

Bill Nye the Science Guy

Forests



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Implementation Guide

Welcome to Disney's Bill Nye DVD collection!
With the help of this Guide you can bring instructional DVDs into your science curriculum.



What's on the DVD?

Bill Nye DVDs expand the educational features of *Bill Nye the Science Guy* programs. Each DVD provides students with science content through video clips aligned with *National Science Education Standards (NSES)* and a host of other resources.

Short video clips aligned with the NSES provide a unique opportunity for you to enhance your lessons using DVD technology. Now you can show a video clip, or even short segments of a clip, on command. But there are a host of other features, too! See the chart below for a summary.

From the **Main** menu, there are three chief sections:

Feature	Description
Watch Program Menu	From this menu, you can play the program straight through or use the clips to customize your viewing.
Teacher Support	From this menu, you can access this Teacher's Guide, the Glossary, Internet Links, and the Quiz.
Bonus Materials	Use this menu to try a different discussion starter, download a special screen-saver, or check out never-before-seen footage.

From the **Watch Program** menu, you can:

Feature	Description
Play Program	Play the entire program from start to finish.
Bilingual Mode	View the entire program or clips in English or Spanish.
Glossary Mode	Make links to Glossary terms appear during the program.
Program Overview	View the program introduction, in which Bill discusses the topic covered.
Try This	Show students demonstrating science concepts.
Way Cool Scientist	Meet a real scientist who talks about his or her area of study.
Bill's Demonstration	Look at a science demonstration conducted by Bill Nye.
Music Video	Enjoy a short music video that summarizes the topic in an age-appropriate and entertaining manner.
Science Standards	Take advantage of short video clips from the program, which are aligned with National Science Education Standards.

From the **Teacher Support** menu, you can:

Feature	Description
Science Quiz	Give students a quiz to take independently or as a class. Seven to ten quiz items are aligned with the National Science Education Standards. The items are in multiple-choice or true-false format. Each wrong answer links to a standards-aligned video clip. At the end of the quiz, a scoring function reveals the number of correct initial answers.
Glossary	Check out definitions of key terms and view video clips that reinforce the concepts.
DVD Features	View a quick overview of the features found on the DVD.
Teacher's Guide	Print out or view this comprehensive Teacher's Guide in PDF format.
Internet Link	Link to the Bill Nye area of Disney's Edustation Web site, where you can find links to Internet sites related to the content of each Bill Nye program.

From the **Bonus Materials** menu, you can:

Feature	Description
Bonus Material	Find out what <i>wasn't</i> in the episode! In most cases, there's more of the Way Cool Scientist interview, Bill Nye outtakes, and an extra discussion starter.
Additional Clips	See trailers of related DVDs and videos.
Screen-Saver	Download this cool screen-saver for your computer.

The Planning Process

This Guide provides a Lesson Planning Worksheet (see page 12), which can assist you in setting up your instruction around a topic. The following sections of this Implementation Guide are offered to assist your planning process:

- **Determining Objectives and Linking to Standards**
- **The Learning Cycle**
 - Explore
 - Apply
 - Extend
 - Assess



Determining Objectives and Linking to Standards



1. The NSES Teaching Standard A states that science teachers must “select science content and adapt and design curricula to meet the interest, knowledge, understanding, abilities, and experience of students.”

The NSES recommends that teachers “integrate . . . a practical structure for the sequence of activities, and the content to be learned.” The primary instructional model recommended by the NSES is inquiry into authentic student-generated questions about natural or designed phenomena. Since most state and local standards documents were derived from the NSES, you will find that your local and state standards match closely with content standards in the Bill Nye DVD.

Each DVD contains a menu of clips that are aligned with the NSES. You can review the standards and their aligned clips in the Science Standards menu under Watch Program. Also, the Standards listed on page 10 of this Guide allow you to look at additional NSES content standards that are addressed on the video. Here’s an example of the content standards and clips aligned with the Bill Nye DVD entitled *Blood and Circulation*:

Life Science Standards (NSES) Addressed in *Blood and Circulation*

Life Science:

Structure and function in living systems

- Living systems at all levels of organization demonstrate the complementary nature of structure and function.

