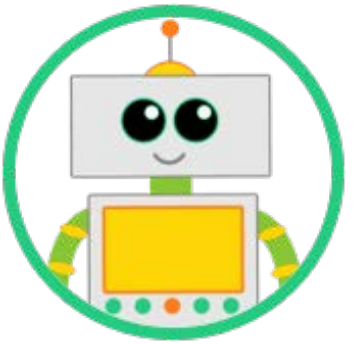
AN ORANGE

A Story of Observing & Describing

Using All 5 Senses

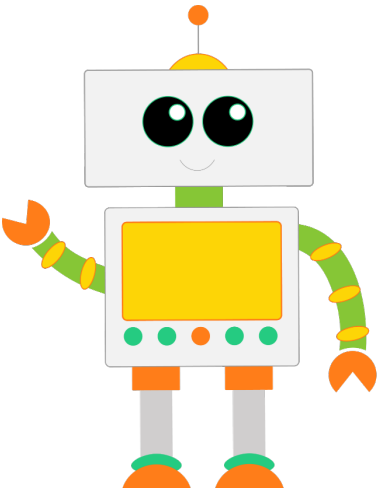
For Older Toddlers & Preschoolers



The mission of the Early Science Initiative (ESI) is to unleash the power of science in early childhood.

An Orange: A Story of Observing and Describing is part of a series of ESI books intended to help develop adults' lens for seeing and supporting science that exists all around us. Through authentic pictures and simple text, ESI (/Eh/-/see/) the curious science robot, introduces crosscutting concepts (e.g., cause and effect; patterns) and science practices (e.g., observing and describing) to support children's natural ability to be young scientists.

Use this book to become comfortable with the science practice of observing & describing. Then, bring it to life by engaging in a hands-on experience.



Be curious, test things out, have fun!

Grumble, grumble, grumble... did you hear my tummy rumble? I'm hungry!

I would like some fruit. The **shape** of the fruit that I want is **round**.

Can you predict which one I want?

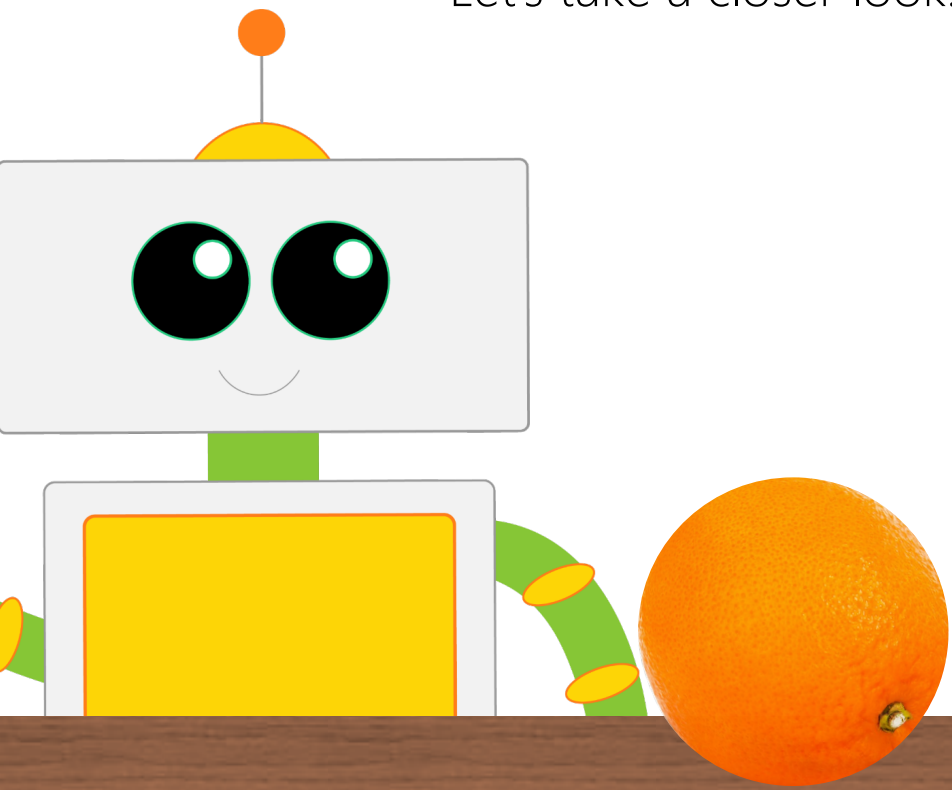
The apple, the orange, and the lemon all have a similar **shape.**

They are all **round** like a ball.

