In the spring of 2006, a team of Illinois educators created the new Illinois Alternate Assessment (IAA) Frameworks. The purpose of the frameworks is to prioritize the skills and knowledge from the Illinois Learning Standards for students with the most significant cognitive disabilities, in order to develop a new Illinois Alternate Assessment. The Illinois State Board of Education (ISBE) contracted Pearson Educational Measurement (PEM), and their subcontractor partners, Beck Evaluation and Testing Associates, Inc. (BETA), and the Inclusive Large Scale Standards and Assessment (ILSSA) group, to develop the new IAA in grades three through eight and 11 for Reading and Mathematics; in grades four, seven, and 11 for Science; and in grades three, five, six, eight, and 11 for Writing. BETA's responsibilities include providing event-based assessment activities linked to the IAA Frameworks, developing the assessment rubric, and incorporating principles of Universal Design for Learning. ILSSA's responsibilities include facilitating the development of the IAA Frameworks and providing state-wide staff development on how to access grade-level curriculum. Pearson Learning Group (PLG) is a division of PEM, and their responsibilities include providing a customized on-line scoring tool along with training to use this feature.

During the framework development meetings, educators were divided into development teams based on both content area and grade level focus. Addressing reading, writing, mathematics and science, each content area had one development team for grades three through five, one for grades six through eight, and one for grade 11. Each team consisted of at least one general education teacher, one special education teacher, and one content expert. The process used by the development teams to create the Illinois Alternate Assessment Frameworks is as follows:

The development teams reviewed each of the assessment objectives (statements coded with numbers such as 11.4.01) in grade four. For each assessment objective, the teams:

- Identified the critical function, or the main idea, of the objective;
- Wrote an instructional activity that could be used to teach the skills needed to meet the assessment objective in the general education classroom;
- Wrote a modified instructional activity that could be used to teach students with the most significant cognitive disabilities the same skills; and
- Identified two to three assessment activities that could be used to assess students with the most significant cognitive disabilities on the skills described in the modified activity.

After the development teams examined the assessment objectives and wrote both instructional and assessment activities for each grade level, the teams prioritized the assessment objectives, and selected the assessment objectives which are most suitable for students with the most significant cognitive disabilities. The leadership team at ISBE reviewed these priorities for further refinement. These pilot priorities will form the basis for the new IAA performance test items. Following the completion of the spring 2007 science pilot, a review may be necessary in order to determine if the new IAA mathematics priorities are appropriate and provide a comparable assessment to the regular statewide assessment.

Using grade-level curriculum as the focus, the development teams described the instructional and assessment supports, accommodations, and assistive technology required to ensure access to quality instruction. The descriptions produced by the development teams were summarized into a set of statements designed to provide consistency across the content frameworks. These statements are as follows:

- Appropriate instruction must occur prior to the assessment activity.
- All activities must provide appropriate support, accommodations, and/or assistive technology during both the instructional activities and the assessment process. This may include the following:
    - The use of prompting strategies, ranging from minimum prompts to full physical assistance in order to create a learning continuum for correct responses.
    - The use of assistive technology, ranging from low tech to high tech.
    - The reduction of breadth, depth, and/or complexity.
- Specific instructional strategies and the instructional environment for the individual student vary and should be determined by the student's IEP team.
- During assessment activities, the students should use the mode of communication that they used to learn and practice the skills during instructional activities.

- Instruction should be presented to the student in a way that is authentic, accessible, and meaningful (e.g., tactile objects, picture symbols, or use of a text reader), to ensure the student has multiple opportunities to learn and demonstrate knowledge.
- Instruction should take place within the context of grade-level content, using age-appropriate activities and materials, regardless of the placement of the student.
- Instruction must incorporate age appropriate activities and materials which represent the same grade level content as their peers without disabilities. However, the activities and materials may be adapted to meet the individual needs of the student (e.g., reduce the language requirements or difficulty of the task) as long as the context of the materials used by same age peers remains intact.

All instructional practices should occur using available resources and materials familiar to the learners.