Aligned clips:

- 1 Blood vessels
 - 2 Heart pump and bloodstream
 - 3 Heart valves and blood circulation
 - 4 White blood cells
 - 5 Capillaries
- The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control, and coordination, and for protection.

Aligned clips:

- 6 Heart pump
- 7 Heart muscle
- 8 Pumping blood to brain



- Determine your objectives for the lesson and how these objectives address the standards.

Sample Objectives for *Blood and Circulation*

In this activity students will:

- Observe and describe a body system responsible for supply and transport.
- Use this information to define a body system.
- Ask questions about the circulatory system.
- Explain how structure complements function in organs of the circulatory system.
- Cite examples of current research related to this system.

- Design a learning cycle of instructional experiences and assessments for the students to engage in that will help students meet these standards. Students may be given teacher-planned investigations or may be guided to design their own investigations.

The Learning Cycle



The learning cycle is a sequence of activities that involve students in the learning process. The sequence found here is based on research from Lawson, Abraham, and Renner published in 1989. That has been adapted to include: Explore, Apply, Extend and Assess:

Explore: Involves assessing students' prior knowledge and providing opportunities for students to interact with content from the video.

Apply: Includes having students use the content learned during the Explore section in a new way that is meaningful to future learning.

Extend: Allows students to conduct further research around an area of interest within the topic.

Assess: Provides strategies meant to inform students and teachers about the content and processes that have been learned.

Explore

The NSES Teaching Standard B states: "Teachers of science guide and facilitate learning." This standard addresses the constant need to balance your predetermined goals with allowing students to set and meet their own learning goals.



Focus and Support Inquiries: Support student inquiries by making decisions about "when to provide information" and "when to connect students with other sources." Knowing the best time to intervene is often determined by allowing students to ask questions and to explore concepts openly.



The NSES Teaching Standard C states: “Teachers of science engage in ongoing assessment of their teaching and of student learning.”

Assess in Order to Guide Teaching: The Program Overview or the Discussion Starter on the DVD can be used to gauge students’ prior knowledge. You can use student responses to make decisions about appropriate instruction and adaptations in order to meet the needs of individual students. Assessment can be in the form of student reflections from standards-aligned video clips or answers to questions found on the science quiz. Or, as in the following example, a simple graphic organizer can facilitate a formative assessment.

Example: T-Chart from *Blood and Circulation*

1. Ask students to fill out the “Know-New” T-Chart (see page 14). Have them list what they already know about the circulatory system (heart, blood vessels, blood, etc.) on the left side of their charts.
2. Show the Program Overview for *Blood and Circulation*. On the right side of the chart, have students list new things they have learned from watching the clip. Walk around the room and assist students in filling in their T-Charts. Replay the program as necessary to allow students to review sections of interest.
3. Once students have completed their charts, ask them to share what they have listed in the “New” column. Write these on the board. Have students write their own working definitions of the circulatory system. Once students have completed their definitions, collect and review their work to assess prior knowledge.

Conduct direct vocabulary instruction in the Explore phase. Research suggests that:

- Students must encounter words in context more than once to learn them.
- Instruction in new words enhances learning those words in context.
- One of the best ways to learn a new word is to associate an image with it.
- Direct vocabulary instruction on words that are critical to new content produces the most powerful learning.



Use the DVD Glossary with the linked video clips to expose students to new vocabulary words in context, along with associated video images. You can also find a printed version of the glossary terms in this Guide on page 16.

Example: Using the Glossary for Direct Vocabulary Instruction ***Blood and Circulation***

1. Present students with a brief explanation or description of the new term or phrase from the glossary. For example: “Capillary: A small blood vessel that connects arteries and veins.”
2. Present students with a nonlinguistic representation of the new term or phrase. Show the video clip associated with the term “capillary.”
3. Ask students to generate their own verbal description of “capillary.”
4. Ask students to create their own nonlinguistic representation of “capillary.”
5. Periodically ask students to review the accuracy of their explanations and representations. This can be done after the Apply activities.

Apply

Based on the information you gained from the Explore assessments, design appropriate activities for your students. Check the experiments listed in the Episode Guide (see page 11) for explanations of the demonstrations from the Bill Nye program as well as for additional experiments designed to help apply the knowledge gained.

In the following example from *Blood and Circulation*, the standards-based video clips provide background information, and an experiment from the Guide helps students apply what they have learned about arteries and veins.

