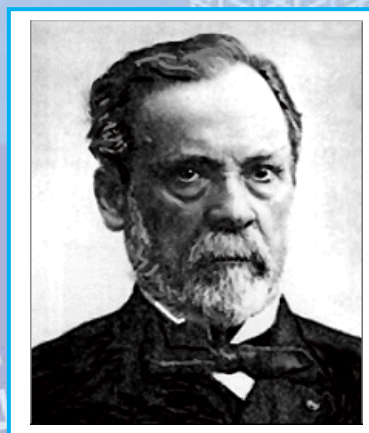
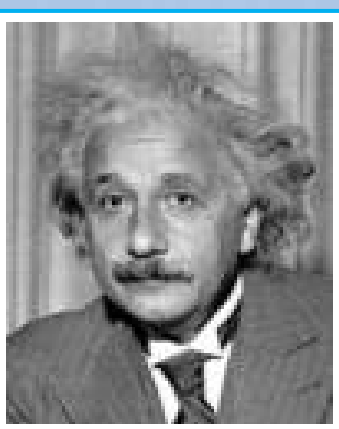
Sir Isaac Newton



Louis Pasteur



Albert Einstein

A SCIENCE Winter Inquiry Land

Grade 3

Winter 2011-2012

Miami-Dade County Public Schools
Curriculum & Instruction

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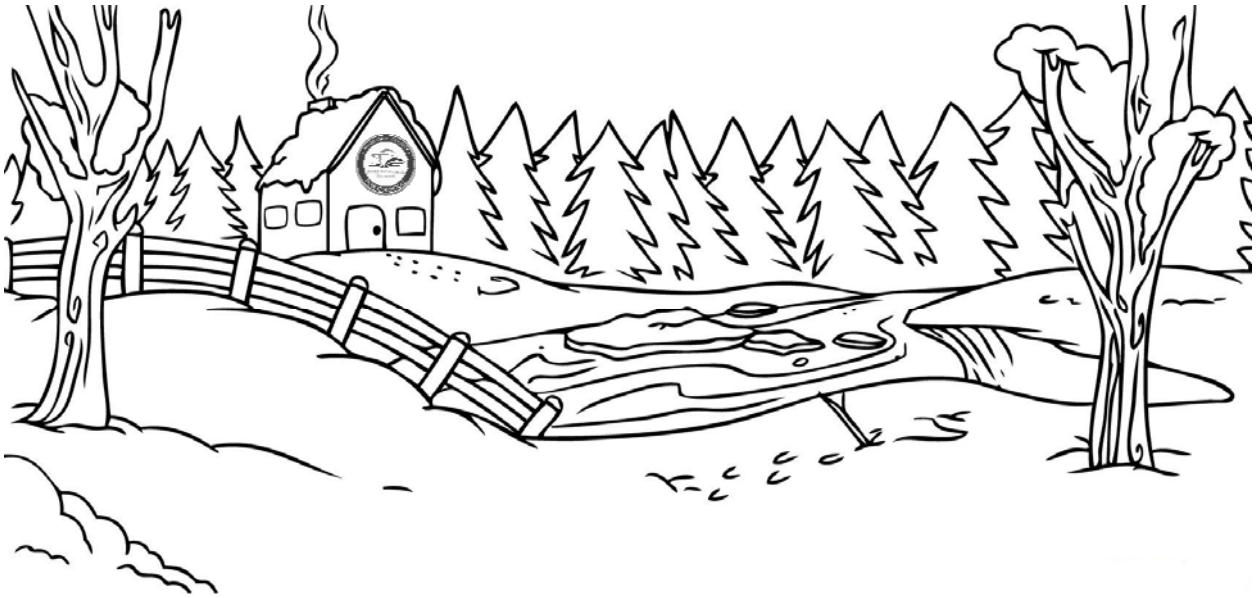


WELCOME TO A SCIENCE WINTER *INQUIRY LAND*

The activities and reading passages in this packet were selected to allow young people to experience the relevancy of science in a fun and engaging way. As they navigate through these activities, they will realize that science is not limited to the classroom but that it is in their everyday lives. Science can be done away from school and can explain many of the phenomena encountered in life. Additionally, each activity addresses a specific Next Generation Sunshine State Standards benchmark. Targeted benchmarks are identified at the end of each activity.

