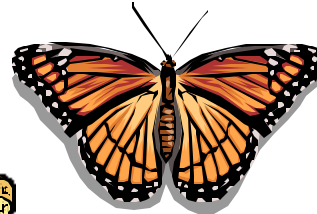
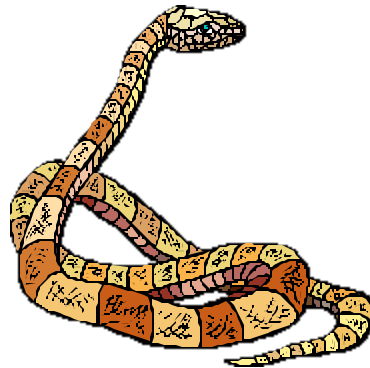
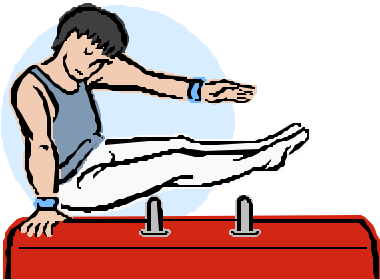
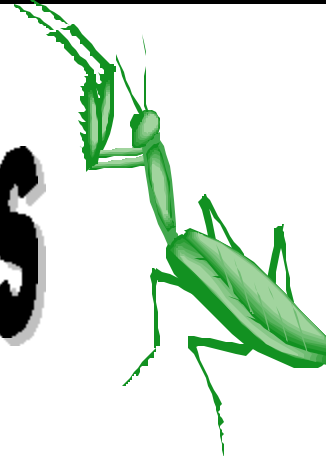


Discovery Minutes



Teacher Guide



South Carolina Department of Education
Instructional Television
Post Office Box 11000
Columbia, SC 29211



South Carolina ETV
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Discovery Minutes

Teacher Guide

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Discovery Minutes **Credits**

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Suggestions for Use: *Since these short segments are all approximately one minute in duration, they are excellent to include in your school news programs. Teachers may also use them as lesson “triggers” to stimulate discussion and to supplement curriculum objectives.*

Discovery Minutes Programs

1. Mt. Vernon: Intro
2. Mt. Vernon: Archeology and Slaves
3. Space Camp: Intro
4. Space Camp: Multi Axis Trainer
5. Medieval Times: Intro
6. Medieval Times: Chivalry
7. Medieval Times: Squires
8. Centripetal Force and Inertia
9. Gravity
10. Monticello: Thomas Jefferson
11. Monticello: Jefferson's Life
12. Monticello: 7 Day Clock
13. Fort Discovery: Floating Stone
14. Fort Discovery: Parabolic Golf and High Wire Bike
15. Fort Discovery: Tesla Coil
16. Backyard Monsters: Bug Vision
17. Backyard Monsters: Praying Mantis
18. Walnut Grove: School In The 1770's
19. DNR Research Vessel: Artificial Reefs
20. DNR Research Vessel: Fish Research
21. DNR Research Vessel: Otolith: A Fish's Age
22. DNR Research Vessel: Fish Tagging
23. Snakes
24. Snakes: A Snake's Tongue
25. Olympics: Men's Gymnastics
26. Olympics: Training and Commitment
27. Around Alone: Intro
28. Around Alone: Setting Sail
29. Around Alone: Sails
30. Butterflies: Butterfly Camouflage

Discovery Minutes

Discovery Minutes is comprised of thirty, one-minute segments. This series focuses on science and social studies topics, such as Jefferson's Monticello, the U.S. Space and Rocket Camp, the DNR research vessel *Palmetto*, and bigger-than-life backyard insects. The short, concise programs contain interesting content that could have many uses, such as in a weekly school news program. *Discovery Minutes* is a multi-curriculum series that is compatible with all grade levels. The following are brief descriptions of the short segments.

1) Mt. Vernon: Intro

This segment introduces Mt. Vernon. Mt. Vernon was the home of George Washington for 45 years. The tombs of George and Martha Washington are also found here.

2) Mt. Vernon: Archeology and Slaves

Much is known about Mt. Vernon because of careful documentation, but little is known about the lives of the slaves there. There were about 300 slaves there in the 18th century. Archeology is crucial at Mt. Vernon in order to find out about the lives of slaves there.

3) Space Camp: Intro

Discover the US Space and Rocket Center. Several exhibits are shown such as, the lunar lander, Apollo 16 command module, and a "Jupiter Journey".

4) Space Camp: Multi Axis Trainer

The multi axis trainer creates the experience that one would have coming back into the earth's atmosphere in tumble spin. This machine is used to train astronauts for cases of emergency.

