of artistic work. ELA: 4. Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. ELA: 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts. Technology: Innovative Designer 4d. Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems. Creative Communicator 6b. Students create original works or responsibly repurpose or remix digital resources into new creations.
Mini-Anagram* Learners use the letters in a given word to create as many new words as possible. Page 96	I.A.2. (Inquire/Think): Learners display curiosity and initiative by recalling prior and background knowledge as context for new meaning. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes.	ELA: 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.

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Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Blackout Poetry* Learners use pages from discarded books and magazines to create poems by blacking out unwanted words with markers. Page 102	I.B.3. (Inquire/Create): Learners engage with new knowledge by following a process that includes generating products that illustrate learning. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes.	Art: Anchor Standard 1. Generate and conceptualize artistic ideas and work. ELA: 3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics). ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. ELA 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.
Word Drawing* Learners create concrete poems by cutting and pasting words from discarded books and magazines into templates. Page 106	I.B.3. (Inquire/Create): Learners engage with new knowledge by following a process that includes generating products that illustrate learning. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes.	Art: Anchor Standard 1. Generate and conceptualize artistic ideas and work. ELA: 4. Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. ELA 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.

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TABLE I.1

Learning Centers and Standards (cont'd)

Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Photo-Book Learners read information about an animal in a photicular book, such as *Dinosaur* by Dan Kainen and Kathy Wollard, and answer questions on the sheet provided. Page 119	I.B.1. (Inquire/Create): Learners engage with new knowledge by following a process that includes using evidence to investigate questions. IV.B.4. (Curate/Create): Learners gather information appropriate to the task by organizing information by priority, topic, or other systematic scheme. V.A. (Explore/Think): Learners develop and satisfy personal curiosity by: 1. Reading widely and deeply in multiple formats and write and create for a variety of purposes. 3. Engaging in inquiry-based processes for personal growth.	ELA: 3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics). ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. Science: Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question. (2-ESS2-3) Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world. (K-ESS3-2)
Book Spine Poetry* Learners take books from the stacks and line up the spines in order to create poems when the titles are read top to bottom. Page 122	I.B.3. (Inquire/Create): Learners engage with new knowledge by following a process that includes generating products that illustrate learning. IV.B.1. (Curate/Create): Learners gather information appropriate to the task by seeking a variety of sources. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes.	ELA: 4. Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. ELA: 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.

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Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Grammar Hunt* Using pages from weeded books and magazines, learners cut out nouns, verbs, adjectives, or adverbs (words or pictures) and paste them on a template bearing the definition. Page 127	I.A.2. (Inquire/Think): Learners display curiosity and initiative by recalling prior and background knowledge as context for new meaning. I.B.3. (Inquire/Create): Learners engage with new knowledge by following a process that includes generating products that illustrate learning.	Art: Anchor Standard 1. Generate and conceptualize artistic ideas and work. Anchor Standard 6. Convey meaning through the presentation of artistic work. ELA: 3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).
Endangered Books Learners choose books to "save" from extinction. They choose picture books from the Endangered Book Cart to read and evaluate before making a recommendation. Page 138	I.D.4. (Inquire/Grow): Learners participate in an ongoing inquiry-based process by using reflection to guide informed decisions. IV.B.3. (Curate/Create): Learners gather information appropriate to the task by systematically questioning and assessing the validity and accuracy of information. IV.D. (Curate/Grow): Learners select and organize information for a variety of audiences by: 1. Performing ongoing analysis of and reflection on the quality, usefulness, and accuracy of curated resources. 3. Openly communicating curation processes for others to use, interpret, and validate. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes.	ELA: 3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics). ELA: 5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. ELA: 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.
Book Cart Learners put weeded books in alphabetical or decimal order on book carts. Page 142	I.A.2. (Inquire/Think): Learners display curiosity and initiative by recalling prior and background knowledge as context for new meaning.	ELA: 3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics). Math: Numbers and Operations: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

(cont'd)

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TABLE I.1

Learning Centers and Standards (cont'd)

Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Database Exploration* Learners use tablets or laptops to explore databases, generate questions, and learn about topics of personal interest. Page 148	I.A.1. (Inquire/Think): Learners display curiosity and initiative by formulating questions about a personal interest or a curricular topic. I.B.1. (Inquire/Create): Learners engage with new knowledge by following a process that includes using evidence to investigate questions. IV.A. (Curate/Think): Learners act on an information need by: 2. Identifying possible sources of information. 3. Making critical choices about information sources to use. V.C.1. (Explore/Share): Learners engage with the learning community by expressing curiosity about a topic of personal interest or curricular relevance. VI.A. (Engage/Think): Learners follow ethical and legal guidelines for gathering and using information by: 1. Responsibly applying information, technology, and media to learning. 2. Understanding the ethical use of information, technology, and media. 3. Evaluating information for accuracy, validity, social and cultural context, and appropriateness for need. VI.B. (Engage/Create): Learners use valid information and reasoned conclusions to make ethical decisions in the creation of knowledge by: 1. Ethically using and reproducing others' work. 2. Acknowledging authorship and demonstrating respect for the intellectual property of others. 3. Including elements in personal-knowledge products that allow others to credit content appropriately.	ELA: 7. Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience. ELA: 8. Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge. Technology: Constructor 3c. Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions. Digital Citizen 2c. Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

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Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Resource Investigation* Learners use resources (atlas, almanac, encyclopedia, dictionary, thesaurus, database) to answer questions. Page 154	IV.A. (Curate/Think): Learners act on an information need by: 1. Determining the need to gather information. 2. Identifying possible sources of information. 3. Making critical choices about information sources to use. V.A. (Explore/Think): Learners develop and satisfy personal curiosity by: 1. Reading widely and deeply in multiple formats and write and create for a variety of purposes. 3. Engaging in inquiry-based processes for personal growth.	ELA: 8. Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.
Geography* Learners complete map puzzles and then answer geography questions using atlases. Page 162	I.B.1. (Inquire/Create): Learners engage with new knowledge by following a process that includes using evidence to investigate questions. IV.A.2. (Curate/Think): Learners act on an information need by identifying possible sources of information.	ELA: 8. Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge. Social Studies: D2.Geo.1.3-5. Construct maps and other graphic representations of both familiar and unfamiliar places. D2.Geo.2.3-5. Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions and their environmental characteristics.
Abstract Collage* Learners make collages based on abstract themes by cutting pictures and words from discarded books and magazines. Page 172	I.B.3. (Inquire/Create): Learners engage with new knowledge by following a process that includes generating products that illustrate learning. V.A.1. (Explore/Think): Learners develop and satisfy personal curiosity by reading widely and deeply in multiple formats and write and create for a variety of purposes.	Art: Anchor Standard 1. Generate and conceptualize artistic ideas and work. Anchor Standard 6. Convey meaning through the presentation of artistic work. ELA: 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts. ELA: 12. Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

(cont'd)

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TABLE I.1

Learning Centers and Standards (cont'd)

Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Mystery Box* Learners are given a box containing random objects. They collaborate to find similarities, such as color, shape, or use, between pairs of objects. Page 183	I.A.2. (Inquire/Think): Learners display curiosity and initiative by recalling prior and background knowledge as context for new meaning. II.B. (Include/Create): Learners adjust their awareness of the global learning community by: 1. Interacting with learners who reflect a range of perspectives. 2. Evaluating a variety of perspectives during learning activities. 3. Representing diverse perspectives during learning activities.	ELA: 4. Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. ELA: 11. Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities. ELA: 12. Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).
Breakout Box* Learners collaborate to complete different challenges to learn the combination of one or more locks and then open toolboxes. Page 189	I.A.2. (Inquire/Think): Learners display curiosity and initiative by recalling prior and background knowledge as context for new meaning. II.C. (Include/Share): Learners exhibit empathy with and tolerance for diverse ideas by: 1. Engaging in informed conversation and active debate. 2. Contributing to discussions in which multiple viewpoints on a topic are expressed. III.A.2. (Collaborate/Think): Learners identify collaborative opportunities by developing new understandings through engagement in a learning group. III.D. (Collaborate/Grow): Learners actively participate with others in learning situations by: 1. Actively contributing to group discussions. 2. Recognizing learning as a social responsibility.	ELA: 3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics). ELA: 11. Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities. Math: Numbers and Operations: Understand numbers, ways of representing numbers, relationships among numbers, and number systems Problem Solving: Solve problems that arise in mathematics and in other contexts. Science: Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question. (2-ESS2-3) Social Studies: D2.His.10.3-5. Compare information provided by different historical sources about the past.