Today I feel like eating an orange!

What other **attributes** can you observe?

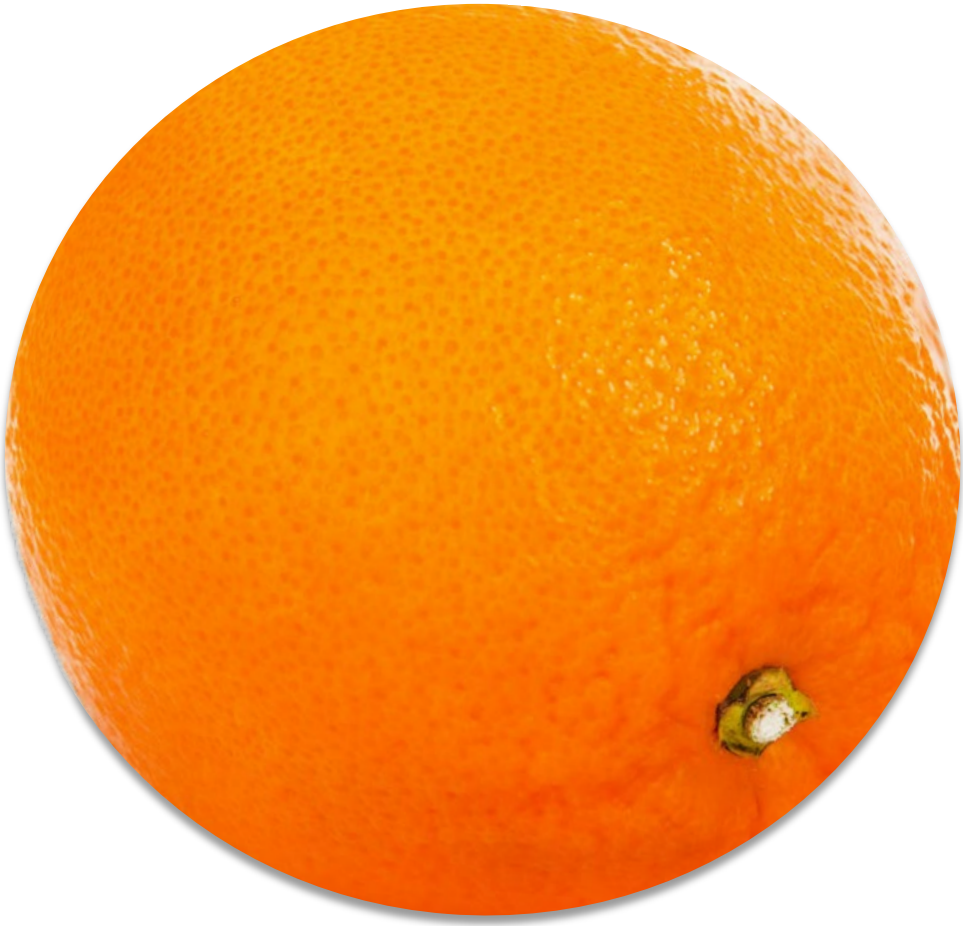
Let's take a closer look.



Wow, when I **observe** with my **eyes**, I can see **small little dots** all over the orange!