Included as part of this packet, is a link to the Miami-Dade County Public Schools Student Portal. Log on to this site and go to Links to Learning technology activities. Individualized student learning paths have been designed based on FCAT scores and are aligned to the District's Pacing Guides. These online activities are supplemental and, as such, are not to be assigned or graded. All online activities are provided as a resource to both parents and students to engage learning using technology. Please log on just as you do at your school.

http://www.dadeschools.net/students.asp

Enjoy!

Activities

Children learn by doing, by trying new ideas and challenging old ones. This doesn't just happen in school. You can help your children learn by providing them with safe, interesting learning experiences in a supportive atmosphere.

The activities that follow are designed for you to use with your child at home and in the community. The activities are intended to show your child that science plays a part in many everyday activities and that it is used in many places and environments. They also show that learning science doesn't require expensive equipment and complicated experiments.

Safety First
Read through each activity before you try it with your child. Adult supervision is important especially with any of the activities that involve heat, chemicals or sharp instruments.

Also make sure that your child understands any safety precautions that may be necessary for these—or any—science activities. In particular, you should:

- Teach your child not to taste anything without your supervision;
- Insist that he wear goggles whenever something could splash, burn, or shatter and endanger his eyes;
- Teach them to follow warnings on manufacturers' labels and instructions for toys and science kits;
- Keep toxic or other dangerous substances out of the reach of your child;
- Teach them what he can do to avoid accidents; and
- Teach them what to do if an accident occurs.

http://www.ed.gov/pubs/parents/Science/Home.html

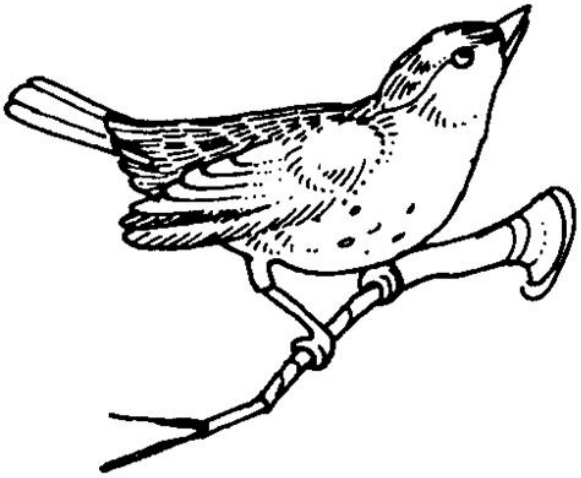
Who Were They?

Sir Isaac Newton was a physicist, mathematician, astronomer, alchemist, and natural philosopher. He is best known for his explanation of Universal Gravitation and the three laws of motion. He was also able to prove that the reason of both the motion of objects on Earth and of celestial bodies is controlled by the same Neutral laws. These findings would make a revolutionary change in the development of science. His invention of the reflecting telescope was his great contribution in optics.

Louis Pasteur was a French chemist and microbiologists and one of the most famous and influential contributors in medical science. He is remembered for his remarkable breakthroughs in the causes and preventions of diseases supported by his experiments on the germ theory of disease. He also created the first vaccine for rabies and anthrax. Pasteur also invented the method of “pasteurization”, where harmful microbes are stopped from causing sickness in food.

Albert Einstein is the greatest scientist of the twentieth century and the most notable physicist of all time. He was born in Germany but eventually migrated to America to take a teaching position at Princeton University. It is told that he had a learning disability in his childhood. He could not talk till he was three and could not read till he was eight. Despite such problems, in 1921 he became the noble prize winner for his contributions to Physics. His *Theory of Relativity* is considered a revolutionary development of Physics.

Bird's Eye View



Background

There are about 8,500 different kinds of birds. Birds are similar to mammals, which are creatures like you and me. Of course, there are quite a few differences between birds and regular mammals. A bird has feathers and wings. They use their wings to fly. However, some birds such as the ostrich or the penguin do not fly because they do not know how.

Under all the feathers and inside the wing the bird has muscles. The muscles inside the wing are attached to the breastbone of the bird and are known as flight muscles. These are like the muscles that you have in your arms. Thanks to these muscles birds can flap their wings and fly if they know how.

Along with their wings, which are a replacement of arms or front legs for other animals, birds also have two legs. If you have ever seen a bird sitting on a tree branch you have seen them using their legs. They are able to perch themselves on branches or hop from limb to limb by using their legs. *(Adapted from All About Birds)*

What You Need

Science Journal Book (i.e. Notebook)
Walking Buddy

What to Do

Go for a walk around your neighborhood and try to identify four types of birds. Draw a picture of each of the birds you identify. Lastly write down the characteristics of each of the birds that you chose. You can record your observations on the following page or make a copy of the chart in your journal.

