

FOSS Next Generation - Outdoor Focus Questions

KINDERGARTEN

Animals 2 by 2		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.5	Comparing Schoolyard Birds	What birds visit our schoolyard?
Inv. 2.3	Land Snails	What do land snails do?
Inv. 4.3	Isopod Movement	How do isopods move?

Trees and Weather		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.1	Observing Schoolyard Trees	What did we learn about our schoolyard trees?
Inv. 1.5	Adopt Schoolyard Trees	What can we find out about our adopted trees?
Inv. 1.6	A Tree Comes to Class	What do trees need to grow?
Inv. 2.1	Leaf Walk	What can we observe about leaves?
Inv. 2.3	Comparing Leaves	How are leaves different?
Inv. 3.1	Weather Calendar	What is the weather today?
Inv. 3.2	Recording Temperature	How can we measure the air temperature?
Inv. 3.3	Wind Direction	What does a wind sock tell us about the wind?
Inv. 4.1	Fall: What Comes from Trees	What do fall trees look like?
Inv. 4.2	Fall: Food from Trees	What do fall trees look like?
Inv. 4.3	Fall: Visiting Adopted Trees	What do fall trees look like?
Inv. 4.4	Winter: Evergreen Hunt	What do winter trees look like?
Inv. 4.6	Winter: Visiting Adopted Trees	What do winter trees look like?
Inv. 4.8	Spring: Bark Hunt	What do spring trees look like?
Inv. 4.9	Spring: Visiting Adopted Trees	What do spring trees look like?

Materials and Motion		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.1	Observing Wood	Where does wood come from? What is made of wood?
Inv. 1.4	Sanding Wood	How can you change the shape of wood?
Inv. 2.3	Paper and Water	What happens when water gets on paper?
Inv. 3.6	Building Structures	What happens to water in sunshine and shade? How can we design a structure to keep water cool in sunshine?
Inv. 4.3	Rolling Outdoors	Where can balls roll on the schoolyard?

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1st GRADE

Plants and Animals		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.4	Variation in Plants and Animals	How many different kinds of plants live in an area of the schoolyard?
Inv. 3.2	Animals in the Terrariums	What do animals need to live in a terrarium?
Inv. 3.4	Squirrel Behavior	How do the behaviors of squirrels help them survive the winter?
Inv. 4.3	Plant and Animal Growth	How do the plants in the schoolyard compare to the plants studied in class? What do animal parents do to help their young survive?

Sound and Light		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.3	Outdoor Sounds	What information does sound give us?
Inv. 3.2	Sun and Shadows	How can we use the Sun to create shadows?
Inv. 4.1	Mirrors and Light Beams	How can we redirect a light beam?

Air and Weather		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.2	Parachutes	How does a parachute interact with air?
Inv. 2.1	Weather Calendars	What is the weather today?
Inv. 2.2	Measuring Temperature and Daylight	What time of day is the air the warmest?
Inv. 2.3	Watching Clouds	What types of clouds are in the sky today?
Inv. 2.4	Observing the Moon	What time of day can we observe the moon?
Inv. 3.1	Bubbles in the Wind	How can bubbles be used to observe the wind?
Inv. 3.2	Wind Speed	How strong is the wind today?
Inv. 3.3	Pinwheels	How can pinwheels be used to observe the wind?
Inv. 3.4	Wind Vanes	What does a wind vane tell us about the wind?
Inv. 3.5	Kites	What weather conditions are good for kite flying?

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2nd GRADE

Insects and Plants		
Inv./Part	Part Title	Outdoor focus question
Inv. 2.4	Planting Outdoors	Where is a good outdoor place for growing young plants?
Inv. 3.4	Insect Search	Where do insects live?
Inv. 4.4	Plant Eaters	What evidence is there that insects are eating plants in the schoolyard?
Inv. 5.5	Flower Powder	What plants in our schoolyard have pollen?

