

Skills for School Success

Critical Thinking



*Ways Families Can Help Their
Children Do Better in School*

THE
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Critical Thinking—the Foundation For School Success

Students learn facts and figures, dates and places, spelling, math, history and much more in school. But as important as it is to learn basic facts, experts say critical thinking skills are more important for success in school.

Instead of just memorizing facts, students must also learn to *think* clearly. They must be able to understand facts, sort them and make sense of them. They need to be able to evaluate what they hear, see and read. They need to know how to make good decisions based on careful analysis. These are the skills of *critical thinking*.

One of the best places to help your child learn and practice critical thinking is right at home! This booklet is filled with activities you can do together to build strong thinking skills.



Every child is unique, so we often use the singular pronoun. We'll alternate using "he/him" and "she/her" throughout this booklet.

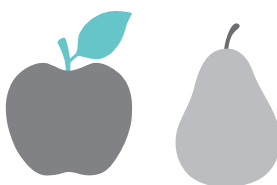
Here Are Six Basic Critical Thinking Skills

Many educators feel that some of the most important thinking skills children need are:

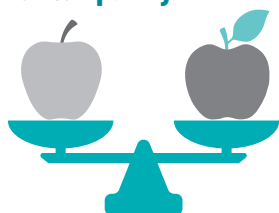
1. Observing



2. Classifying



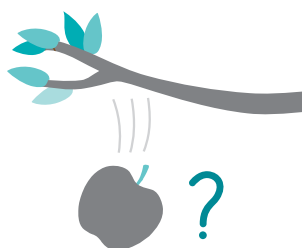
3. Comparing



4. Summarizing



5. Hypothesizing



6. Evaluating



Look at each skill separately on the following pages. See what it includes and how you can help your child learn that skill. Try out some of the activities together.

1. Observing

Critical thinking begins with careful observing and questioning. Watching, reading and listening (sometimes even tasting, smelling and feeling) are ways to get basic facts and information. Children who don't observe carefully or ask good questions will miss getting the information they need for critical thinking.

Here are some observing activities to enjoy with your child:



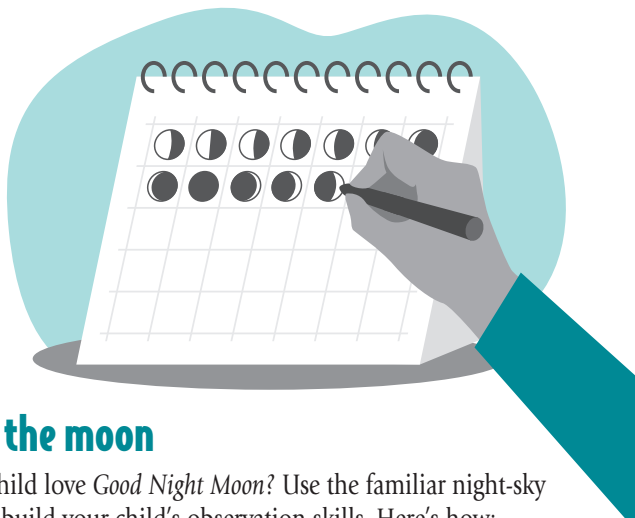
Observe pumpkins

This is a great activity for fall, but you can do it with another fruit or vegetable any time of year. Help your child pick out a pumpkin. While she's looking, encourage her to note the sizes and shapes of all the pumpkins. Then help her make up a list of all the questions she can ask (and answer) about her pumpkin. Some may include:

- What color is it?
- What shape is it?
- How much does it weigh?
- What's inside? (Remember to supervise if your child cuts the top off the pumpkin.)

Observe a dollar

Give your child a one-dollar bill. Ask her to look it over. See if she can find the key. Then have her find the eye. What else can she find?



Observe the moon

Did your child love *Good Night Moon*? Use the familiar night-sky friend to build your child's observation skills. Here's how:

1. **Give your child a large calendar** or help him make one.
2. **Set up a time every night** to look at the moon together.
3. **Have your child draw** in each calendar square how the moon looks that night.
4. **Continue this activity** for two months.
5. **Look at the calendar** with your child. Ask how the moon has changed. If he has observed it for a month or two, he should notice that the moon has gone through phases.
6. **Help your child find more information** about the moon:
 - Online. You can find information about the moon's phases and more on NASA's website about the moon at <https://moon.nasa.gov>.
 - The library. Ask the librarian to help your child find age-appropriate books about the moon.
 - A planetarium, if your community has one.

Observe insects

Your backyard or your local park can be just the place to have fun observing with your child. Bring along a magnifying glass and spend an afternoon looking at insects together. You may be surprised at all the "wildlife" you'll find!

2. Classifying

Once facts and information are at hand, the next important skill is to classify or sort them. Classifying is deciding which objects should go into which groups. You may be delighted to know that tasks like putting away the dishes can teach your child skills in classification.