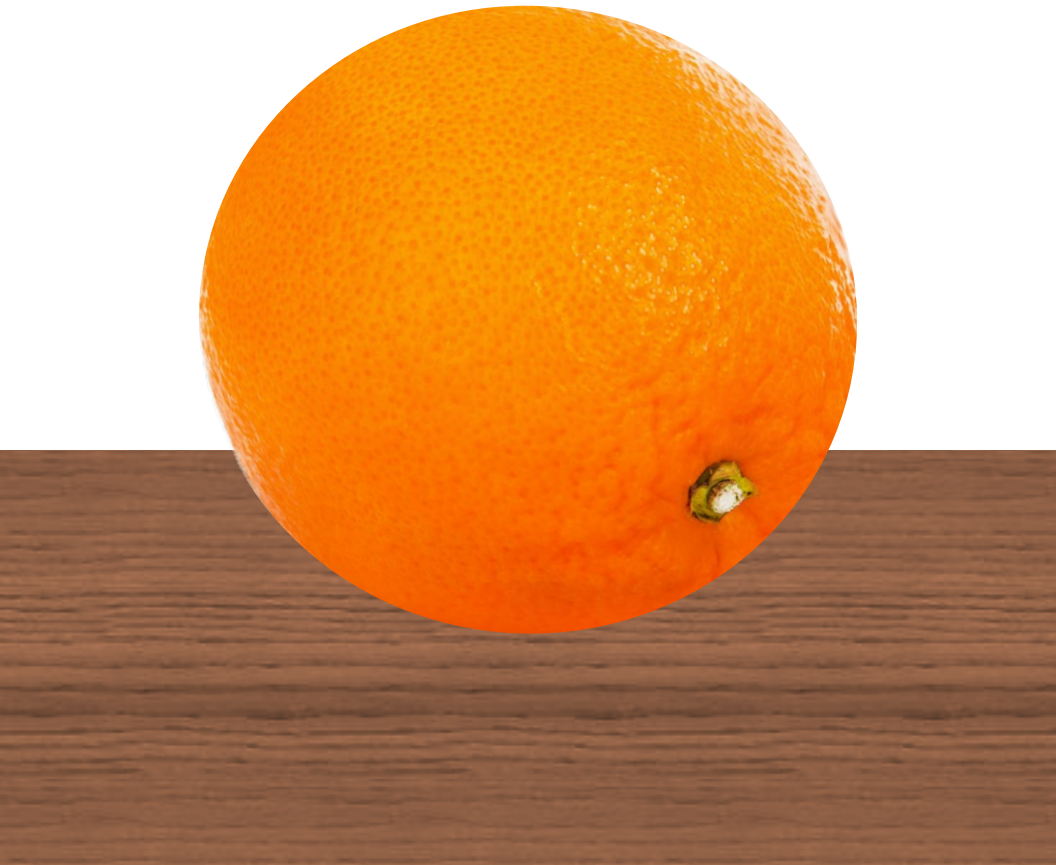
I wonder what it **feels** like?

I use my fingers to **touch** the orange. It feels **bumpy**.



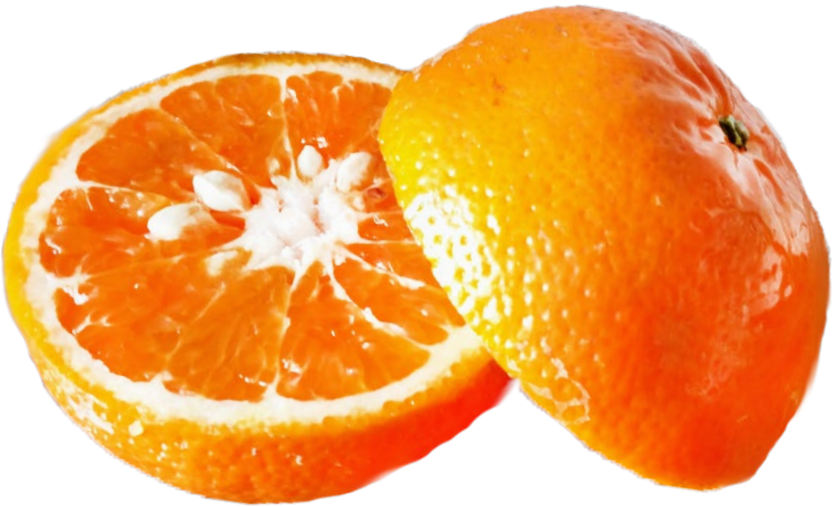
I wonder what it **looks** like inside.