Communication skills are essential to the assessment of students with significant cognitive disabilities. Symbolic communication skills form the foundation for reading, mathematics, and writing. Students with significant cognitive disabilities are very diverse in their communication ability. Some students communicate symbolically, while others communicate in highly individualized ways. There are some important considerations in the development of symbolic communication skills which include the following:

- All students communicate regardless of their level of symbolic language use.
- Students with the most significant cognitive disabilities can acquire generalized use of objects (or object selection) to communicate preferences (Hetzroni, Rubin, Konkol, 2002).
- Language learners must use symbols repeatedly, interactively, and generatively during meaningful and ongoing activities in language-rich environments (Goossens, Crain, & Elder, 1992; Cafiero, 1998; Goossens, et al., 1992; Romiski & Sevcik, 1996; Miller & Eller-Miller, 2002; Mirenda, 2003).
- Competent use of language for multiple purposes, audiences, and contexts facilitate the metalinguistic skills required for reading comprehension (Rankin, Harwood, & Mirenda, 1994).

The assessment activities in this document reflect three types of students who represent the continuum of communication skills within this student population.

- The first activity is designed for students who inconsistently respond to communication and inconsistently use words, objects, or gestures to communicate expressively.
- The second activity is for learners who are beginning to use understandable communication through gestures, pictures, objects/textures, points, etc., to clearly express a variety of intentions.
- The third activity is for students who are using verbal or written words, sign language, Braille, or any language-based augmentative system to request, initiate, and respond to questions, describe things or events, and express refusal.

Throughout the frameworks document, the suggested general education instructional and modified instructional activities are written in plural form, as instruction is typically provided to a whole class. However, the instruction for these activities may be provided in the context of whole class instruction, small group instruction, or individually based on student needs. Conversely, the assessment activities are written in the singular form, as the IAA is a standard assessment measuring individual performance.

The process of reviewing the frameworks and aligning the new IAA to the Illinois Learning Standards and regular assessment is an ongoing process. The activities in this document were created by Illinois teachers and are only suggested activities that may be used to teach the assessment objectives listed. The activities, materials, and techniques listed in the frameworks are just one possible way to teach these assessment objectives and should not to be considered the state-mandated strategy for teaching any given assessment objective. Teachers should feel comfortable in using other strategies, materials, or activities that may already be in place or familiar to the teacher. The IAA Frameworks and the IAA itself will continue to be reviewed and adjusted as changes occur with the Illinois Standards and/or the regular assessment.

Grade 4 Priorities

State Goal 11

Scientific Inquiry (Standard A)

11.4.01 Understand how to design and perform simple experiments.

Technological Design (Standard B)

11.4.05 Identify a design problem and identify possible solutions. Assess designs or plans to build a prototype.

State Goal 12

Living Things (Standard A)

Reproduction

12.4.03 Identify the life cycle of familiar animals and compare their various stages: birth, growth and development, reproduction, and death. Understand that metamorphosis occurs in some animals (e.g., butterflies, frogs).

Environment and the Interaction of Living Things (Standard B)

12.4.07 Understand the concept of food chains and food webs and the related classifications of plants or animals (e.g., producers, decomposers, consumers, herbivores, carnivores).

Matter and Energy (Standard C)

Properties of Matter

12.4.14 Understand that matter is usually found in three states: liquid, solid, and gas; and be able to identify the properties of each. Understand that water can be found in all three forms.

Energy/Electricity

12.4.17 Understand that a magnet attracts iron, but not plastic, paper, and other nonmetals; nor does it attract all metals (since it does not attract copper or aluminum). Identify conductors and insulators.

Force and Motion (Standard D)

12.4.27 Identify simple machines (lever, inclined plane, pulley, screw, and wheel and axle) and understand how they function. Understand and know how they apply forces with advantage, and identify which machine is suited for accomplishing a simple task.

Earth Science (Standard E)

The Earth's Dynamic Processes

12.4.32 Understand that the surface of the earth changes. Know that some changes are due to slow processes (e.g., erosion, weathering), whereas others are due to sudden events (e.g., landslides, volcanic eruptions, earthquakes, asteroid impacts).

The Atmosphere

12.4.40 Understand that weather changes from day to day and over the seasons. Identify the order of the seasons and the different characteristics of each season.

Astronomy (Standard F)

12.4.47 Identify the order of planets from the sun, and know that the further planets take longer to go around the sun. Understand that all planets in our solar system revolve around the sun. Because Earth revolves around the sun, objects (e.g., stars, planets, constellations) in the sky appear to change positions throughout the year. Know that it takes Earth, 365 1/4 days to revolve around the sun.

