

What you will learn in this module

How to help children with disabilities learn concepts

All children need to learn core concepts. We help them learn these concepts by giving them ways to play and explore.

How to help children with disabilities learn to solve problems

Children learn how to solve problems when teachers and other adults play with them. When adults listen to children and encourage them to try out new ideas, they learn to think on their own.

How to use projects to help children acquire “mental models” of how things work

Children need projects that encourage them to observe and explore. As children work on projects they form “mental models” to explain how things work. They learn to adjust their mental models so that they match up more closely with the way things really are.

You already know a lot about how children learn

You know that playing teaches children how to think.

Children's cognition or ability to learn develops through play. Play experiences as well as the attention of caring adults teach them how to make sense of their world. They learn how to think about themselves and others.

Some disabilities make it harder for children to learn how to think. Some limit their ability to explore their surroundings or handle things. Others make it hard to sort things into 'alike' and 'different' categories. Some children can't apply what they learn in one situation to other similar ones. Children with these problems need teachers to accommodate to their individual needs.

You know that children need to learn core concepts.

Children need certain core concepts to make sense of the world. We help them develop these concepts when we give them toys and activities to group by similar characteristics. As they play and create, children begin to learn cause and effect. Following a daily schedule helps them understand sequence.

Some disabilities, such as cerebral palsy, make it hard for children to physically manipulate objects. Others, like autism, make it hard to sort objects into groups. Mental retardation makes it hard to follow a sequence.

You know that children develop problem-solving skills through meaningful classroom experiences.

We help children develop problem-solving skills by involving them in solving classroom problems. And by being willing to listen to their ideas. Open-ended play lets children find solutions to real problems. For example, how to build the block tower so it doesn't tip over. Or how to share toys at the water table.

Children with disabilities like autism, attention deficit disorder, and mental retardation have difficulty solving problems. They have trouble picturing several possible solutions to the same problem. Or they don't have the communication skills they need to talk things through with other children. Children with disabilities need our support to learn skills other children learn on their own.

You know that projects help children acquire "mental models" of how things work.

Preschool children form models in their mind as they try to make sense of their world. Projects help them see things from other points of view. They begin to adjust and fill in their mental models. As they work on projects they learn to make predictions. They test their ideas and interpret the results.

Classroom projects are a way for children with disabilities to participate. Open-ended materials, such as construction paper or blocks, encourage children with different levels of ability to join in. And hands-on learning gives them the chance to use real objects to express and expand their mental models.

 **What do you think?**

Ms. Lancaster knows that Quinn has sequencing problems. She spent a lot of time making picture sequences of classroom activities and routines. He refuses to use them. He just turned five and she thinks he may be afraid that other children are making fun of him. *What would you tell her?*

- (a) Make the picture sequences available to all of the children. That way he won't feel singled out.
- (b) Everybody has problems. Quinn needs to accept that he needs help sequencing, and not care what other people think.
- (c) Don't make him use the picture sequences. He'll find another way of coping.

The correct answer is (a). Other children besides Quinn can benefit from picture sequences.

Recognizing similarities and differences

Children's cognitive development depends largely on their ability to recognize similarities and differences. As they explore these concepts, children can make complex comparisons. They begin to notice that objects are similar in some ways and different in others. This leads to a broader understanding of how grouping helps us organize and use information. For some children, the complexity is overwhelming. Their disability causes them to focus on a narrow range of things and ignore everything else.

"Miquel has Asperger's syndrome," said Ms. Khang. "It's a form of autism. Children who have it fix their attention on one particular subject. Miquel's subject is dinosaurs. He knows everything there is to know about them. But don't ask him about any other kind of animal. He's not interested!"

"What does he do all day?" asked Ms. Alvarez. "Do you just let him play with dinosaurs?"