What do you **predict** it will look like inside?



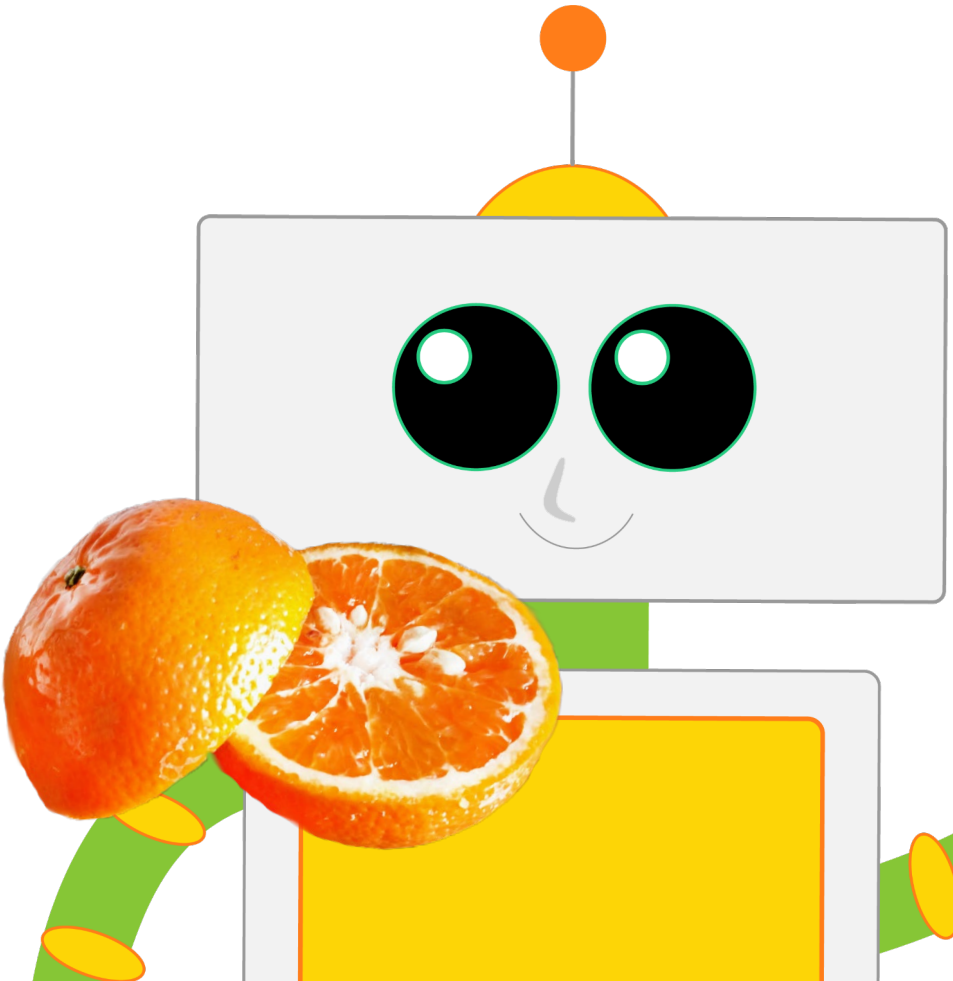
Look at that!
It is the **color** orange inside just like the outside.

I also see the color white.
Do you notice the **four small white** seeds inside?

