

## **Guide for Grownups**

**Here are some ideas to keep in mind as you play Tiny Polka Dot games with your child.**

### **1. Learning takes time!**

The process of learning and mastering a new skill can be slow and complex. This is not a test. Try not to rush your child. You may find a child makes the same mistake over and over, or enjoys playing a game that seems too easy. As long as they are having fun, trust that your child is learning! Be patient and stay flexible.

### **2. Think out loud**

The best way to help your child is to slow down during your turn, count clearly, and describe what's happening in your head. When you say, "That's a two. I need an eight to make a match. Now where was there an eight...?" you're helping them see how to think.

### **3. Follow their lead**

For each variation you play, let the child show you if it is right for them. Most kids will enjoy starting with a game that is easy for them. It's fun to be successful! If a game becomes too easy, they can move on to a more advanced game. On the other hand, if a game is too hard, the child will likely lose focus or want to stop. That's a sign you need to move to a simpler version.

### **4. Use your fingers**

If you find your child is having a hard time organizing their counting strategies for large numbers of dots, or for the dots in tricky arrangements, show them how to place a finger on the first dot they count so they can keep track of where they started. For young children, demonstrate counting by touching the dots slowly and deliberately while you speak the numbers aloud. You may need to count a card together several times before they count correctly.

### **5. Help less**

It's easy to over-help. Make sure you are letting your child take as active a role in the game as possible. Try making neutral observations and asking them questions. Rather than say "That's a three. You need to find a two to make five," say "You flipped over a three. What do you need next?"

### **6. Play!**

Play is the engine of learning for young children. Winning might be irrelevant to some kids, and games can be played collaboratively. Keep the game light and fun, and have fun yourself!

## **The Progression of Counting and Arithmetic**

We created Tiny Polka Dot to help kids learn foundational ideas in counting and mathematics through play. Developing these skills is more complex than you might expect. In fact, mastering counting and simple arithmetic comprises most of the work children do in math from pre-Kindergarten to second grade.

The progression of math skills in young children develops roughly in the order below, but every child is different. Don't be concerned if your child doesn't seem to know something he or she "should." Tiny Polka Dot was developed to give kids a playful way to practice honing these skills while having fun!

- Number names
- Number order to five
- One to one correspondence — knowing each successive number name corresponds to one more when counting
- Conservation of number — recognizing that objects in different arrangements can still represent the same number
- Number order to ten and beyond
- Subitizing — the ability to recognize the number of objects in a small collection without having to count
- Understanding addition as combining and subtraction as taking away
- Addition to five
- Addition to ten
- Subtraction to five
- Subtraction to ten
- Addition and subtraction to twenty and beyond

## **Habits of Mind**

Beyond specific skills, playing Tiny Polka Dot games encourages the habits of mind kids need to be successful in math. These habits include:

- Problem solving
- Perseverance
- Finding and using mathematical structure
- Comparing and estimating
- Learning from mistakes
- Mathematical courage and creativity

Again, don't worry about every game having a measurable outcome. When your child plays and has fun, they are laying the foundation for a lifetime of mathematical success.