Matching plates with others of the same size or putting forks and spoons in the right places helps your child see how to group things that are alike. Sorting clothes is another way to teach classifying.

So next time you remind your child to help with the laundry, remember—you aren't just assigning a chore. You're teaching an important skill, too!

Here are some ways to help your child practice classifying:



Use pictures

Look through old magazines for pictures of items from different categories. For example, you might find pictures of trucks, babies, dogs or food. Glue each picture to a separate index card or piece of paper.

Ask your child to put similar pictures together—match dogs with dogs, babies with babies. Then ask her to classify them in different ways. You might even encourage your child to sort the pictures into piles of people, places or things.

Classify on the go

Practice classification with your child while you are in the car, waiting in the doctor's office or out on a walk. Play the "name something" game.

Pick a characteristic and ask your child to name something that fits that characteristic. For example, "Name something that grows." Encourage your child to give as many different answers as he can. Later you can get more specific—"Name something that grows in the ground."

Use snack time

Offer your child a snack made up of different items mixed together. Try fruit salad or trail mix. Or make your own snack mix by filling a bowl with three kinds of pretzels.

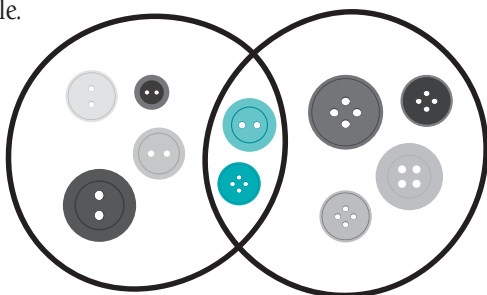
Give your child a clean plate. Then ask him to arrange the snack into groups on the plate before eating.

Show how groups overlap

Draw two separate circles on a piece of paper. Give your child some buttons. Ask him to put buttons with two holes in one circle and four-holed buttons into the other.

Next, draw two overlapping circles. Ask your child to put two-holed buttons on one side, four-holed buttons on the other, and all the blue buttons in the middle.

This shows him how items can be classified into two groups at the same time. For example, a blue, four-holed button could go in two groups.



3. Comparing

Once your child knows how to classify, she can make comparisons. Talk with your child as you compare:

Cookies

What kid doesn't love cookies? Here is a way to use them to teach your child to compare. Have your child:

1. **Help you select** two (or more) kinds of cookies.
2. **Make a chart** with a row for each cookie and five columns. Label the rows with the names of the cookies. Label the columns: size, shape, color, smell and taste.
3. **Enter information** for each cookie in the columns.
4. **Compare the cookies**

using her chart. Which cookie does she prefer?



Or try a variation. Have your child:

1. **Write nutritional information** provided on the box in columns: number of cookies per serving, calories, fat content and so on.
2. **Tell you which cookie** is the most nutritious.

Afterward, take time to enjoy some milk and cookies with your child!



4. Summarizing

One of the most useful critical thinking skills is summarizing. After facts have been gathered and organized, it is easier to deal with them in brief form. Writing a summary also helps students remember what they've learned. Summarizing is simply making something long into something short, keeping just the main elements and leaving out the less important ones. To help your child practice summarizing, have him:

Write headlines

Cut the headline off a news article. Do not show your child the headline. Have your child read the article, then write his own headline that summarizes the whole story. Are the headlines similar?

Shrink summaries

Cut a piece of paper into three pieces. The first one should measure 3" x 5", the second 3" x 3" and the third 2" x 1-1/2". Have your child read a short article or paragraph and write the most important details filling up the largest piece. Next, have him select the most important details from this piece of paper and write them on the medium-sized piece. Finally, have your child select the most important details from the medium-sized piece to write onto the smallest piece.

Telegraph the main idea

When people communicated by telegram, they paid a price for each word. As a result, telegrams contained only the most critical information.

Give your child a budget of two dollars. Tell him each word will cost 10 cents. Have him "telegraph" (summarize) a paragraph or story and remain within his budget.

5. Hypothesizing

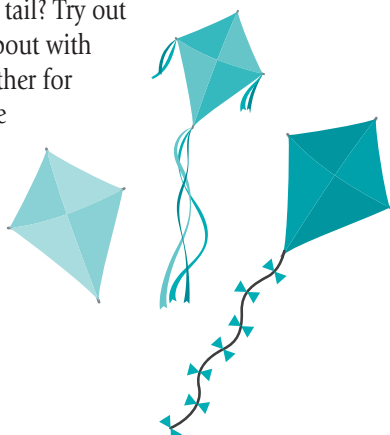
Your child has made observations. She has classified and compared facts. She can summarize her findings. Now she is ready to learn one of the most exciting skills in critical thinking: hypothesizing.