Example: The Structure and Function of Arteries and Veins

1. Have students begin “Know-New” T-Charts, focusing on what they already know about the structure and function of blood vessels, arteries, and veins.
2. Watch the following chapters from the Bill Nye DVD *Blood and Circulation*:
 - Blood vessels
 - Heart pump and bloodstream
 - Capillaries
3. Complete the “Know-New” T-Charts.
4. Give students copies of the Student Recording Sheet (see page 15) and have them fill the sheets out as they conduct their experiments.
5. Do the experiment entitled “Pump it Up!” from the *Blood and Circulation* Episode Guide, in which students observe the apparent effects of pressure on arteries and veins.
6. Write down any remaining questions about the structure and function of blood vessels, arteries, and veins.



Extend

The NSES Teaching Standard D states: “Teachers of science design and manage learning environments that provide students with the time, space, and resources needed for learning science.” School administrators, parents, and the community can assist teachers in providing local resources that make science lessons pertinent and meaningful.

Identify and Use Resources Outside of the School: “The school science program must extend beyond the walls of the school.” Each Bill Nye DVD contains resources designed to facilitate such understanding, including:

- Way Cool Scientist, found in both Watch Program and Bonus Materials, in which scientists discuss their current areas of study. This real-world connection often results in a deeper student understanding of a particular career.
- Disney’s Edustation Web site, where relevant Internet links provide a starting point for students to further explore science topics.
- Try these video clips, with activities parents and students can do at home. The questions generated by students from these experiences can be used as foundations from which they may conduct their own research.
- Standards-aligned video clips and Bill’s demonstration video clips, which can help generate topics for further research. After viewing the clips, have students list their questions, perhaps about the most current developments in a topic. By conducting online or library research, students will find answers to their questions and will learn about a topic in greater depth.



Example: Conducting Student Research Using *Blood and Circulation*

Ask students to choose one of the questions they had after completing the activities from *Blood and Circulation*. An example of a student research question might be, “How has the technology related to artificial hearts advanced in the last ten years?” Explain to students that they will be conducting research to find answers to their questions. Some students may want to complete online or library research, others may want to ask an expert in the field, while others may want to design and conduct a scientific investigation. Encourage students to write a detailed procedure for finding answers to their questions. Ask students to find one or more examples of current research dealing with the circulatory system that is related to their question. NOTE: Students with similar questions may work together to complete the assignment.



Assess

Once students have conducted the research, you may choose to assess them in a number of different ways:

- By having students write about what they learned in a journal.
- By having students submit projects or reports.
- By having students take the program quiz to gauge their understanding of certain facts in the video. You can either print the quiz (found in this Guide on page 18) and have each student complete it individually or use the DVD screen version and the scoring feature for whole-class assessment.
- By designing other standards-aligned questions to augment those that are provided.

While the quiz will provide you with information about what the students have learned, it does not assess how students have processed the information. Below you will find assessment ideas that can be used to measure both content and process.

A Sample Assessment for *Blood and Circulation*

1. Explain to students that an important aspect of scientific inquiry is to communicate findings to others. In this assessment, students will present the following information to their peers:
 - The question they investigated.
 - The method that was used to find answers to their question.
 - Problems or successes during the search.
 - Answers to their question.
 - Current research related to their question.
 - New questions that have arisen.
2. Distribute the rubric found in the Lesson Planning Worksheet (see page 13) to students so they know how they will be assessed. Make sure students understand the criteria found in the rubric. Before you begin, you may want to allow students to make changes to the rubric so that it is clearer or makes more sense from their perspectives.
3. Allow students time to gather information to answer their questions and to prepare for their presentations. As students conduct this work, walk around the room and ask questions to assess their progress and provide input as needed.
4. Take a few minutes to clarify the rules of the presentation with the students. You may want to have multiple copies of the rubric available so that peers can rate the presentations.
5. As presentations are made, assess the quality of the student's work as thoroughly and as equitably as you possibly can.



Congratulations! You have now completed the steps to set up a lesson plan using the Lesson Planning Worksheet. You have also explored many of the features of the Bill Nye DVD as well as the supplemental information found in this Teacher's Guide. And most important, you've made significant strides toward incorporating DVD technology into your day-to-day instruction.

