Illinois Early Learning and Computer Science Standards Crosswalk

Mission/Vision: This resource is designed to support educators for the integration of computer science concepts with the normal academic curriculum. This crosswalk is meant to help educators capitalize on teachable moments and provide experiences that help teachers see how this work connects and supports what they are already doing. This resource, which was created by a working group convened by ISBE, is intended to support early childhood educators in all settings.

Crosswalk Between: Illinois Early Learning Standards | Pre-K Computer Science Standards | Screen Time Recommendations for Early Learning Environment

Illinois Early Learning Standard	Pre-K Computer Science Standard	Activities/Examples
SOCIAL STUDIES		
GOAL 14 Understand some concepts related to citizenship.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development. 2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size). 3. Problem Solving: Children construct knowledge through problem solving. 4. Representation: People can represent concepts using symbols. 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Grab Your Passports — Make mini passports for the children. Have the classroom set up in stations so students can collect stamps in their passports as they travel the "world" learning about the different countries they are visiting. Each station can have pictures, a stamp, and possibly items (if available) from the countries of choice.

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GOAL 15 Explore economic systems and human interdependence.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development. 2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size). 4. Representation: People can represent concepts using symbols. 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Cubetto Unit — Students create a map of their community (school or town) and create code and stories to navigate through it.
GOAL 17 Explore geography, the child's environment, and where people live, work, and play	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Map a Yard (or Playground)! — Students create a map of their backyard as close to scale as possible.
GOAL 18 Explore people and families.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development. 2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size). 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	The Blue Bowl — The children in this video explore their environment by using a variety of social skills to engage in cooperative play.

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MATH		
6.A.ECc Understand and appropriately use informal or everyday terms that mean zero, such as "none" or "nothing."	4. Representation: People can represent concepts using symbols.	Lesson based upon the book One...Two...Three... Sassafras by Stuart J. Murphy pages 8 and 9 — Where is cousin Bonzo? If he is not there, that relates to the concept of "none."
6.A.ECd Connect numbers to quantities they represent using physical models and informal representations.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks.
6.B.ECa Recognize that numbers (or sets of objects) can be combined or separated to make another number.	4. Representation: People can represent concepts using symbols.	Story problems during read aloud Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Take the 10 yellow blocks. Count them. Now how can you put them in two groups? What numbers can you make in each group? For example, two and eight. How many total blocks do you have, no matter which way you group them?
6.B.ECb Show understanding of how to count out and construct sets of objects of a given number up to 5.	4. Representation: People can represent concepts using symbols. 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Start with the blue blocks. How many red blocks do you need to add to have five blocks? (1) How many red blocks do you now have? (5) How can you group the yellow blocks into groups of five? How many groups of yellow blocks will you have if you have five in each group? (2)

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6.B.ECc Identify the new number created when small sets (up to 5) are combined or separated.	4. Representation: People can represent concepts using symbols.	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Separate the blue blocks into two groups. How many blocks do you have in each separate group? Try again in a different way. How many do you have now?
6.B.ECd Informally solve simple mathematical problems presented in a meaningful context.	3. Problem Solving: Children construct knowledge through problem solving.	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Ask the group how many blocks of all colors there are in total. (20) Then have the students remove all the blue blocks. How many blue blocks did they remove? (4) How many blocks that are red and yellow remain? (16)
6.B.ECe Fairly share a set of up to 10 items between two children.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Give the blue and red blocks to the students and ask, "How can they be divided equally between two students?" (Each gets two red blocks and three blue blocks.)
LEARNING STANDARD 6.D Compare quantities using appropriate vocabulary terms.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Comparing and contrasting different sets of objects during play Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Group the blocks that are the same. How many blue? Red? Yellow?
6.D.ECa Compare two collections to see if they are equal or determine which is more, using a procedure of the child's choice.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Have the students compare the blue and yellow blocks by color and number. Which has more? Which has fewer? How are they different?