State Goal 13

Safety and Practices of Science (Standard A)

13.4.01 Identify the basic safety equipment used in science (e.g., gloves, goggles, lab coats, tongs).

Science, Technology, Society (Standard B)

13.4.11 Identify ways that science and technology affect people's lives (e.g., in transportation, medicine, agriculture, communication) and careers.

13.4.13 Identify ways to reduce, reuse, and recycle materials.

State Goal 11

Scientific Inquiry (Standard A)

11.4.01 Understand how to design and perform simple experiments.

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Create a simple experiment.	The teacher will provide direct instruction on designing experiments. The students will select three different soils (sand, gravel, potting soil) and plant a bean seed in each container.	The teacher will provide direct instruction on designing experiments. The students will select 2 different soils and plant a bean seed.	Given miniature objects or pictures of a cup, soil, seeds, water and light, the student will match the actual materials to the objects needed for the plant experiment.	Given a number of different materials that include a cup, soil, seeds, water and light as well as other materials (e.g., sock, pencil, hat), the student will differentiate the materials needed versus those not needed for the plant experiment.	Given the directions for a plant experiment, the student will be directed to change one of the variables (e.g., amount of water, amount or type of soil) and conduct the experiment.

State Goal 11

Technological Design (Standard B)

11.4.05 Identify a design problem and identify possible solutions. Assess designs or plans to build a prototype.

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Develop and analyze prototypes.	The teacher will provide direct instruction on how to identify a design problem and identify possible solutions. The students will then develop a paper airplane model and produce the airplane model from three different materials (e.g., tissue paper, foil, construction paper).	The teacher will provide direct instruction on how to identify a design problem and identify possible solutions. The students will then select a paper plane design, build it in groups, and test it.	Given three differently designed planes, the student will determine which plane will glide. (e.g., a plane with only one wing, a plane with no tail, or a plane that is correctly designed).	Given three planes; one constructed of tissue paper, one of foil and one of construction paper, the student will select which plane will glide.	Given foil, tissue paper and construction paper, the student will construct a plane from each type of paper, fly each plane and determine which will glide the furthest.

State Goal 12

Living Things (Standard A)
Reproduction

12.4.03 Identify the life cycle of familiar animals and compare their various stages: birth, growth and development, reproduction, and death. Understand that metamorphosis occurs in some animals (e.g., butterflies, frogs).

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Compare animal life cycles.	The teacher will provide direct instruction on the life cycle of familiar animals. The students will observe the stages of development of meal worms or butterflies in a controlled environment.	The teacher will provide direct instruction on the life cycle of familiar animals. The students will observe the stages of development of meal worms or butterflies in a controlled environment. The students will then sequence the order of the life cycle of an animal (minimum 2 stages).	Given two pictures of the life cycle of familiar animals, the student will sequence the pictures in the correct order.	Given more than two pictures of the life cycle of familiar animals, the student will sequence the pictures in the correct order.	Given information about the life cycles of two animals, the student will use this information to answer questions comparing the two; such as, which has a longer life, etc.

State Goal 12

Environment and Interaction of Living Things (Standard B)

12.4.07 Understand the concept of food chains and food webs and the related classifications of plants or animals (e.g., producers, decomposers, consumers, herbivores, carnivores).

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Understand the concepts of food chains and food webs.	The teacher will review the concept and features of a food chain. In class the students will start a food chain with the hawk as the consumer (i.e., bass, minnow, insect, plant).	The teacher will review the concept and features of a food chain. The students will select the order of a food chain (i.e., minimum 3 parts).	Given a food chain (e.g., corn, chicken, fox) and a non-food chain (e.g., grass, flower, tree) the student will identify the food chain.	Given a number of objects or pictures of objects that represent a food chain, the student will sequence them into a food chain.	Given a food chain with one chain removed (e.g., plant, plant eater, meat eater) the student will predict the effects on the food chain.

State Goal 12

Matter and Energy (Standard C)
Properties of Matter

12.4.14 Understand that matter is usually found in three states: liquid, solid, and gas and be able to identify the properties of each. Understand that water can be found in all three forms.