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Learning Center	AASL Standards Framework for Learners	Content-Area Standards
Book Sort Geometry Learners collaborate to sort books into different categories. Next, they measure each book and use the data in math problems. Page 216	II.A.1. (Include/Think): Learners contribute a balanced perspective when participating in a learning community by articulating an awareness of the contributions of a range of learners. V.C. (Explore/Share): Learners engage with the learning community by: 2. Co-constructing innovative means of investigation. 3. Collaboratively identifying innovative solutions to a challenge or problem.	ELA: 6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts. ELA: 11. Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities. Math: Measurement: Apply appropriate techniques, tools, and formulas to determine measurements. Geometry: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships. Number and Operations: Compute fluently and make reasonable estimates. Problem Solving: Solve problems that arise in mathematics and in other contexts.

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Part I

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CHAPTER 1

Learning Centers

Before getting into the nuts and bolts of learning centers, it's probably a good idea to start with a clear definition. This is especially true if learning centers are a new concept for you. However, even if you've already used learning centers in your school library, this chapter is helpful. It defines learning centers as they relate to this book and includes research to support using them.

THE DEFINITION

Centers or stations aren't a new concept in education. Many classroom educators already use these structures, often to teach math and literacy. Learning centers are focused, self-directed activities set up in different areas of the classroom or school library where learners work independently or collaboratively. In some classes the learner chooses which center to visit, but in others the educator assigns these. Centers are an interesting way to differentiate instruction and target multiple skills while the educator works with small groups.

Learning centers work equally well in the school library where makerspaces have paved the way for innovative library instruction. Makerspaces can vary drastically according to setting, participant grade level, budget, and purpose. In general they're places where learners have choice and where learners make something. Many learning centers, especially the maker centers, share these qualities.

Each learning center offers a different activity or challenge. Learners choose a center, complete the task, share their work, and clean up. Depending on the time available, learners may be able to visit more than one center. Learning centers are flexible and easily adapted to different schedules, grade levels, and content.

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THE BENEFITS

Learning centers have numerous benefits for both school librarians and learners. They can help school librarians juggle the instructional and administrative parts of the role. When learners are working independently, the school librarian is better able to work with individuals, conduct readers' advisory, and facilitate book checkout. It can be difficult to support learners during book selection and checkout while supervising others and providing a meaningful lesson. This is especially true if you have no assistant and limited time.

Although there are distinct advantages for school librarians who offer learning centers, including opportunities to collaborate with content-area educators, learners are the main beneficiaries. Learning centers offer differentiated instruction, encourage independence and collaboration, and build competencies and resiliency in learners. They're also fun.

Differentiation

Choice is one of the most important features of learning centers. It empowers learners to take an active role in their education and increases their buy-in. Learners are more likely to work hard at a task they've selected. Responsive Classroom—a learner-centered, social-emotional approach to teaching and discipline—stresses the power of academic choice in both the classroom and special-area subjects, like the school library. Offering choices encourages learners to "develop intrinsic motivation to learn" and "take greater responsibility for their own learning" (Center for Responsive Schools 2016, 121). Isn't this what all educators hope for? Thoughtful, independent learners will be able to use these skills throughout their lives.

For some learners, too many options can be overwhelming rather than empowering. Consider your audience when selecting which centers to offer. Younger learners or those with special needs may appreciate more limited options.

Resiliency

One of the most important attributes for academic success is resiliency. No matter how intelligent a person is, they will eventually face challenges and setbacks. How a person deals with these obstacles is what matters. Some learners, often more advanced ones, can become so used to everything being easy that they're reluctant to persevere. If something doesn't work out as planned or if they struggle with a new task, they give up. The school library presents the perfect environment for learning that it's okay to make mistakes. Everybody fails sometimes. Often, that's how progress happens. We may learn more from our mistakes than our successes.

In her book *Mindset: The New Psychology of Success* (2016), Carol Dweck writes about the importance of having a growth mindset—the belief that change is pos-

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sible. Learners might not be able to complete a specific activity yet. That "yet" is hugely significant and hopeful. It suggests the promise of mastering that skill sometime in the future. Learners who embrace a growth mindset are generally more positive and willing to tackle challenges.