National Science Education Standards

Forests



Standards/Benchmarks

Grades K-4

Science as Inquiry

Abilities necessary to do scientific inquiry

- Plan and conduct a simple investigation.
- Employ simple equipment and tools to gather data and extend the senses.



Understandings about scientific inquiry

- Scientific investigations involve asking and answering a question and comparing the answer with what scientists already know about the world.
 - Scientists use different kinds of investigations depending on the questions they are trying to answer. Types of investigations include describing objects, events, and organisms; classifying them; and doing a fair test (experimenting).
 - Simple instruments, such as magnifiers, thermometers, and rulers, provide more information than scientists obtain using only their senses.
-

Life Science

The characteristics of organisms

- Organisms have basic needs. For example, animals need air, water, and food; plants require air, water, nutrients, and light. Organisms can survive only in environments in which their needs can be met. The world has many different environments, and distinct environments support the life of different types of organisms.

Organisms and their environments

- All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.
 - Humans depend on their natural and constructed environments. Humans change environments in ways that can be either beneficial or detrimental for themselves and other organisms.
-

Earth and Space Science

Properties of earth materials

- Soils have properties of color and texture, capacity to retain water, and ability to support the growth of many kinds of plants, including those in our food supply.
-

Science in Personal and Social Perspectives

Types of resources

- Resources are things that we get from the living and nonliving environment to meet the needs and wants of a population.

- Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials; and some resources are nonmaterial, such as quiet places, beauty, security, and safety.

Changes in environments

- Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.
- Changes in environments can be natural or influenced by humans. Some changes are good, some are bad, and some are neither good nor bad. Pollution is a change in the environment that can influence the health, survival, or activities of organisms, including humans.
- Some environmental changes occur slowly, and others occur rapidly. Students should understand the different consequences of changing environments in small increments over long periods as compared with changing environments in large increments over short periods.

History and Nature of Science

Science as a human endeavor

- Many people choose science as a career and devote their entire lives to studying it. Many people derive great pleasure from doing science.

Grades 5-8

Science as Inquiry

Abilities necessary to do scientific inquiry

- Identify questions that can be answered through scientific investigations.
- Design and conduct a scientific investigation.
- Use appropriate tools and techniques to gather, analyze, and interpret data.



Understandings about scientific inquiry

- Different kinds of questions suggest different kinds of scientific investigations. Some investigations involve observing and describing objects, organisms, or events; some involve collecting specimens; some involve experiments; some involve seeking more information; some involve discovery of new objects and phenomena; and some involve making models.
- Current scientific knowledge and understanding guide scientific investigations. Different scientific domains employ different methods, core theories, and standards to advance scientific knowledge and understanding.
- Technology used to gather data enhances accuracy and allows scientists to analyze and quantify results of investigations.

Life Science

Structure and function in living systems

- Living systems at all levels of organization demonstrate the complementary nature of structure and function. Important levels of organization for structure and function include cells, organs, tissues, organ systems, whole organisms, and ecosystems.

Populations and ecosystems

- A population consists of all individuals of a species that occur together at a given place and time. All populations living together and the physical factors with which they interact compose an ecosystem.

- Populations of organisms can be categorized by the function they serve in an ecosystem. Plants and some micro-organisms are producers—they make their own food. All animals, including humans, are consumers, which obtain food by eating other organisms. Decomposers, primarily bacteria and fungi, are consumers that use waste materials and dead organisms for food. Food webs identify the relationships among producers, consumers, and decomposers in an ecosystem.
- For ecosystems, the major source of energy is sunlight. Energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis. That energy then passes from organism to organism in food webs.
- The number of organisms an ecosystem can support depends on the resources available and abiotic factors, such as quantity of light and water, range of temperatures, and soil composition. Given adequate biotic and abiotic resources and no disease or predators, populations (including humans) increase at rapid rates. Lack of resources and other factors, such as predation and climate, limit the growth of populations in specific niches in the ecosystem.

Diversity and adaptations of organisms

- Biological evolution accounts for the diversity of species developed through gradual processes over many generations. Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations. Biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.

Earth and Space Science



Structure of the earth system

- The atmosphere is a mixture of nitrogen, oxygen, and trace gases that include water vapor. The atmosphere has different properties at different elevations.
- Soil consists of weathered rocks and decomposed organic material from dead plants, animals, and bacteria. Soils are often found in layers, with each having a different chemical composition and texture.