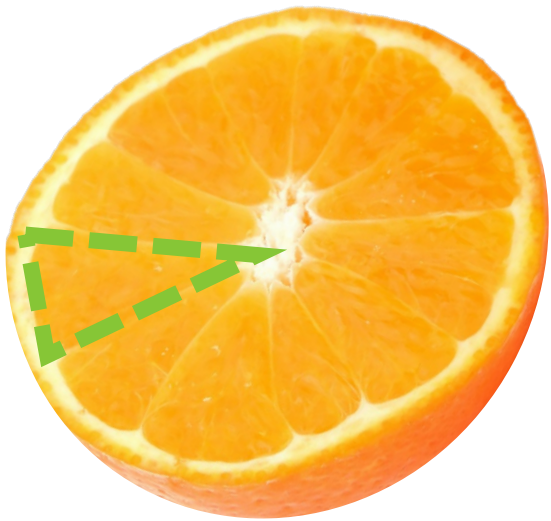


Sniff, sniff, sniff.
I use my **nose** to observe the **smell**.

It smells **fresh** and **citrusy!**



Look!
I see **triangles** inside
the orange.

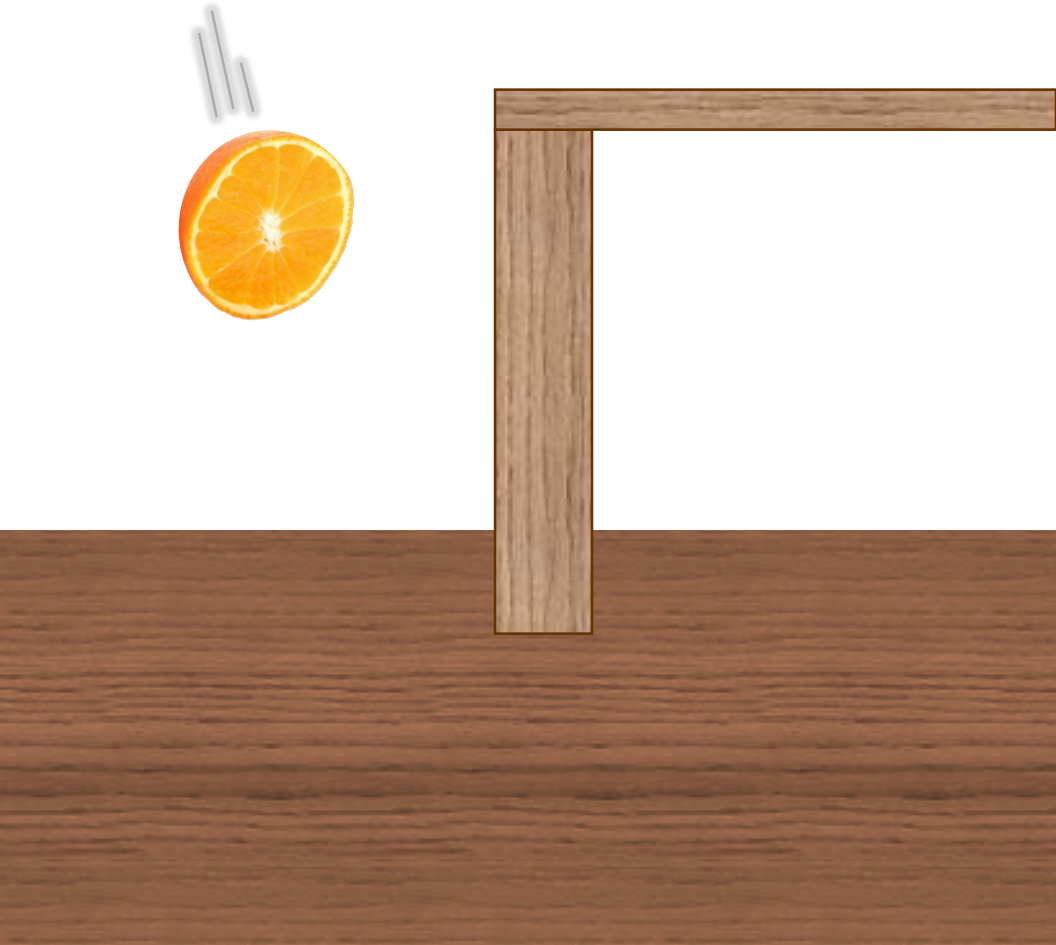


I'm curious...
what does it **feel** like on the inside?
I can observe the **texture** of the orange
with my **fingers.**

It feels **wet** and **squishy** when I touch it.
This is different from the **bumpy** outside.