Hypothesizing is simply predicting what is likely to happen next, based on known facts. Here are some activities for your child to practice this important skill at home:

- **Read.** Encourage your child to ask herself thought-provoking questions as she reads. What just happened? Why did it happen? Will this have an effect on what happens next?

You can start nurturing this critical thinking skill in your child from a very early age. As you read to your child, stop occasionally to ask questions. "What do you think will happen next? Why?"

- **Get the cold facts.** Ask your child: "If we leave this ice cube on the counter, what do you think will happen to it? How long will it last as an ice cube?" Have her experiment with different sizes of ice cubes. Does she predict that one will melt faster than another?
- **Go fly a kite.** Build a simple kite with your child. Have her make some predictions: Will the kite fly without a tail? Will it fly better with a longer tail? Try out different lengths. How about with two tails? Check the weather for wind conditions. Will the kite fly best in a light, moderate or strong wind?





- **Talk to plants.** Some people say that a plant will grow better if you talk to it. Have your child test this hypothesis by observing two identical plants as they grow. Have him talk to one plant every day for a period of time, but not to the other plant. Ask him which one he thinks will grow more quickly.
- **Get scientific.** Place two straws parallel to each other about 1/3 inch apart on a smooth table top. Lay two empty soda cans on their sides across the straws about two inches apart. Have your child use a third straw to blow air straight between the two cans. Ask him to predict which way the cans will move if he blows between them. (They will move toward each other.)
- **Make pasta predictions.** Place 1/4 cup of uncooked elbow macaroni (or other short pasta) in each of two bowls. Add one cup of cold water to one bowl. Add one cup of hot water to the other bowl. Which bowl of pasta does your child predict will absorb the water more quickly?



6. Evaluating

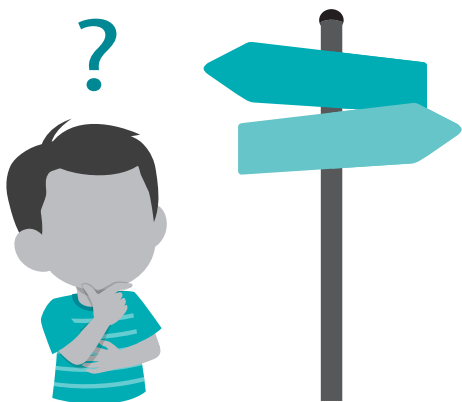
The final step in critical thinking is evaluating. This skill teaches children to look at all sides of an issue or problem. Your child is evaluating when she considers whether something is good or bad, worthy or less worthy, and the reasons why.

It is important for your child to learn that, after all her critical thinking about a problem is finished, there may be several workable solutions. Then she must evaluate each option to determine which one is the best.

You can help your child learn to evaluate:

- **A product.** Have your child compare a name-brand product to the generic version. She can compare the ingredients and the prices, then evaluate the difference. Which one would she buy? Why?
- **A service.** If you are allowing your child to get a cell phone, have her do the research on which plan to get. She should evaluate the pros and cons of having her own plan versus being part of a family plan. She could also weigh the benefits of adding an insurance plan.

- **A program.** Choose a TV show or video to watch with your child. Afterward, ask him to write a review evaluating it. He shouldn't just write whether it was bad or good—he should explain what made it so. "I didn't think what the main character did was believable." "I enjoyed the cliffhanger at the end."
- **A policy.** Talk with your child about a local, state or national policy. Does he think it makes sense? Why does he think the lawmakers decided to put the policy into place? What would he have done instead?



Consider values when evaluating

As children grow older, they have more decisions to make. One way you can help your child develop the ability to evaluate is to talk about the choices he faces.

Encourage your child to think about your family's values when he is making a decision. For example, ask him to evaluate the choice of whether or not to cheat on a test. He may want to get the good grade. But he knows that cheating is dishonest. Explain that doing the right thing is part of good character and the best choice for responsible students.

More ways to help your child practice critical thinking skills

Screen media doesn't have to turn your family into couch potatoes. Here's how to use screen time to encourage critical thinking skills:

- **Select a show to watch together.** Pause in the middle to talk about how you think the show will end (hypothesizing). Then watch the rest and compare your ideas with the actual story. Whose ending was closest? Whose ending was better? Why or why not?
- **Watch the news together.** After seeing a news report, look for a written article on the same subject. Talk about how they are alike—and how they are different (comparing).
- **Have your child choose a commercial** for a toy and write down what the ad says about it. Then visit a toy store. How does the actual toy stack up (evaluating)? Ask your child if the advertising led her to expect it to be different? Talk about the purpose of advertising—to sell.

Your child can also use news articles to practice critical thinking. For example, have your child read a short editorial on a subject that interests her. Have her underline all the facts with a red pen or pencil. Then have her underline opinions with a blue pen or pencil (classifying).

Fostering critical thinking skills is one of the greatest contributions you can make to your child's future success.



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