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7.A.ECa Compare, order, and describe objects according to a single attribute.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Based on COLOR, how many of each block do you have?
7.A.ECd Begin to construct a sense of time through participation in daily activities.	1.Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.	Implementing visual schedules or visual task analysis Lesson using the book Around the Clock with Harriett by Betsy and Giulio Maestro — Read the book and ask the students to share their morning routine before school.
7.B.ECa Practice estimating in everyday play and everyday measurement problems.	1.Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Estimate how many blocks you have in total. Now estimate how many times in your week you play with blocks. Lever Experiment - Students explore how the power of a lever changes based on the fulcrum's location. Students estimate which of their three launches went the farthest.
LEARNING STANDARD 8.A Explore objects and patterns.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Based on COLOR, how many of each color of block do you have?
8.A.ECa Sort, order, compare, and describe objects according to characteristics or attribute(s).	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Sort, order, and compare the blocks based on COLOR. How about SIZE?

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8.A.ECb Recognize, duplicate, extend, and create simple patterns in various formats.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size). 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Identifying and extending patterns in songs and movement, manipulatives, stories, and learning activities Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Make a pattern based on the COLOR of the blocks. Teacher Models: Here is one pattern — one blue, two red, three yellow, one blue, two red, three yellow. Try to make a different pattern.
LEARNING STANDARD 8.B Describe and document patterns using symbols.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size). 4. Representation: People can represent concepts using symbols.	Identifying how machines (flashlight, light switch, remote, iPad, phone, etc.) have buttons that represent functions or "commands." Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Use the blocks to make a HAPPY face. Use the blocks to make a SAD face.
8.B.ECa With adult assistance, represent a simple repeating pattern by verbally describing it or by modeling it with objects or actions.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size). 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Lesson using blocks of different colors — Each child/group will receive a set of four blue blocks, six red blocks, and 10 yellow blocks. Teacher Models: Here is one pattern — one blue, two red, three yellow, one blue, two red, three yellow. Try to make a different pattern.
GOAL 9 Explore concepts of geometry and spatial relations.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Lesson using laminated shapes (triangles, diamonds, squares, hearts, ovals, etc.) of different colors and sizes — Ask students to sort the cards by shape.

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9.A.ECb Sort collections of two- and three-dimensional shapes by type (e.g., triangles, rectangles, circles, cubes, spheres, pyramids).	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size). 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Lesson using the book What Happens Next by Nicola Davies, look at pages 1 and 2 — What do you think will happen next? Turn to pages 3 and 4. What happened? Were you right? Lesson using the book Around the Clock with Harriett by Betsy and Giulio Maestro — Read the book and ask the students to share their morning routine before school. Lesson using laminated shapes (triangles, diamonds, squares, hearts, ovals, etc.) of different colors and sizes — Ask the students to sort the cards by shape.
10.B.ECa Organize, represent, and analyze information using concrete objects, pictures, and graphs, with teacher support.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Using scientific inquiry to change or reconstruct a marble run or maze, as needed. Lesson using laminated shapes (triangles, diamonds, squares, hearts, ovals, etc.) of different colors and sizes — Ask students to sort objects by shape, then by color.
5.C.ECa Participate in group projects or units of study designed to learn about a topic of interest.	1.Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.	Utilizing supports during whole group and/or small group activities (talking stick or other tangible to support turn-taking, yes/no and agree/disagree visual cues, etc.).

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LANGUAGE ARTS		
1.A.ECa Follow simple one-, two- and three-step directions.	5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Preschool cooking lesson Cubetto map What Happens Next? Nicola Davies felt board activity
1.A.ECb Respond appropriately to questions from others.	3. Problem Solving: Children construct knowledge through problem solving.	Creating illustrations with dictation based on prompts or discussion topics.
1.B.ECa Use language for a variety of purposes.	4. Representation: People can represent concepts using symbols.	Oats, Peas, Beans and Barley: Learning Through an Action Song — Children in this video experienced the English language by singing during this activity. They were exposed to the structure of the English language through the song.
1.B.ECd Engage in agreed-upon rules for discussions (e.g., listening, making eye contact, taking turns speaking).	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.	Encouraging Child to Child Conversation —This resource provides tips on how to engage children in whole group discussions, small settings, and one on one.
1.D.ECc Understand and use question words in speaking.	3. Problem Solving: Children construct knowledge through problem solving.	Consider connections to everyday family activities like recipes (create, test, improve), running errands (think about the tasks they need to complete and decide on the order to do them in), and fixing things around the home (figuring out what the problem is and then coming up with a solution).
1. E.ECd With teacher assistance, explore word relationships to understand the concepts represented by common categories of words (e.g., food, clothing, vehicles).	3. Problem Solving: Children construct knowledge through problem solving.	Ramp Building Activity — Students will explore what a ramp is and the various places they see them in their day-to-day lives. This activity could be modified for any shape or theme that can be seen in construction.

