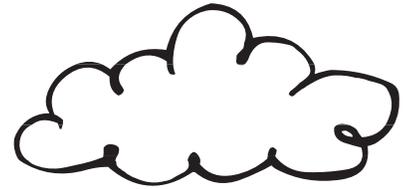


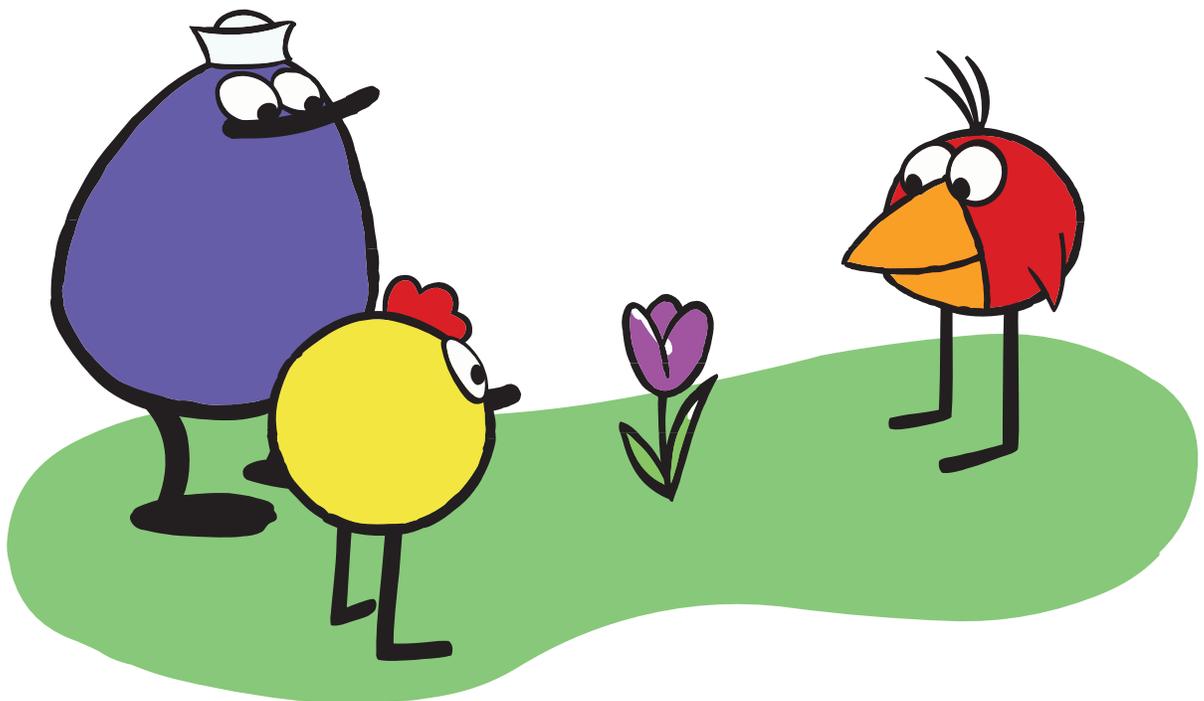
PEEP and the
Big Wide World™



Neighborhood Safari



A field guide of science activities
you can do anywhere, anytime.



peepandthebigwideworld.org

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Neighborhood Safari

A field guide of science activities you can do anywhere, anytime.

PEEP encourages children to explore, experiment, and ask questions. This is a hands-on science field guide for parents, caregivers, and children in which kids can record observations, collect data, and draw what they see. It offers a menu of science activities that are easy to incorporate into a child's daily routine. Taking a walk might be an opportunity for making hand shadows; taking a bath can lead to experiments with sinking and floating.

While using this Guide, we encourage you to treat your children as scientists by validating the questions they ask, the ideas they have, and the predictions they make. To quote PEEP's Content Director, Karen Worth, "Research suggests that the best way to support science learning is to encourage and guide a child's own thinking rather than deliver the facts. When your child asks you those hard-to-answer 'why' questions, it's fine to simply say, 'I don't know! Maybe we can find out together.'"