The AASL Standards also stress the importance of resiliency and a growth mindset. The Key Commitment of the Explore Shared Foundation is that learners will "discover and innovate in a growth mindset developed through experience and reflection" (AASL 2018, 38). Having a growth mindset makes it easier to be resilient.

Although a growth mindset, reflection, and resiliency feature prominently in the AASL Standards, not many other sets of national standards directly address these essential attributes for learning. Perhaps this omission is because resiliency is more a disposition than a skill. It's a bit trickier to teach than long division.

However, learning centers provide the opportunity to practice resiliency. For example, if you're building a bridge and it falls or doesn't work out exactly as planned, you need to start over. Becoming frustrated is part of the learning process. Being able to work past that frustration and start again is something learners will need to master. Learning centers provide a fun context in which to do so, making it even more possible for learners to persevere through setbacks toward genuine resiliency.

Most centers are set up for learners to work both independently or collaboratively, and educators may choose when or whether to intervene to facilitate learning. Instead of providing the answer, educators lead learners to consider other possibilities by asking key questions. To an adult, it may be obvious that no matter how much glue stick learners use, those heavy pieces of cardboard won't stay together. But educators shouldn't steal learners' struggle. The finished product is not as important as how learners get there. Learners are working toward becoming self-sufficient. Experiencing small obstacles and failures in a safe environment prepares them to handle bigger obstacles on their own later.

Play

Fun in education is often underrated. When we enjoy an activity, it becomes play rather than work. We tend to stay engaged longer, focus more attentively, and retain what we've learned. Unfortunately, after kindergarten most learners don't have the opportunity to play in school outside recess. Modern education focuses heavily on testing and covering standards according to a timeline, both of which can cause stress and neither of which is very fun!

A visitor to your school library may question why learners are working with LEGOs. They may see this as "just playing," with an implicit message that play doesn't belong in school. Learning is a serious business. *Play,* however, is not a dirty word, nor should we be embarrassed to use it in connection to learning centers. This

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isn't an either-or situation. Something can be fun *and* educational. Numerous psychologists and educational researchers—including Jung, Piaget, and Erikson—have studied the role of play, demonstrating its effectiveness and importance in child development and education.

First, play helps facilitate brain development, and not just in early childhood. The book *Einstein Never Used Flash Cards: How Our Children Really Learn—And Why They Need to Play More and Memorize Less* provides evidence-based explanations about the role of play in brain development and learning. "Play promotes problem solving and creativity. It also helps to build better attention spans and encourages social development" (Hirsh-Pasek, Golinkoff, and Eyer 2004, 206). Play also can lead to higher reading levels and IQ, as well as greater imagination and innovation in learners. The truly creative inventors and innovators in society must "go beyond finding answers to already formulated problems" (215). Through play, learners are able to practice these skills.

Second, play relieves stress. Learners today are often overscheduled both in and out of school. Many are engaged in so many extracurricular activities that they have little free time for fun, relaxation, and creativity. School days can often seem like a triathlon, rushing from one activity to the next, trying to cram it all in. Who wouldn't be stressed? Erikson believed that play "is the most natural self-healing measure that childhood affords" (Erikson and Coles 2001, 113). In today's uncertain world, all learners could use more play in their lives.

The school library is the perfect place for learners to experiment without the fear of failure, where they can simply play. Learning centers also enable an autonomy and independence that learners don't often have in school, where so much of their time is directed by adults. Learning centers are fun. When learners come to the school library and see centers set up, you may hear, "Yes! It's centers." Such pure joy!

THE APPLICATION

It's my hope that you're now convinced and are excited to use learning centers. You may wonder, though, "What about everything else? What about booktalks, read-alouds, research, and all the rest?" Learning centers are meant to complement rather than replace other types of school library experiences. Learners still need direct instruction in research and library skills.

Learners love centers and get so excited to see them set up when they come to the school library. However, if centers were all learners did, some of that thrill would probably be lost. It's best to alternate learning centers with other projects or lessons. You could offer four weeks of centers and then teach learners how to use databases. You could have all grades working on centers on the same days or have just a few grades working on centers with others working on projects. You could teach

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research skills and then have learners cycle through the Library and Research Skills centers to practice and reinforce what they've learned. Learning centers are also great for those weeks when learners are particularly antsy, such as before and after winter break and at the end of the school year.

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