Science in Personal and Social Perspectives



Natural hazards

- Human activities also can induce hazards through resource acquisition, urban growth, land-use decisions, and waste disposal. Such activities can accelerate many natural changes.

Risks and benefits

- Students should understand the risks associated with natural hazards (fires, floods, tornadoes, hurricanes, earthquakes, and volcanic eruptions), with chemical hazards (pollutants in air, water, soil, and food), with biological hazards (pollen, viruses, bacterial, and parasites), social hazards (occupational safety and transportation), and with personal hazards (smoking, dieting, and drinking).

History and Nature of Science

Science as a human endeavor

- Women and men of various social and ethnic backgrounds—and with diverse interests, talents, qualities, and motivations—engage in the activities of science, engineering, and related fields such as the health professions. Some scientists work in teams, and some work alone, but all communicate extensively with others.
- Science requires different abilities, depending on such factors as the field of study and type of inquiry. Science is very much a human endeavor, and the work of science relies on basic human qualities, such as reasoning, insight, energy, skill, and creativity—as well as on scientific habits of mind, such as intellectual honesty, tolerance of ambiguity, skepticism, and openness to new ideas.

Episode Guide

Forests



Nifty Questions in This Episode



What are the largest living things on Earth?

What are the parts of a forest?

What are decomposers?

Awesome Answers

Trees are the largest living things on Earth.

The parts of a forest are its subfloor (tree roots), floor (ground plants and animals), understory (from the middle to the top of the trees), and canopy (sun).

Decomposers are insects, fungi, and bacteria that turn dead material into soil used by trees to grow.

Experiments shown on the video:

CHEWY CELERY

Objective: To simulate the diverse forest environment.

- Put a drop of food coloring in each of four glasses.
- Put a stalk of celery in each glass.
- Place the glasses in four areas: sunlight, in front of blowing fan, in a plastic bag, and in a classroom at room temperature.
- Observe how the change in the celery is effected by various environments.

More interesting stuff to do:

CONCENTRATE ON CARROTS

Objective: To show how water is absorbed by tree roots and plants on the forest subfloor.

- Use a corkscrew to hollow out the top quarter of a large, fat carrot.
- Insert a one-hole rubber stopper into carrot hollow.
- Remove the rubber stopper and fill the carrot hollow with corn syrup.
- Insert a glass tube into rubber stopper.
- Replace the stopper in the carrot hollow.
- To insure a tight fit, seal the edge with candle wax.
- Place the carrot in a 600-milliliter beaker of water. Use toothpicks to hold it upright.
- After waiting 24 hours, measure the amount of corn syrup in the glass tube.
- Water in high concentration (in the beaker) will move toward water in low concentration (in the carrot), forcing the corn syrup up the glass tube.

FOR THE BEANS

Objective: To simulate growth in three environments in a forest.

- Soak sixty beans overnight in water.
- Place ten wet seeds on each of three wet paper towels.
- Dry thirty seeds and place ten dry seeds on each of three dry paper towels.
- Carefully slide each paper towel into a plastic bag.
- Seal and label all six bags.
- Place one dry and one wet bag in the following classroom locations: under a light or sunlight, in a cold refrigerator, and in a dark drawer.
- Wait 48 hours, then count the seeds that have germinated (roots appear from seeds).
- Record your observations on a chart.



Bill Nye the Science Guy
Lesson Planning Worksheet

Lesson Title _____

Objectives _____

Estimated Time Required _____

Materials Needed _____

National Science Educational Standards

Explore _____

Apply _____

Extend _____

Assess

As presentations are made, assess the quality of the student's work as thoroughly and as equitably as you possibly can. The following criteria can be used to assist in your assessment.