This guide comes in two parts: a parent's guide and children's activity pages. The name of each activity in the parents guide matches the title for each of the children's activity pages. The suggestions in the parent's guide explain the best ways to use the children's activity pages.

Each activity is based on an Anywhere Science activity from the PEEP Web site. Anywhere Science activities, based on the idea that science can be done by anyone, at any time, in any place, encourage kids and parents to record, draw, and document their findings. This guide is a place where they can do just that, with helpful suggestions for parents to encourage exploration.

To give children a sense of ownership and accomplishment, children can personalize the front cover for the children's activity pages by attaching something they find over the course of their neighborhood safari.

We hope you find this Guide useful in supporting your child's science investigations!



Blowing Bubbles

Children love to blow bubbles. Here are some ideas for how to transform their exploration into “science play.”



Get Ready

- 1 Buy or make simple bubble blowers from straws or empty food cans that have easily removable tops and bottoms.
- 2 Make your bubble solution. Mix together: 1/4 cup of dishwashing liquid, 1 tablespoon of glycerin (optional and available at your local pharmacy) and 3 cups of water in an empty container.
- 3 Print the “**Blowing Bubbles**” activity page.

Explore

Use the different-sized blowers to make lots of bubbles. Watch the bubbles, noticing how they move and float through the air.

Ask children questions and make comments like:

What do you notice about the bubbles?

What happens when the bubbles land on different surfaces?

Wow, look how big that one is!

I wonder if the bubbles are all the same size.

Use the “**Blowing Bubbles**” activity page to catch bubbles before they break. When the bubbles pop, look for the wet rings that form on the page. Trace over them with a crayon or pencil. Compare the sizes of different bubbles.

Take It Further

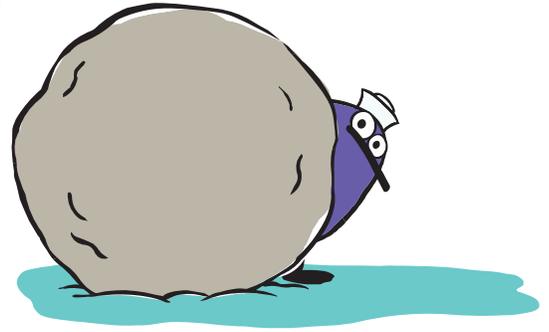
Gather other items to make bubble blowers. What sort of bubble blower would make a really big bubble? How about a small bubble?

To make a monster bubble, thread a piece of yarn, about two feet long, through two drinking straws. Tie the ends of the yarn together. Lay the yarn in bubble mixture that’s been poured in a shallow pan. The straws should be at opposite sides of the loop of yarn. Using the straws as handles, hold the yarn taut and pull it out. This is a bit tricky and may take some practice.

To make lots and lots of tiny bubbles, try using fly swatters, spatulas, and slotted spoons.

Under Logs and Rocks

It's fun to find things hidden in backyards or parks. Help kids become outdoor explorers with this observation activity.



Get Ready

- 1 Print a few copies of the “Under Logs and Rocks” activity page.
- 2 Bring a box of crayons or colored pencils.

Explore

Though we often classify things as living and non-living there is also a third category of classification: “things that were once living but are dead.” Try to keep this in mind as you talk about your discoveries.

In your yard or park, find a log or rock you can pull up and look under.

Ask children questions or make comments like:

What do you notice?

Let's look for things we think are alive. Why do you think it is alive?

Let's look for things that aren't alive.

I think this little branch used to be alive. What other things can we find that might have been alive?