5) Medieval Times: Intro

See a replica of an 11th century Spanish castle. The show here takes place in 1093. This was the year before the First Crusade in Spain.

6) Medieval Times: Chivalry

Chivalry is explained as "a simple respect for opponent". Chivalry requires certain rules and ideas. Knighthood was based on this concept.

7) Medieval Times: Squires

Get a glance into the caste system of medieval times. Squires made sure that the knight was ready for battle. He made sure that the knight had his weapons, etc.

8) Centripetal Force and Inertia

Centripetal force is a center-seeking force. For example, when a rock is swung around someone's head, the force is around the string. A demonstration of inertia is displayed by using a jar and a ball.

9) Gravity

By using an accelerometer while on a roller coaster, the force of gravity can be measured throughout the ride. Gravity is a crucial factor in rides.

10) Monticello: Thomas Jefferson

Monticello is Italian for "little mountain". Jefferson used Italian architecture features for his beautiful home. This is probably why he gave his home an Italian name. Jefferson was a Renaissance man that was able to read in seven different languages.

11) Monticello: Jefferson's Life

Discover Thomas Jefferson's background. Architecture was Jefferson's delight, and after he inherited his father's land, he started building in 1769.

12) Monticello: 7 Day Clock

This unique clock is found over the front door in Monticello. This clock is operated by cables and 18 lb cannon balls. The days of the week are displayed on the wall, and the top weight reveals which day it is.

13) Fort Discovery: Floating Stone

See a unique demonstration of a 1070 lb red granite ball floating on water. Discover the explanation for this unusual site.

14) Fort Discovery: Parabolic Golf and High Wire Bike

See an exhibit of parabolic golf. If the golf ball hits the parabola, then the ball should go into the hole every single time. The high wire bike demonstrates how the center of mass works.

15) Fort Discovery: Tesla Coil

See an actual lightning storm indoors. It is real lightning, but it is on a smaller scale. This exhibit generates high voltage that even produces the smell of ozone in the air just like after a thunderstorm.

16) Backyard Monsters: Bug Vision

This segment explains "bug eyes". Insects have compound eyes. They see hundreds and thousands of images at the same time. Some can see in all directions.

17) Backyard Monsters: Praying Mantis

See a giant display of a praying mantis. Discover the different uses of the body parts and other interesting facts about the praying mantis.

18) Walnut Grove: School In The 1770's

What were schools like in the 1770's? Check out the clothing and school supplies used at the first school of Spartanburg County.

19) DNR Research Vessel: Artificial Reefs

Discover how marine artificial reefs are created. Humans choose the location of these artificial reefs.

20) DNR Research Vessel: Fish Research

Fish traps are used in order to research fish. When the fish are caught, their species is identified, and tissue samples are taken. Tissue samples help determine the age, sex, and reproduction statistics of the fish.

21) DNR Research Vessel: Otolith: A Fish's Age

After a fish is dissected, the otolith is removed. Otolith means "ear stone". This is the bone that is found in the head, and it functions as an ear. It is also laid in layers, and therefore the age can be determined the same way as a tree can with its rings.

22) DNR Research Vessel: Fish Tagging

Fish tagging is done in order to monitor the fish population. The fish tag includes a number and a message. Rewards are given to those who return the tags. The movement and growth of the fish are monitored in this way.

23) Snakes

In the Bible, snakes are described as cursed in the book of Genesis. See a snake devour its food by swallowing it whole.

24) Snakes: A Snake's Tongue

Discover the mystery behind a snake's tongue. A snake's tongue is used for smell. It is forked, and functions by collecting molecules of the air.

25) Olympics: Men's Gymnastics

Men's gymnastics consists of six main events. They must do compulsories and optionals. See demonstrations of men's gymnastics.

26) Olympics: Training and Commitment

Competitive gymnastics requires serious commitment. Hear the testimony of one gymnast's account of the sacrifices he made for gymnastics. He also stresses that gymnastics does not necessarily have to be a serious commitment. It can be an activity for fun and for a great body.

27) Around Alone: Intro

Discover a race around the world for boats. This race is 27,000 miles, and it starts and ends in Charleston.

28) Around Alone: Setting Sail

Math and physics play a major role in sailing. See a demonstration of the parts used to set sail.

29) Around Alone: Sails

The shape of a sail is very important in the operation of a sailboat. Hear an explanation about how the sail is used to move a boat.

30) Butterflies: Butterfly Camouflage

Butterflies mimic leaves, bark, and even other butterflies in order to protect themselves. Hear an explanation of why this camouflage is so useful.