

BIO-INDICATORS: TIE-DYED FROGS (6-8)

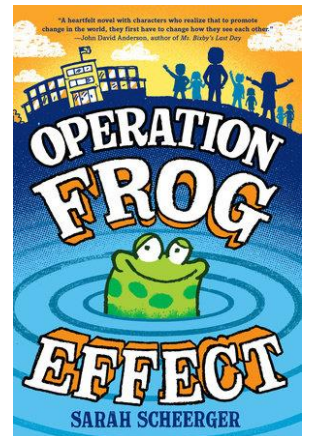
KEY CONCEPTS:

- Frogs are **BIO-INDICATORS** - An organism that is particularly sensitive to ecological changes in an ecosystem. They serve as an indication of the ecosystem's health.
- Reptiles have dry, scaly skin while frogs and other amphibians have wet skin. Amphibian skin is **permeable**, which means it soaks up its surroundings much like a sponge. Because of this, frogs are often the first animals to tell you when something is wrong with their habitat.

For this reason, amphibians, especially frogs, are known as “bio-indicators.” Sick frogs are a signal to scientists that something is wrong with the environment.

LITERACY CONNECTION:

Check out [*Operation Frog Effect*](#) by Sarah Scheerger for an interesting tale told from eight different points of view, including one in graphic novel form.



ACTIVITY: TIE-DYED ORIGAMI FROGS

Materials: water, spray bottle, paper, washable markers, origami frog instructions, paper towel, plate

1. Fold 1 sheet of paper in half and tear or cut it (makes 2 frogs)
2. Follow origami frog instructions (below)
3. Decorate ‘frog’ with stripes, spots – the more colors the better!
4. Place the ‘frog’ on a plate
5. Frogs need to live in water, so spray your ‘frog’ with a mist of water (no need to soak it)
6. Watch the colors run to make a tie-dyed frog
7. Let it dry so it can hop once again!

What is happening? Amphibians are ideal indicator species because they live in two environments – both land and water. They also have thin skin and often breathe through the skin. This thin skin also absorbs toxic chemicals, radiation and diseases.

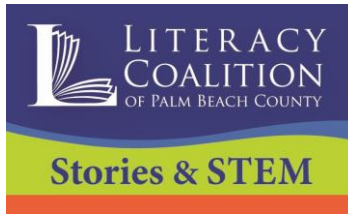
EXPLORE: What other species would make excellent bio-indicators?

For more about frogs, visit The Florida Museum – which has a variety of [frog sounds](#) online.

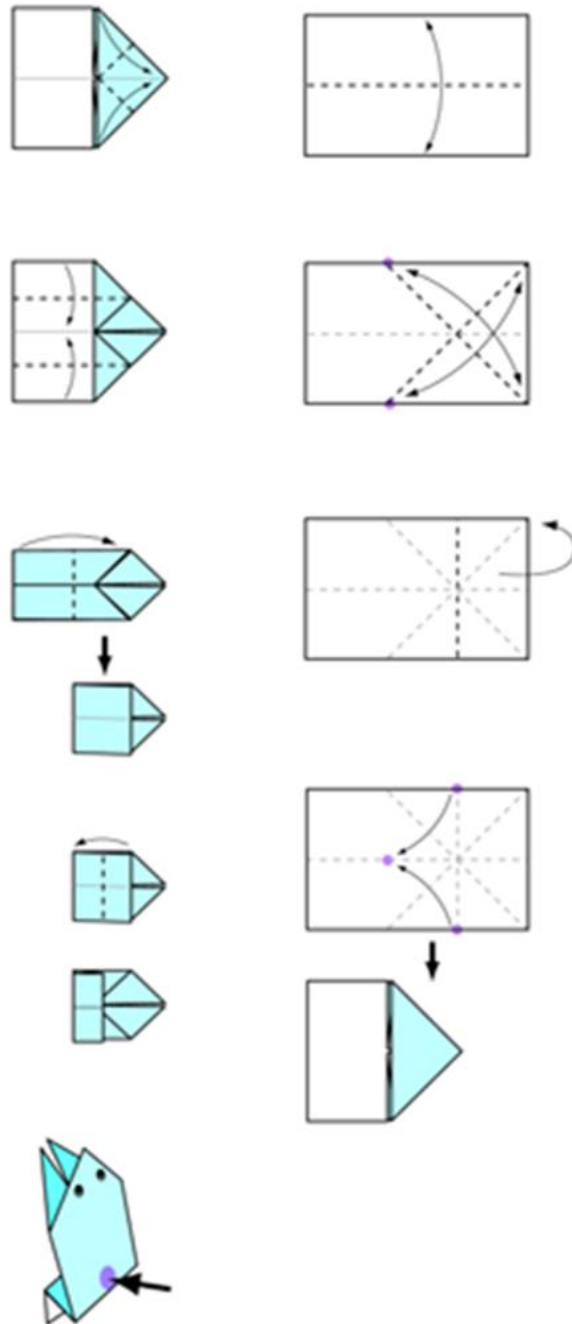
For step-by-step instructions, watch the video: [Origami Frog STEM Activity](#)

This at-home educational activity is from the Literacy Coalition of Palm Beach County's literacy-based Stories & STEM program. Stories & STEM is made possible with support from Prime Time Palm Beach County, Inc., which receives significant funding from the Children's Services Council of Palm Beach County, Inc.

Having fun? Send pictures or video links of you and your Stories & STEM projects to csharkey@literacypbc.org



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EASY HOPPING FROG ORIGAMI

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