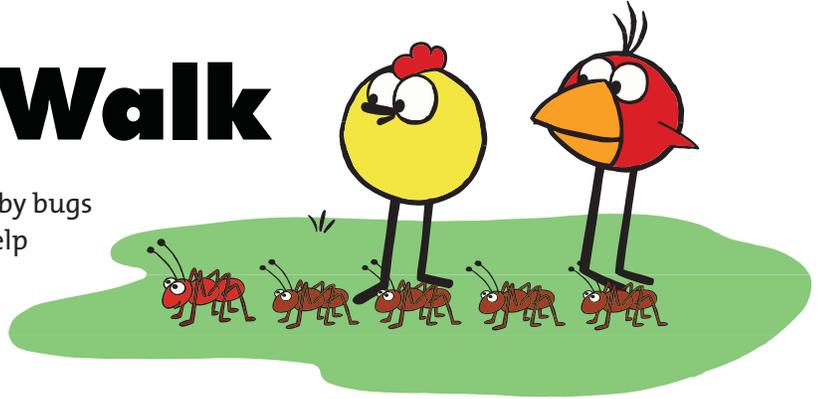
Carefully observe everything, living and non-living. Record what you find by inviting children to draw pictures of the things they see on their “Under Logs and Rocks” activity page.

Take It Further

Look under the same spots the next day or even in a few hours.

Going on a Bug Walk

Most preschoolers are fascinated by bugs and spiders. Use this activity to help children recognize how insects vary by color, number of legs, and the way they move.



Get Ready

- 1 Print a few copies of the “Going on a Bug Walk” activity page.
- 2 Bring a box of crayons or colored pencils.

Explore

Find a safe area outside where children can look carefully at different insects.

Ask questions and make comments like:

I wonder if we have a crayon that matches the color of the ant’s body. Let’s try to draw the ant.

Let’s count the number of legs this spider has. How many legs do you have?

How do you think it moves?

I wonder if other insects we can find have more or fewer legs?

Encourage children to draw a particular bug or insect on the “Going on a Bug Walk” activity page. Record their observations below each drawing.

Take It Further

Go out in the evening or early morning and see if you can find more or different kinds of insects.

Springing to Life



In many climates, spring is the time when a myriad of flowers are in bloom. Encourage children to appreciate this environmental change by scouting out the different colored flowers they find. This is also a fun activity in neighborhoods that have the advantage of year-round flowers.

Get Ready

- 1 Print the “Springing to Life” activity page.
- 2 Bring a box of crayons or colored pencils.

Explore

Find a safe area outside where there are as many different colored flowers as you can find.

Ask questions and make comments like:

Let’s look closely at all the different colors of the flowers.

What crayon would you say is the closest to the color of the flower?

Can we find any flowers with more than one color?

Which color flower do you see the most?

Which color do you like best? Why is that color your favorite?

Help children label the chart that appears on the “Springing to Life” activity page by coloring in the flowers at the bottom with the different flower colors they see.

Then, ask children to pick a spot or area where they can do closer observation. Pick a place where there are quite a few flowers of different colors and an area that has clear boundaries, (e.g. between the fence and the walkway.)

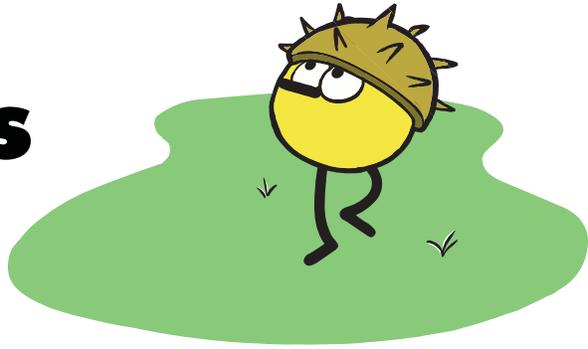
Using the matching crayon color make a circle for each flower you find of a particular color above that same color flower on the chart. If you find multi-colored flowers, use more than one color of crayon to draw the circles, e.g. a pink circle for pink flowers or purple circle and a yellow circle for purple and yellow flowers.

Take It Further

If you live in a place that has a fall climate, try this activity with trees with different colored foliage.

Draw a colored circle using the matching crayon color for each kind of tree you find. Use more than one color if the tree has leaves of more than one color, e.g. a red circle and an orange circle for red and orange leaves.

Growing Seeds



Preschoolers are fascinated by growth and change. They're often told about their own growth, but these changes are gradual and often imperceptible to themselves. Growing a seed enables young children to see changes over a short period of time. Use this activity to talk about the things plants need to grow and how you can record and measure changes.

