Grade 3
Example for Place-Based Learning

GRADE 3
Big Ideas for Science

B BIOLOGY
All life is diverse, can be grouped, and interacts in its ecosystem.

C CHEMISTRY
All matter is made of particles.

P PHYSICS
Thermal Energy can be produced and transferred.

E EARTH SCIENCES
Wind, water, and ice change the shape of the land.

HCTF Education

PLACE: local water body, or school or community garden or forest

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1 Experience Place

TONE: open-minded, unburdened, curious, playful

Visit, Plant, Care, Measure, Eat, Put the garden to bed:

Avoid revealing information about the concepts they will learn at the garden, provide students with an opportunity to think and share their ideas about what they think they will see and how they plan to be a good visitor. Review any other skills or tools (not content) they might need for their experience. Then have students:

- Roam around the garden to experience it in many different ways, from many different angles to look, smell, touch, taste and listen.
- Sit in the garden to sketch observations, draw pictures or write a poem.
- Watch others prepare soil, water and seeds/cuttings for planting.
- Ask, people who work in/visit the garden, questions.
- Plant a seed and a cutting.
- Care for the garden.
- Harvest something from the garden.

2 Questioning and Predicting

TONE: more focused, curious, reflective

B What's making the smells here? What's making those sounds? How does a flower change into fruit? Why are there so many more insects and birds here than at school?

Why do some plants have spots on their leaves? Why are old newspapers scattered in the garden? Where does the water come from and where does it go? Why are all the leaves and flowers turned in the same direction? Why are some of the same plants smaller than others? Are some soils better that others for growing plants?

C What makes the plants grow? How do they get bigger? Do they stretch? How? What are plants made out of? What's in the soil?

P What's making the soil hot? How does the sun help the garden? Why is the water from this hose hot at first and cooler the more it runs?

E Where does soil come from? What happens to soil when it rains?
When it's windy? What happens to the soil when there's too much/too little water?

3 Planning and Conducting

TONE: creative, restrained, calculating, collaborative

B Compare changes in the garden over time.
C Compare soil and plant material inside the garden with a variety of other areas outside the garden.
P Compare soil and plant material inside the garden with a variety of other areas outside the garden.
E Compare water runoff rates with different soil conditions.

4 Processing and analyzing data and information

TONE: observant, methodical

B Share a story about how the plants, animals and insects live together.
C Have students collect soil samples from inside and outside the garden, and compare the composition of these in a chart to document what it looks like, feels like and smells like.
P Share a poem about how the garden uses the sun.
E Give a guest a tour. Show them how wind and water move soil.

5 Evaluating

TONE: discerning, reflective, interdependent, collaborative

B Reflect on different rates of change among similar species and the various conditions that affect growth rates.
C Reflect on how the composition of soil determines conditions suitable and unsuitable for plants to grow.
P Reflect on what sunlight conditions determine temperature of different materials in the garden.
E Reflect on the relationships between water flow rates, slope and soil composition that allow water to permeate while others cause a range of runoff rates.

6 Applying and Innovating

TONE: reative, open-minded, interconnected, engaging

- Have students create a message for the garden that captures what they've learned and how they've been inspired.
- Have students create a picture dictionary about the garden.
- Have students design a composter, or improve an existing one, at the garden.

7 Communicating

TONE: confident, engaging, interpretive, expressive, sensory, using technology

- Have students create a picture dictionary about the garden.