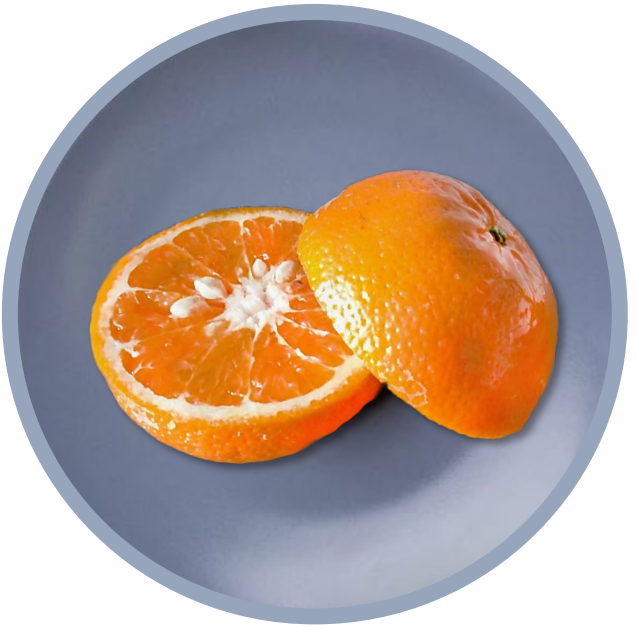
Oops! I dropped some of the orange.
I **heard** a thump **sound with my ears** as it landed on the floor.

Do you think it made a LOUD sound or a soft sound?



And now the best part...
I'm going to observe the **taste** of the orange with my **tongue.**

Mmmm...it's **sweet!**



What will you have for snack today?

Can you **observe and describe** your snack before you eat it?

Try it!

Reading with Purpose

Every ESI story introduces children *and adults* to the language of the Early Science Framework. Use ESI books as a way to get started. However, be sure to get hands-on and minds-on! Use real objects and experiences to provide the most authentic and effective learning for young children.

When reading the story remember to:

- Emphasize the vocabulary words used in describing the orange and the parts of the body used for sensory observation.
- Ask questions along the way encouraging children to make observations and comparisons to the descriptions made. For example, "The outside of the orange is bumpy, what else feels bumpy?"
- Pause for children to share their own thoughts related to the story. What does this tell you about how they are thinking?

Use the story to support an authentic experience with real foods and other objects:

- Provide real oranges, one for each child. Have children practice looking at, smelling, touching and tasting the orange. Remember to use language from the Early Science Framework and rich vocabulary.
- During mealtimes, outdoors, activity time (really anytime), continue observing and describing. Encourage children to make their own observations before guiding them to specific senses to explore with. Continue to introduce new descriptive words. Model how you observe and describe by thinking aloud.
- Take photos of your sensory experiences and make your own sensory book!

Reference our attributes chart to get you thinking of various attributes that you can observe and some fun descriptive words you can use to describe them!

Attribute		Descriptive Words
With our **eyes** we can observe and describe shape, size, color opacity, luster		Round, square, triangular, rectangular, cylindrical, oblong, irregular, long, short, big, small, tiny, large, bright, faded, clear, opaque, translucent, shiny, dull.
With our **hands** we can observe and describe texture, weight, temperature		Rough, smooth, slimy, silky, fluffy, soft, hard, sticky, Heavy, light, Hot, warm, cool, cold
With our **tongues** we can observe and describe taste, flavor		Sweet, bitter, salty, sour, fruity, fresh, citrusy, spicy, creamy, rich, bland
With our **ears** we can observe and describe Pitch, volume, duration		High, low, Loud, soft, quiet, Short sound, long sound
With our **nose** we can observe and describe Scent, aroma, odor		Stinky, fresh, pleasant, sweet, strong, subtle, fruity, rotten, peppery

Look for other great ESI books to begin learning about:

- Cause & Effect
- Structure & Function
- Stability & Change
- Asking Questions, Making Predictions, & Investigating