Get Ready

- 1 Gather growing materials: a dry bean, paper towel, flat tray (like the foam meat trays from the grocery store), and a sealable plastic bag
- 2 Have a pencil and construction paper ready.
- 3 Print a few copies of the “**Growing Seeds**” activity page.

Activity

Wet the paper towel. Wrap a dry bean in it. Place the paper towel with the bean on the flat tray and push the tray into a sealable plastic bag. Don't seal the bag or mold will start to grow on the wet paper towel.

Check on your beans daily as they germinate and start to grow. Add water to the paper towel when it starts to feel dry.

Encourage children to use the boxes on the “**Growing Seeds**” activity page to draw any changes in the bean. Help children label the drawings with Day 1, Day 2, Day 3, etc.

Use the columns on the right side of the “**Growing Seeds**” activity page to track the growth of the bean into a plant. Help children label the columns with Day 1, Day 2, Day 3, etc.

Rather than measure growth with a ruler, use construction paper to make strips of paper and then help children cut them to the length of the stem of the plant.

Paste the strips on the column for the right day. In the end, children will have drawings of the bean germinating with a graph that shows the changes in the bean's height.

Take It Further

At the end of this activity, plant the seedling in a pot or garden to see how it grows and continue to measure and record its growth.

Making Prints



Preschoolers often play with paints and stamps, but they don't always realize that different objects absorb paint differently and that the same object can be used to make a variety of prints. Here are some ideas for how to integrate children's science play into art activities.

Get Ready

- 1 Purchase colorful non-toxic tempera paints and pour on individual paper plates.
- 2 Find some objects outdoors or indoors that will make interesting patterns when you make prints with them. (Note: Be sure to use things you don't mind getting paint on like leaves, rocks, sponges or coins.)
- 3 Print a few copies of the "Making Prints" activity page.

Explore

Try making prints of household objects or things you've found outside on a walk, at a park, or on a trip. Dip these objects into tempera paints and press the object, paint side down, onto the "Making Prints" activity page. Encourage children to print using different sides or angles of the same object. For example, make a print by pressing a jar lid flat against the paper. Then, make another print using just one side of the lid.

Ask questions and make comments like:

I wonder what this is going to look like?

How do you think we could make a different shape with this?

Let's try to press harder and see if the print is the same.

What would happen if we press more lightly? Let's see.

Let's make as many prints as we can without adding paint. How are the prints changing? How many can we make?

Encourage children to use the "Making Prints" activity page to record their exploration of different objects and ways of making prints.

Play a game where children make a print while you close your eyes. Then try to guess the object that was used to make it.

Take It Further

For an outdoor activity, notice the prints your shoes or bare feet make on different surfaces like sand, dirt, and grass. What surface makes the best footprints? What happens when you walk on different surfaces with wet feet? Notice how your footprints look when your shoes are on and when your shoes are off.

What Floats



Since young children take lots of baths, they have opportunities to watch their toys sink and float. This activity asks kids to make predictions about what sinks and floats, test their predictions, and record the results. It's science with a splash!

Get Ready

- 1 Collect a variety of objects that can sink or float and that you don't mind getting wet, like kitchen utensils, toys, rocks or leaves.
- 2 Fill a bathtub or a plastic pool with water.
- 3 Print a few copies of the “**What Floats**” activity page.
- 4 Have a pencil and crayon to write with.

Explore

Try putting a few objects in water and see which ones float and which ones sink. Talk with children about what you and they observe, using the words “sink” and “float.”

Gather some more objects and have children make a prediction by separating the objects you've collected into a “will sink” pile and a “will float” pile. Choose a few of the objects and ask: What made you think it would float (or sink)?

Test each object out and see what happens.

Ask questions and make comments like:

Wow, you were right! It did sink.

Let's try it again and see how it sinks.

I really thought it would float but it sank. Why did you think it would float?

Let's look at all the things that sank. Do you think they are the same in some ways?

Let's look for new things that we think will float.