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Understand states of matter.	The teacher will provide direct observation on the states and properties of matter. The students will then observe water's reaction to the addition and removal of heat (i.e., ice cube, melting, evaporation).	The teacher will provide direct observation on the states and properties of matter. The students will then match water's changes to the three stages of matter (i.e., ice cube, melting, evaporation).	Given an example of matter in either the liquid or solid state, the student will match it to a different matter in the same liquid or solid state.	Given examples of matter, the student will label the matter by one of the three states of matter.	Given water and a prompt, the student will describe how to change the water to either a solid or a gas.

State Goal 12

Matter and Energy (Standard C)
Energy/Electricity

12.4.17 Understand that a magnet attracts iron, but not plastic, paper, or other nonmetals; nor does it attract all metals (since it does not attract copper or aluminum). Identify conductors and insulators.

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Magnetic attraction.	The teacher will demonstrate the rules of attraction, conductors and insulators. The students will practice using a magnet to investigate and list materials that were magnetic in the classroom.	The teacher will demonstrate the rules of attraction, conductors and insulators. The students will practice using a magnet to investigate and list materials that were magnetic in the classroom.	Given the rules of attraction, and a choice of two objects, the student will select the one that is has magnetic attraction.	Given the rules of attraction, and several objects the student will sort magnetic objects from objects with no magnetic attraction.	Given a minimum of three types of magnets, the student will predict which magnet would have the most force.

State Goal 12

Force and Motion (Standard D)

12.4.27 Identify simple machines (lever, inclined plane, pulley, screw, and wheel and axle) and understand how they function. Understand and know how they apply forces with advantage, and identify which machine is suited for accomplishing a simple task.

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Identify the functions and use of simple machines.	The teacher will describe simple machines, how they function and identify which machine is suited for accomplishing a simple task. To practice, the students will select pictures of simple machines such as: wheel and axle, inclined plane, wedge or lever and explain their functions and how they make work easier.	The teacher will describe simple machines, how they function and identify which machine is suited for accomplishing a simple task. To practice, the students will match pictures of simple machines to common objects (wheel and axle: bicycle, inclined plane: ramp, lever: hammer).	Given a function of a simple machine, the student will identify the simple machine to perform the function from a choice of two.	Given simple machine, the student will identify its function.	Given several simple machines and a specified task, the student will select the best simple machine for the job.

State Goal 12

Earth Science (Standard E)
The Earth's Dynamic Processes

12.4.32 Understand that the surface of the earth changes. Know that some changes are due to slow processes (e.g., erosion, weathering), whereas others are due to sudden events (e.g., landslides, volcanic eruptions, earthquakes, asteroid impacts).

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Understand the processes that change the Earth's surface.	The teacher will describe and provide historical examples of quick and slow processes that change the earth's surface. The students will be shown pictures of volcanoes, earthquakes, and examples of weathering. The teacher will distinguish quick changes (volcanoes and earthquakes) from slow changes (weathering, erosion, or the building of mountains).	The teacher will describe and provide historical examples of quick and slow processes that change the earth's surface. The students will be shown pictures of volcanoes, earthquakes, and examples of weathering. The teacher will distinguish quick changes (volcanoes and earthquakes) from show changes (weathering, erosion, or the building of mountains).	Given a process that changes the earth's surface (earthquake, erosion) the student will indicate whether it is a quick or slow change.	Given several processes that change the earth's surface, the student will sort them into quick or slow change.	Given the prompt of either a sudden or slow process to change the Earth's surface, the student will list three examples for each.

State Goal 12

Earth Science (Standard E)
The Atmosphere

12.4.40 Understand that weather changes from day to day and over the seasons. Identify the order of the seasons and the different characteristics of each season.

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Identify changes of weather and season.	The teacher will describe that weather changes from day to day and over the seasons, identifying the order of the seasons and the different characteristics of each season. The students will chart the weather by temperature, cloud conditions, precipitation, wind and recognize the qualities of the four seasons.	The teacher will describe that weather changes from day to day and over the seasons, identifying the order of the seasons and the different characteristics of each season. The students will describe weather conditions expressively or receptively, charting weather conditions.	Given a prompt of a particular season, the student will select the weather appropriate event. (e.g. winter matches snow)	Given weather conditions (e.g. temperature precipitation), the student will predict the season.	Given data collected for five days of weather the student will develop a weather prediction.