Complete the chart below after reading the background information, as you are taking a stroll in your neighborhood.

	Bird	Color(s)	Shape of beak	Size	Location
1					
2					
3					
4					

Benchmark: SC.3.N.1.1. (Next Generation Sunshine State Standards)Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.

My Five Senses

The poem below is all about the five senses. While reading it, think of all of your senses. After reading the poem, write a poem of your own describing your five senses.

Wonderful World by Eva Grant

I can see

Trees and grass,

The sun and sky;

I can taste

Chocolate ice cream,

Apple pie;

I can hear

Music, laughter,

Words you said;

I can smell

Perfume, flowers,

Baking bread;

I can touch

Silk and velvet,

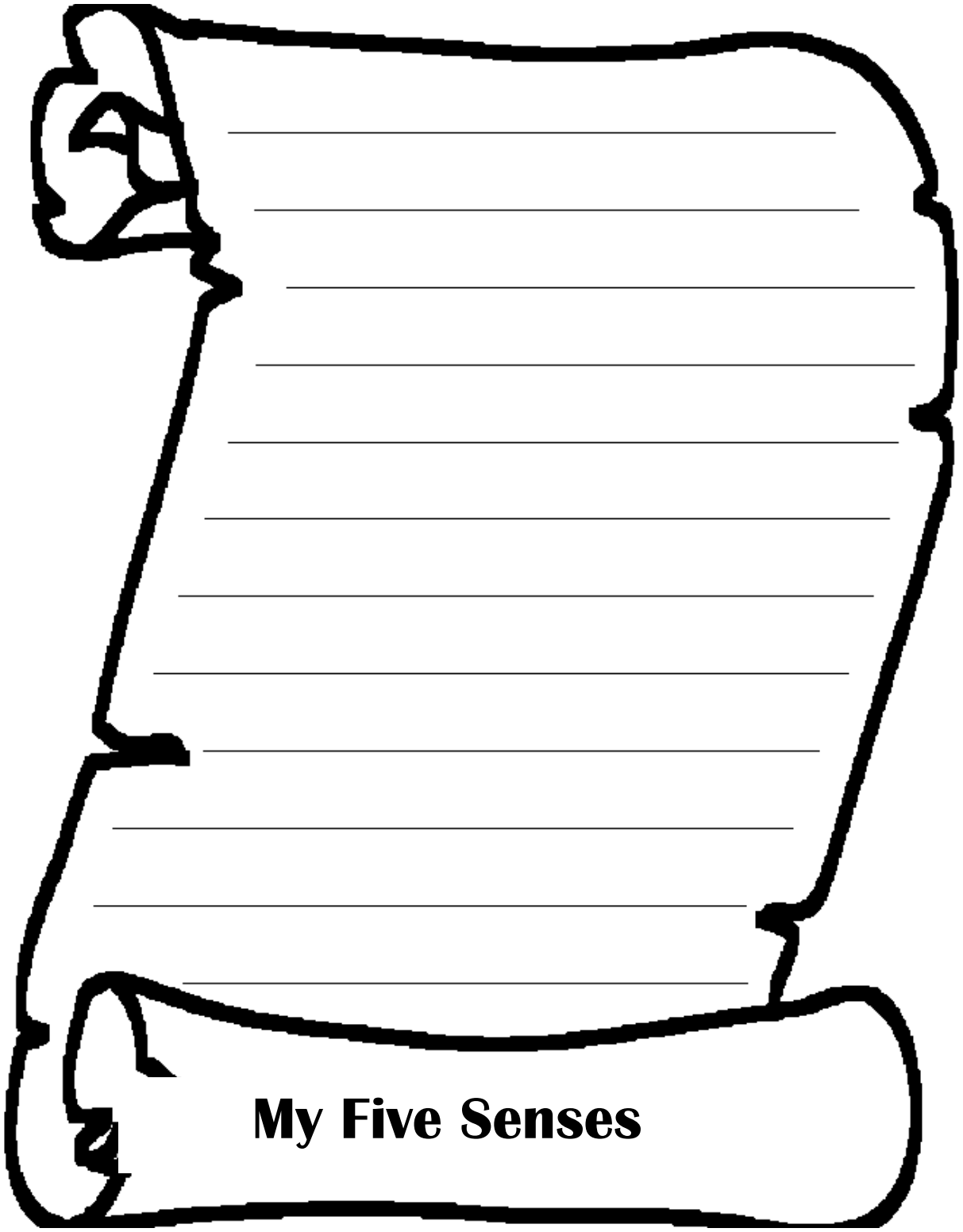
A baby's skin;

What a wonderful

World I'm in!