Pebbles, Sand, and Silt		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.4	Start a Rock Collection	What are the properties of schoolyard rocks?
Inv. 3.1	Rocks in Use	How do people use earth materials?
Inv. 3.5	Making Bricks	How are bricks made?
Inv. 4.2	Local Soil	How do soils differ?
Inv. 4.4	Land and Water	How can soil erosion be reduced?

Solids and Liquids		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.5	Outdoor Solids	Are there solid objects outdoors?
Inv. 2.4	Puddles	Where are liquids outdoors?
Inv. 3.5	Spills	Are there little pieces of solid material outdoors?
Inv. 4.5	Tea Time	What happens when you mix water with solid plant material collected outdoors?

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3rd GRADE

Structures of Life		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.4	Seed Dispersal	How do seeds disperse away from the parent plant?
Inv. 2.3	Roots and Shoots	How do the roots of the schoolyard plants compare to the roots of bean plants?
Inv. 3.4	Compare Crayfish to Other Animals	How are the structures of crayfish and other animals alike and different?
Inv. 3.5	Food Chains	What is needed to sustain a food chain?
Inv. 4.1	Counting Bones	What are the functions of the skeletal system?

Water and Climate		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.4	Water in Nature	What is the effect of rain on natural materials?
Inv. 2.5	Ice Outdoors	Where should an animal go to stay warm or to stay cool?
Inv. 3.1	Measuring Weather	What does the weather forecast tell us?
Inv. 5.2	Water in Soil	Do soils in the schoolyard drain water at the same rate?

Motion and Matter		
Inv./Part	Part Title	Outdoor focus question
Inv. 2.3	Twirly Birds	Student-created question – for example, what happens to the motion of a twirly bird when the design is changed?
Inv. 4.3	Metric Field Day	What is the importance of accurate measurements for a metric field day?

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4th GRADE

Environments		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.3	Leaf-Litter Critters	What are the characteristics of animals living in the leaf-litter environment?
Inv. 2.3	Population Simulation	How does food affect a population in its home range?
Inv. 2.4	Sound Off	How do animals use their sense of hearing?
Inv. 3.4	Variation in a Population	What are some benefits of having variation within a population?
Inv. 4.2	Plant Patterns	How does mapping the plants in the schoolyard help us to investigate environmental factors?

Soils, Rocks, and Landforms		
Inv./Part	Investigation	Outdoor focus question
Inv. 1.1	Soil Composition	What is soil?
Inv. 1.4	Schoolyard Soils	What's in our schoolyard soils?
Inv. 2.3	Schoolyard Erosion and Deposition	Where are erosion and deposition happening in our schoolyard?
Inv. 4.2	Making Concrete	How are natural resources used to make concrete?
Inv. 4.3	Earth Materials in Use	How do people use natural resources to make or build things?

Energy		
Inv./Part	Part Title	Outdoor focus question
Inv. 5.2	Light Travels	How does light travel?
Inv. 5.3	Engineering with Solar Cells	How can you make a motor run faster using solar cells?

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5th GRADE

Living Systems		
Inv./Part	Part Title	Outdoor focus question
Inv. 3.1	Plant Vascular Systems	How are nutrients transported to cells in plants?
Inv. 4.2	Attention	What features of organisms attract attention?

Earth and Sun		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.1	Shadow Shifting	How and why does your shadow change during the day?
Inv. 1.2	Sun Tracking	What can be learned by studying the length and direction of shadows?
Inv. 2.1	Night-Sky Observations	How can you explain why we see some natural objects only in the night sky, some only in the day sky, and some at both times?
Inv. 3.3	Local Weather	How do meteorologists measure and record weather variables?
Inv. 4.1	Heating Earth Materials	What happens to earth materials when they are exposed to sunlight?
Inv. 4.4	Color and Energy Transfer	What is the best design for a solar water heater?

Mixtures and Solutions		
Inv./Part	Part Title	Outdoor focus question
Inv. 1.4	Outdoor Solutions	Are there materials outdoors that will dissolve in water?