State Goal 12

Astronomy (Standard F)

12.4.47 Identify the order of planets from the sun, and know the further planets take longer to go around the sun. Understand that all planets in our solar system revolve around the sun. Because Earth revolves around the sun, objects (e.g., stars, planets, constellations) in the sky appear to change positions throughout the year. Know that it takes Earth, 365 1/4 days to revolve around the sun.

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Understand the order and movement of the planets in our solar system.	The teacher will describe the order of the planets from the sun, and that the further planets take longer to go around the sun, that all planets in our solar system revolve around the sun, that Earth revolves around the sun and that it takes Earth, 365 1/4 days to revolve around the sun. To learn this, the students will create a distance model using toilet paper or string to scale the distance from the sun to Pluto.	The teacher will describe the order of the planets from the sun, and that the further planets take longer to go around the sun, that all planets in our solar system revolve around the sun, that Earth revolves around the sun and that it takes Earth, 365 1/4 days to revolve around the sun. To practice this, the students will use photos and a model to understand that there is order in the planets (i.e., first, next, last). They will compare and contrast physical characteristics and appearance.	Given representations of the sun, earth and moon, the student will correctly identify each.	Given a model of the solar system, the student will answer questions about location and relationship to other planets. The student will be able to identify 2 to 3 other planets besides Earth.	Given a prompt, the student will answer questions about location and relationship to other planets in the solar system. The student will be able to match the planets and their names or put the planets in order.

Safety and Practices of Science (Standard A) **13.4.01 Identify the basic safety equipment used in science (e.g., gloves, goggles, lab coats, tongs).**					
Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Identify basic safety equipment in science.	The teacher will present an illustration of a scientist working in a lab and identify the safety equipment. The students will identify basic science safety equipment using an illustration of a scientist working in a lab (i.e., goggles, lab coat, gloves).	The teacher will present an illustration of a scientist working in a lab and identify the safety equipment. The students will match safety objects to their use (i.e., gloves protect…; goggles protect…).	Given a prompt, the student will match safety equipment to a body part.	Give an example of a situation, the student will choose which safety equipment to use. (e.g. a picture of someone heating objects with tongs and gloves) Identify hazard and equipment, describe consequences.	Given a prompt, the student will develop a science experiment and formulate a minimum of three safety requirements for the operation.

State Goal 13

Science, Technology, Society (Standard B)

13.4.11 Identify ways that science and technology affect people's lives (e.g., in transportation, medicine, agriculture, and communication) and careers.

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Identify ways that science and technology affect people's lives.	The teacher will describe ways that science and technology have affected people's lives. The students will list a timeline of communication (i.e., pony express to telegraph) and describe how the progress affects lives.	The teacher will describe ways that science and technology have affected people's lives. The students will construct a picture of before and after using pictures of progressive technologies or inventions (e.g., before—rotary phone, and after—cell phone; before—early automobiles, after modern cars, before—early air flight, after—space shuttle).	Given a current technology, the student will match its "older" technology from a choice of two.	Given a current technology, the student will identify the "older" technology.	Given a current technology, the student will identify the "older" technology and one way the new technology has affected people's lives.

State Goal 13

Science, Technology, Society (Standard B)

13.4.13 Identify ways to reduce, reuse, and recycle materials.

Level	Critical Function	Suggested General Education Activity	Suggested Modified Instructional Activity	Possible Assessment Activity 1	Possible Assessment Activity 2	Possible Assessment Activity 3
Grade 4	Identify ways to reduce, reuse, and recycle.	The teacher will describe and demonstrate ways to reduce, reuse, and recycle materials. The students will then generate a list of potentially recyclable materials and choose an item or object to investigate how it can be recycled (i.e., batteries, glass, aluminum cans, paper). Share results.	The teacher will describe and demonstrate ways to reduce, reuse, and recycle materials. The students will then sort objects by recyclable, reducible, and/or reusable. They will then describe ways to reduce, reuse or recycle.	Given several pictures of materials, the student will identify a material as either recyclable or non-recyclable.	Given several pictures of materials, the student will sort them into recyclable or reusable.	Given a prompt, the student will make a list of items that can be recycled or a list of items that can be reused (instead of thrown away).