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2.B.ECb With teacher assistance, retell familiar stories with three or more key events.	5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Distribute felt board cards with chronological parts of the story. Students assemble them in order.
4.A.ECa Recognize the differences between print and pictures.	4. Representation: People can represent concepts using symbols.	Take a casual walk. Help the children categorize the different signs that they see (advertisements, announcements, warning signs, directional signs).
4.C.ECb With teacher assistance, recognize and match words that rhyme.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Picture Rhyme Bingo, word prompt, find a picture on your sheet that rhymes with word.

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SCIENCE		
GOAL 11 Demonstrate curiosity about the world and begin to use the practices of science and engineering to answer questions and solve problems.	3. Problem Solving: Children construct knowledge through problem solving.	What is a computer? Students discuss. What about an iPad/tablet? What about a phone? What about a microwave? Etc. Provide definition.
GOAL 12 Explore concepts and information about the physical, earth, and life sciences.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development. 4. Representation: People can represent concepts using symbols.	Project-based learning Conducting investigations
GOAL 13 Understand important connections and understandings in science and engineering.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size). 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Incorporating engineering design to reconstruct a ramp, marble run, maze as needed to go faster, slower, etc. Ramp Experiment/exploration — Students roll a marker off three separate surfaces and compare the speed of the marker. (Is there a pattern between the angle and the speed?) Follow-up lesson that ties into social studies and design.

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SOCIAL AND EMOTIONAL LEARNING		
GOAL 20 Develop habits for lifelong fitness.	5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Memory Games
GOAL 21 Develop team-building skills by working with others through physical activity.	3. Problem Solving: Children construct knowledge through problem solving.	Clay Engraving
GOAL 22 Understand principles of health promotion and the prevention and treatment of illness and injury.	3. Problem Solving: Children construct knowledge through problem solving.	Implementing self-regulation and/or conflict-resolution visual supports.
GOAL 24 Promote and enhance health and well-being through the use of effective communication and decision-making skills.	3. Problem Solving: Children construct knowledge through problem solving.	Incorporating speaking stems and/or visual supports to facilitate respectful discussions, agreements, and disagreements.

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PHYSICAL DEVELOPMENT AND HEALTH		
30.A.ECd Begin to understand and follow rules.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Building Endurance: Let's Get Physical — Fitness is important in preschool because it builds on the idea that healthy habits begin early and influence later childhood and adult health.
30.C.ECb Demonstrate persistence and creativity in seeking solutions to problems.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.	Incorporating "my-turn your-turn" games or activities to reach a common goal.
31.C.ECb Solve simple conflicts with peers with independence, using gestures or words.	3. Problem Solving: Children construct knowledge through problem solving. 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Active Play Promotes Young Children's Development — This resource promotes active play and gives tips on how to promote healthy lifestyles.
32.B.ECa Participate in discussions about finding alternative solutions to problems.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development. 3. Problem Solving: Children construct knowledge through problem solving. 5. Sequencing: Sequencing is the process of arranging events, ideas, and objects in a specific order.	Things to Do While You're Waiting: Get Physical — This visual tip sheet gives caregivers, parents, and teachers tips to keep children physically engaged while waiting.

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THE ARTS		
GOAL 26 Understand that the arts can be used to communicate ideas and emotions.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.	You've Got Blue Hands — This video from IELP shows how children are active investigators and how to communicate their ideas and emotions through their art.
26.B.ECa Use creative arts as an avenue for self-expression.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.	Challenge Young Artists to Create in Three Dimension — This blog post from Illinois Early Learning Project (IELP) goes in depth about creating 3-D artwork as a form of self-expression.

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ENGLISH LANGUAGE LEARNER/HOME LANGUAGE DEVELOPMENT		
GOAL 28 Use the home language to communicate within and beyond the classroom.	1. Social and Emotional Learning: Strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.	BeeBot Mood Meter activity — Code a robot to travel across a student-made grid. Students could have another student move as well.
GOAL 29 Use the home language to make connections and reinforce knowledge and skills across academic and social areas.	2. Patterns: Patterns help us make sense of the world by organizing objects and information using common features (e.g., color, shape, size).	Helping Children Take Surveys — Children with home languages other than English.