Benchmark: SC.3.N.1.2 (Next Generation Sunshine State Standards) Compare the observations made by different groups using the same tools and seek reasons to explain the differences across the groups.

Write your five senses poem here.



Icky Sticky Stuff

Adhesives are used to stick things together. Many adhesives occur in nature and have important uses for plants and animals

Background
What makes glue, paste or tape stick to things? Wood, paper and many other materials have tiny cracks and holes in them. When we glue things together, sometimes the glue seeps into the tiny openings and hardens, making the materials stick together. Other times, the molecules on the surface of an object get tangled up with the glue molecules, making the objects stick together.

What You Need
A walking buddy

What to Do
Help your child to search around your home to track down things that they can see that are sticky. See how many things they can find. The following examples can be found:

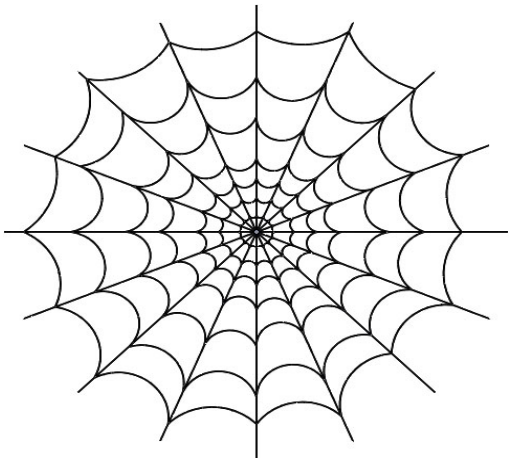
- Tape
- Peanut butter
- Stamps
- Envelopes
- Honey
- Bandage

Ask your child to make a list of things in nature - animals, plants and so forth-that are sticky (have adhesive properties). For example:

- Spiders have sticky threads
- Tree sap

Complete the data table below.

Object	*What does it look like?*	*What does it feels like?*



Benchmark: SC.3.N.1.1 (Next Generation Sunshine State Standards) Compare the observations made by different groups using the same tools and seek reasons to explain the differences across the groups.

ANTI-DISCRIMINATION POLICY

Federal and State Laws

The School Board of Miami-Dade County, Florida adheres to a policy of nondiscrimination in employment and educational programs/activities and strives affirmatively to provide equal opportunity for all as required by law:

Title VI of the Civil Rights Act of 1964 - prohibits discrimination on the basis of race, color, religion, or national origin.

Title VII of the Civil Rights Act of 1964, as amended - prohibits discrimination in employment on the basis of race, color, religion, gender, or national origin.

Title IX of the Educational Amendments of 1972 - prohibits discrimination on the basis of gender.

Age Discrimination in Employment Act of 1967 (ADEA), as amended - prohibits discrimination on the basis of age with respect to individuals who are at least 40.

The Equal Pay Act of 1963, as amended - prohibits gender discrimination in payment of wages to women and men performing substantially equal work in the same establishment.

Section 504 of the Rehabilitation Act of 1973 - prohibits discrimination against the disabled.

Americans with Disabilities Act of 1990 (ADA) - prohibits discrimination against individuals with disabilities in employment, public service, public accommodations and telecommunications.

The Family and Medical Leave Act of 1993 (FMLA) - requires covered employers to provide up to 12 weeks of unpaid, job-protected leave to “eligible” employees for certain family and medical reasons.

The Pregnancy Discrimination Act of 1978 - prohibits discrimination in employment on the basis of pregnancy, childbirth, or related medical conditions.

Florida Educational Equity Act (FEEA) - prohibits discrimination on the basis of race, gender, national origin, marital status, or handicap against a student or employee.

Florida Civil Rights Act of 1992 - secures for all individuals within the state freedom from discrimination because of race, color, religion, sex, national origin, age, handicap, or marital status.

Veterans are provided re-employment rights in accordance with P.L. 93-508 (Federal Law) and Section 295.07 (Florida Statutes), which stipulates categorical preferences for employment.

Revised 9/2008