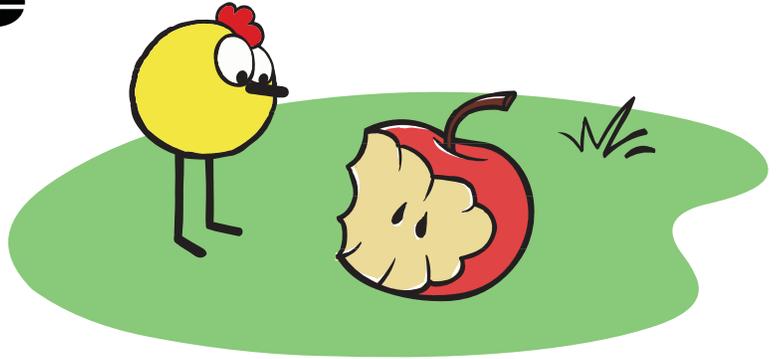
Use the “**What Floats**” activity page to record children's predictions about what they think will sink or float. As children test each object, record the result.

Take It Further

Ask children to compare their predictions with their results. Help write their conclusions about the characteristics of things that float and sink on the right side of the activity page.

Change over Time

Although rotting food is something most adults try to avoid, it can be an interesting phenomenon for children to observe. You'll find that a rotting banana can have a lot of appeal!



Get Ready

- 1 Gather an un-ripened banana and a sealable plastic food storage bag.
- 2 Print four copies of the “Change over Time” activity page.

Explore

Have children place an un-ripened banana in a sealable plastic bag. (Make sure to seal the bag shut.) Be sure to check the banana everyday for a week.

Ask questions and make comments like:

What do you think it will look like tomorrow?

What do you notice about the banana?

Wait a day, then ask questions and make comments like:

What do you notice?

What do you think it will look like tomorrow?

How do you think it has changed from yesterday?

Have children use the boxes in the “Change over Time” activity page to draw the banana from day to day over the course of a week.

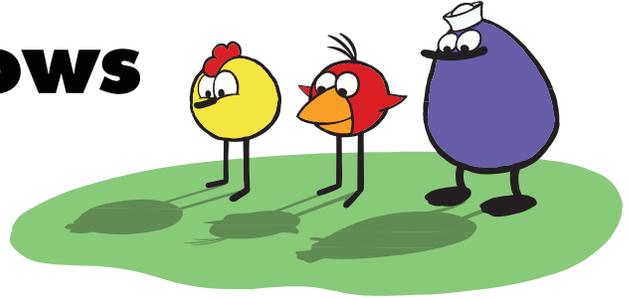
Record their observations on the line below the boxes. Make sure to label each box with Day 1, Day 2, Day 3, etc.

Take It Further

Try this with other foods (bread, fruits, and vegetables). You can use the rotting food to make compost for someone’s garden. (Compost is rotting vegetation that turns into fertilizer over time.)

Making Hand Shadows

Playing with shadows is fun and easy to do. All you need is a light source and some fidgety fingers.



Get Ready

- 1 Locate a portable lamp or flashlight.
- 2 Print a few copies of the “**Making Hand Shadows**” activity page.
- 3 Gather crayons or pencils.

Explore

Get some crayons and put the “**Making Hand Shadows**” activity page on the wall. Shine the light onto the activity page. Let children put their hands in different positions to create different shadows by blocking the light. Tell them you can trace the shadows they like.

Ask questions or make comments like:

What different shadows can we make on this paper?

I'm going to try to hold my hand closer to the paper. I wonder what will happen.

What do you notice?

What happens when you hold your hand far away from the light?

What do you notice about the shadow when you're close to the light?

Can you make a shadow that's too big to fit on your activity page?

How small can you make your shadow?

Use the “**Making Hand Shadows**” activity page to trace the various outlines of children's hands as they create shadows.

Take It Further

Make shadows using objects or body parts other than hands. Then, put on a shadow play.

READY
SET
LEARN!

Watch *Peep and the Big Wide World*
weekday mornings during Ready Set Learn!
on TLC and the Discovery Kids Channel.

Go to peepandthebigwideworld.org
for more science games and activities.



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