Name of Student _____

Question Investigated _____

Initial Question			
1 Question is broad and not well defined	2 Question is defined but limited to single-answer responses.	3 Question is clear and might elicit multiple responses that may lead to new ideas and additional questions.	4 Question is engaging and provokes new ways of thinking about an issue.
Methods for Finding Answers			
1 Students do not share planned or actual methods.	2 Students share methods but they are unclear or vague.	3 Students share methods but not the problems or successes of using the methods.	4 Students share methods and problems or successes in using the methods.
Results			
1 Student results are undefined.	2 Student results are incomplete and do not adequately answer the question.	3 Student results are complete, adequately answer the question, and include current research related to the question.	4 Student results are complete, include current research, and have resulted in one or more additional questions.
Communication			
1 Student is not prepared to speak.	2 Presenter has distracting mannerisms and avoids eye contact with the audience.	3 Presentation is clean and clear with some eye contact and very few distractions.	4 Presentation is exceptional and unique. Presenter uses regular eye contact and avoids distractions.

Bill Nye the Science Guy
Student “Know / New” Chart

Know

Write down what you know about the topic of the video.

New

Write down information from the video that is new to you.

Bill Nye the Science Guy
Student Recording Sheet

Name

Date

Title of Experiment _____

Question: (What are you testing?) _____

Procedure: (Describe the experiment) _____

Materials: (List what you used) _____

Observations: (Record what happened) _____

Results: (Make your own data table)

--

Conclusions: (Use your observations and results to describe what you learned)

Glossary

Forests

Fold and cut to use as flashcards.

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SUBFLOOR

Subfloor

In a forest, the subfloor is the area underground. Tree roots inhabit the subfloor to obtain water and nutrients.

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FLOOR

Floor

The shaded ground level of a forest that is home to countless plants and animals. When these plants or animals die and decompose, the process of decay adds essential life-building nutrients to the soil.

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UNDERSTORY

Understory

The layer of vegetation, consisting of small trees, shrubs and plants, that inhabits the area between the tree tops of the canopy and the ground level of the forest floor.

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CANOPY

Canopy

The uppermost level of the forest formed by leafy tree tops. While the canopy shades the lower levels of the forest, its foliage acquires the sun's energy to support forest life.

Fold and cut to use as flashcards.

Bill Nye the Science Guy

HUMUS

Humus

Humus consists of decomposed or decaying leaves and is the nutrient-rich part of the soil located in the forest floor.

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DECIDUOUS

Deciduous

Deciduous trees shed their leaves seasonally as the weather cools during the autumn months.

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FOG FOREST

Fog forest

A dense, rich forest located on a mountain, usually in moist tropical environments. Because of the higher elevation, the forest is able to receive plenty of moisture from low-lying clouds and fog.

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TIMBERLINE

Timberline

This is the upper limit of tree growth in mountainous regions. Because of high altitude factors such as colder temperatures, lack of water, and rocky soil, trees cannot grow above this point. Also called treeline.

Name _____

Date _____

Quiz

Forests



True or False? Circle T or F

1. Cyprus trees are adapted to live in aquatic environments. T or F
2. Among the tallest trees in the world are the conifer trees that live near the tops of mountains. T or F
3. Trees use waste materials and dead organisms for food. T or F
4. For the forest ecosystem, the major source of energy is water. T or F
5. Forests contain large numbers of organisms because there is an abundance of food. T or F

Multiple Choice: Circle the letter of the best answer

6. Which of the following is(are) true about forest fires?
 - A. Fires are part of the process of the forest ecosystem.
 - B. Fires provide a way for forests to renew themselves
 - C. Fires can be caused by lightening
 - D. All of the above
7. Which of the following are decomposers?
 - A. Trees and bushes
 - B. Bacteria and fungi
 - C. Ferns and mosses
 - D. None of the above
8. Which of the following is (are) true about the air above the timberline?
 - A. It is thinner than where trees live.
 - B. It is warmer than where trees live.
 - C. The air has more moisture than where trees live.
 - D. All of the above
9. Which of the following layers of the forest contain organisms that make up the forest ecosystem?
 - A. Canopy, floor, timberline, understory
 - B. Subfloor, humus, canopy, emergent zone
 - C. Subfloor, floor, understory, canopy
 - D. Riparian zone, overstory, floor, basement
10. Which of the following make(s) up the layers of dirt on the forest floor?
 - A. Leaf litter
 - B. Moldy leaves
 - C. Humus
 - D. All of these



Answer Key

Forests

1. **T**

4. **F**

7. **B**

9. **C**

2. **F**

5. **T**

8. **A**

10. **D**

3. **F**

6. **D**



FOG FOREST



SCIENCE

